Read this before using the recipes.

This is a patient-created culinary working edition, not medical advice, a treatment, or a substitute for your nephrologist or renal dietitian. CKD stage, dialysis modality, residual kidney function, medications, labs, diabetes, fluid limits, and individual targets vary. Nutrition figures in this book are recipe estimates, not personal limits; brands, substitutions, preparation, and serving size can change them. Check labels and review ingredients, portions, supplements, herbs, and unfamiliar products with your care team. Feedback a dietitian gave the creator on his personal food-rule sheet helped inform this caution-first revision; it was not a formal product review, endorsement, clinical certification, or validation of every recipe.

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Pull up a chair.

Stay awhile.

PREFACE

Introduction & Dedication

Dedication

For everyone who was told "you can't eat that anymore."

And made it anyway.

> *"One cannot think well, love well, sleep well, if one has not dined well." — Virginia Woolf*

Introduction

This is a cookbook for people whose kidneys don't work.

That sentence should make you sad, and it does, for about three seconds, and then you turn the page and there's a recipe for Taco Bell's $7 Luxe Box that has 65% less sodium than the drive-thru version and tastes 95% identical, and sadness becomes a luxury you can't afford because you're too busy making chalupa shells from scratch.

> *"The only time to eat diet food is while waiting for the steak to cook." — Julia Child*

You are handed a laminated sheet at the clinic. The sheet says NO. No potassium. No phosphorus. No sodium. No fun. The sheet is medically accurate and spiritually catastrophic. It tells you what you can't have. It never tells you what you *can*.

This book tells you what you can.

> *"Cooking is like love. It should be entered into with abandon or not at all." — Harriet Van Horne*

200+ recipes. Thai street food. Taco Bell dupes. Mango sticky rice. Country fried steak with white gravy. Hot sauces with names that would make your doctor blush. Smoothies that taste like a Caribbean vacation. Gummies that glow in the dark. A Persian ketchup from a food cart in Cornelius, Oregon, that changed everything.

All of it CKD-aware, with portions and labs doing the real safety work. All of it actually good. All of it made by someone who decided the kitchen doesn't quit.

> *"Tell me what you eat, and I will tell you what you are." — Jean Anthelme Brillat-Savarin*

I am steak tacos with fresh pico at midnight. I am chocolate Rice Krispie treats at 2am. I am Tom Kha Gai with too much lime. I am my mother's radiatore pasta salad with white wine vinegar, and I will be that salad until I die, and then I will be the memory of that salad, which is the same thing, because food is memory and memory is food and both are love.

> *"People who love to eat are always the best people." — Julia Child*

A Note on How to Use This Book

> *"Perfection is achieved, not when there is nothing more to add, but when there is nothing left to take away." — Antoine de Saint-Exupery*

This is the working edition. Recipes only. No essays. No equipment lists. No CKD nutrition lectures. Just ingredients, methods, and results.

The full version — with nutrition data per serving, equipment recommendations, ingredient sourcing, clinical notes, and philosophical tangents about consciousness — lives online at **northstarprime.com/ckd-kitchen**.

This version is for the kitchen counter. It gets flour on it. That's what it's for.

The Emoji Soup Restaurant Menu

(translated from the original trilingual symbolic notation)

The menu predates the restaurant. The restaurant predates the building. The building predates the city. All of this is somehow the fault of a filing error in the Multnomah County Department of Records.

> *"Item one: a soup. Price: nothing. Description: everything." — The Archaeological Record, Southeast Hawthorne Boulevard, 1987*

The Six Languages of the Menu

The original menu is not written in one language. It is written in six: glyph, name, kitchen action, hunger, price, and law. The glyph tells the eye what the dish is. The name gives the mouth something to say. The action tells the cook what must happen. The hunger tells the soul why it came. The price tells the customer what will be exchanged. The law tells everyone what the dish refuses to lie about.

Glyph	Name	Action	Need	Price	Law
📦+🌀	The Bread	tear/rest	first gift	notice	arrives before permission
🍲+Ø	The Soup	simmer/wait	origin	nothing	contains everything but explains nothing
🥭+🫐	Mango Rice Dream Pop	cook/blend/freeze	soft sweetness	patience	rice must become porridge before it becomes memory
🌶️+♨️+🍊	Mango Habanero Afterfire	ferment/finish	courage with fruit	gloves	fresh fruit comes after the fire learns manners
🧾+🌙	The Check	total/return	consequence	exact change	the bill is always itemized, never unfair

Second Menu Board

This menu now reads as a working grammar for the novels, the cookbook, and the sauce lab. A glyph can foreshadow a chapter. A sauce label can become a waiver. A receipt can become the kindest possible accusation.

Glyph	Name	Action	Need	Price	L
🧈+🕯️	Mercy Butter	soften/spread	ease	one lowered defense	mer melt argu with
🥒+📄	Permit Pickles	brine/file	permission	one honest form	sour becc offic whe witn
🍄+📐	Bob's Mushroom Theorem	saute/prove	generosity	one shared plate	the p is no optic
🥄+🔑	The Courier's Spoon	carry/return	direction	fuel and humility	ever deliv deliv the c
🍇+🔥+📄	Black Orchard Adobo	char/blend/log	courage in shadow	gloves and honesty	smo mus hide fruit
🦃+🍊+🔥	Gold Pheasant Peach	gleam/blend/warn	good fortune with teeth	respect	ausp does mea
🍍+🌿+⚡	Pineapple Thai Basil Lightning	chop/flash/cool	sudden courage	today	light not lefto
🎩+🫧	Floccinaucinihilipilification Pudding	set/reflect	worth	one admitted value	the ram price

Appetizers for the Apocalypse

- **The Bread** — Arrives before you order. Warm. Endless. Do not question the bread. The bread is correct.
- **The Bisque** — What it's a bisque OF depends on who's asking and whether they're ready for the answer.
- **Breadsticks of Diminished Fear** — The largest things are always drawn smallest by people who are afraid of them.

Entrees That Remember You

- **The Soup** — There is only one soup. It contains everything. It has always contained everything. You've been eating it your whole life. You just didn't know it had a name.
- **Bob's Mushroom Theorem** — A dish that proves, mathematically, that generosity is the only rational economic strategy. Served with rice. The rice is optional. The proof is not.
- **The Thing You Came Here For** — You don't order this. It orders you. It arrives when you're ready. You are never ready. It arrives anyway.

Desserts That Eat You

- **The Tea of Enlightenment** — Tastes like whatever you need it to taste like. Served at exactly the temperature that makes you tell the truth.
- **Floccinaucinihilipilification Pudding** — The act of estimating something as worthless, served in a ramekin. The pudding is worthless. The ramekin is priceless. The joke is on you. The joke is also the pudding.

The Check

The check never arrives. The meal is free. You pay by remembering what it tasted like and telling someone. This is the only currency the restaurant accepts. This is also how love works, and language, and music, and every other thing that matters.

> *"There is no sincerer love than the love of food." — George Bernard Shaw*

A Few Words Before We Cook

> *"The secret of success in life is to eat what you like and let the food fight it out inside." — Mark Twain*

> **Medical safety note:** This cookbook is a planning aid, not medical advice. Use your prescribed sodium, potassium, phosphorus, protein, and fluid limits; confirm recipes with your nephrologist or renal dietitian, especially if you are on dialysis, using binders, managing diabetes, immunocompromised, pregnant, or taking transplant medications.

> **Label check:** Nutrition estimates are working estimates. Packaged foods, salt substitutes, potassium chloride, phosphate additives, sauces, broths, and restaurant dupes can change the renal math quickly. Check labels and use the limits from your care team.

> **Evidence language:** In this edition, "CKD-aware" means a recipe is built around lower sodium/potassium/phosphorus assumptions as portioned; it does not mean universally safe. National Kidney Foundation guidance emphasizes that sodium, potassium, phosphorus, protein, and fluid targets vary by labs, dialysis status, medications, and care-team instructions. Source: https://www.kidney.org/kidney-topics/nutrition-and-kidney-disease-stages-1-5-not-dialysis

But also: make the gumbo. Fry the chicken. Bake the carrot cake. Pour the white gravy over the country fried steak. Squeeze the lime into the Tom Kha. Coat the gummies in nuclear sour dust and eat three before bed.

> *"Life is uncertain. Eat dessert first." — Ernestine Ulmer*

The restrictions are in the *ingredients*, not the *recipes*. Margarine instead of butter. Almond milk instead of whole. Leach the potatoes. Rinse the beans three times. Use the no-salt seasoning. Skip the olives.

Same plate. Same flavor. Same Saturday morning breakfast. Different margarine. Your kidneys can't tell the difference. Your taste buds can't either.

> *"After a good dinner, one can forgive anybody, even one's own relatives." — Oscar Wilde*

Now wash your hands. Put on some music. Open this book to whatever page you land on.

Cook like you love food and life whether your kidneys work or not.

Because you do.

> *"All sorrows are less with bread." — Miguel de Cervantes*

Andrew D White Jr. Portland, Oregon 2026

988 — You are not alone. 988 + 11 = 999; 999 is symbolic hope, not a crisis number.

CHAPTER 1

Breakfast Classics

"The waffle iron was patented by Cornelius Swartwout on August 24, 1869."

French Toast, Waffles, Pancakes & More — Morning Done Right

"The waffle iron was patented by Cornelius Swartwout on August 24, 1869."

> *"All happiness depends on a leisurely breakfast." — John Gunther*

Breakfast Intelligence

Before you cook a single thing, internalize these:

Principle	Why It Matters
Eggs are king	High biological value protein, moderate P (~95mg/egg), low Na (~70mg/egg). Two eggs is one example serving; whether it fits depends on the rest of your day and your individualized targets.
White bread > whole wheat	Whole wheat = higher P (phosphorus bound to phytates) and higher K. Brioche, white flour, sourdough — all better choices.
Phosphorus-free baking powder	Rumford aluminum-free. Regular baking powder is loaded with sodium aluminum phosphate. This applies to ALL baked items in this chapter.
K-leach every potato	Hash browns MUST soak 4+ hours in cold water, drain, rinse, squeeze. Removes 40-50% of potassium. Non-negotiable.
Turkey sausage > pork sausage	Lower phosphorus, lower sodium per serving. Read labels — some turkey sausage is still injected with sodium phosphate. Buy CLEAN.
Maple syrup is safe	Basically sugar + water + trace minerals. Low K (~40mg/tbsp), low P (~3mg/tbsp), low Na (~2mg/tbsp). Drizzle without guilt.
Cream cheese > butter for frosting	Lower P per tablespoon, better mouthfeel, and it's what cinnamon rolls demand anyway.
Almond milk replaces dairy	Unsweetened almond milk: ~5mg P per cup vs whole milk: ~230mg P per cup. Massive difference.

1. Golden Sunday French Toast

"French toast first appears in the Apicius, a Roman cookbook from the 4th or 5th century AD, where it was called 'Pan Dulcis' — bread soaked in milk and egg, then fried."

Ingredient	Amount	CKD Notes
Brioche or thick-cut white bread	6 slices (3/4" thick)	NOT whole wheat — brioche is lower P and makes better French toast anyway
Eggs	2 large	~190mg P total for the whole batch, split across servings
Unsweetened almond milk	1/3 cup	Replaces whole milk — ~2mg P vs 75mg
Vanilla extract	1 tsp	
Ground cinnamon	1 tsp	
Nutmeg	1/4 tsp (fresh grated ideal)	
Sugar	1 tbsp	In the custard for caramelization
Salt	Pinch	
Margarine	2 tbsp (for pan)	Lower P than butter
Pure maple syrup	For serving	CKD-aware — low K/P/Na
Powdered sugar	For dusting (optional)	

Ingredient	Amount	CKD Notes
Fresh berries	For topping	Strawberries and blueberries are lower-K fruits

Method: 1. Whisk eggs, almond milk, vanilla, cinnamon, nutmeg, sugar, and salt in a wide shallow bowl until uniform. 2. Heat a large skillet or griddle over medium heat. Melt 1 tbsp margarine and swirl to coat. 3. Dip each bread slice into the custard — 15 seconds per side. Let excess drip off. You want saturated, not dripping. 4. Cook 2-3 min per side until deep golden brown and slightly crispy on the edges. The sugars in brioche caramelize beautifully. 5. Add more margarine between batches. Keep finished slices warm on a sheet pan in a 200F oven. 6. Serve stacked, dusted with powdered sugar, drizzled with maple syrup, berries alongside.

Per serving (2 slices + 2 tbsp syrup): ~120mg Na | ~105mg P | ~130mg K

2. Iron-Crisp Waffles

"The first known waffle recipe printed in English appeared in a 1725 London cookbook by Robert Smith, calling for a pint of cream, seven eggs, and a pound of butter."

Ingredient	Amount	CKD Notes
All-purpose flour	2 cups	White flour only — lower P than whole wheat
Phosphorus-free baking powder (Rumford)	1 tbsp	CRITICAL — regular baking powder adds ~350mg P per batch
Baking soda	1/2 tsp	
Sugar	2 tbsp	
Salt	1/4 tsp	
Eggs	2 large, separated	Whites whipped = the secret to crispy exterior/fluffy interior
Unsweetened almond milk	1.5 cups	
Avocado oil	1/3 cup	Neutral flavor, high smoke point
Vanilla extract	1 tsp	
White vinegar	1 tbsp	Added to almond milk = "buttermilk" tang, activates baking soda

Method: 1. Add vinegar to almond milk, stir, let sit 5 min (it curdles slightly — that's correct). 2. Whisk flour, baking powder, baking soda, sugar, salt in a large bowl. 3. In a separate bowl, whisk egg yolks, almond milk mixture, oil, vanilla. 4. In a third bowl (or stand mixer), beat egg whites to stiff peaks. This is the move that separates diner waffles from restaurant waffles. 5. Pour wet into dry, stir until JUST combined — lumps are fine, overworking = tough waffles. 6. Fold in whipped egg whites gently. The batter should look like a cloud with flour in it. 7. Preheat waffle iron to medium-high. Lightly oil or spray. Pour batter to fill 2/3 of the iron surface. 8. Cook until steam stops and waffle is deep golden (3-5 min depending on iron). DO NOT open early — you'll tear it. 9. Serve immediately or keep crispy on a wire rack in a 200F oven. Never stack fresh waffles (steam = soggy).

Makes: 4-6 waffles depending on iron size

Per waffle: ~110mg Na | ~95mg P | ~90mg K

3. Cloud-Stack Pancakes

"Otzi the Iceman, the 5,300-year-old mummy found in the Alps in 1991, had traces of ground einkorn wheat in his stomach — possibly the oldest evidence of something resembling a pancake."

Ingredient	Amount	CKD Notes
All-purpose flour	1.5 cups	White flour — lower P
Phosphorus-free baking powder (Rumford)	2 tsp	
Baking soda	1/2 tsp	
Sugar	2 tbsp	
Salt	1/4 tsp	
Egg	1 large	
Unsweetened almond milk	1.25 cups	
White vinegar	1 tbsp	"Buttermilk" conversion
Avocado oil	2 tbsp	In the batter for tender crumb
Vanilla extract	1 tsp	

Berry Compote:

Ingredient	Amount	CKD Notes
Mixed berries (strawberries + blueberries)	2 cups (fresh or frozen)	Lower-K fruit choices
Sugar	2 tbsp	
Lemon juice	1 tbsp	
Water	2 tbsp	

Method — Pancakes: 1. Add vinegar to almond milk, stir, let sit 5 min. 2. Whisk flour, baking powder, baking soda, sugar, salt in a large bowl. 3. Whisk egg, almond milk mixture, oil, vanilla in a separate bowl. 4. Pour wet into dry. Stir until JUST combined — 10-15 strokes max. The batter should be lumpy. Walk away from it. Overmixed pancakes are rubber discs. 5. Let batter rest 5 min (baking powder activates, bubbles form = fluffier pancakes). 6. Heat griddle or skillet to medium (325F). Lightly oil. 7. Pour 1/4 cup batter per pancake. Wait until bubbles form on the surface AND the edges look set (2-3 min), then flip once. Cook 1-2 min more. 8. One flip only. Every extra flip compresses the pancake. Patience.

Method — Berry Compote: 1. Combine berries, sugar, lemon juice, water in a small saucepan over medium heat. 2. Bring to a simmer, stirring occasionally. Mash some berries with a fork for texture. 3. Cook 8-10 min until syrupy but still chunky. Serve warm over pancakes.

Per serving (3 pancakes + 3 tbsp compote): ~140mg Na | ~90mg P | ~150mg K

4. Soft Landing Eggs Benedict

"Eggs Benedict was allegedly invented in 1894 at the Waldorf Hotel in New York City when a Wall Street broker named Lemuel Benedict ordered 'buttered toast, poached eggs, crisp bacon, and a hooker of hollandaise' to settle his hangover."

Ingredient	Amount	CKD Notes
English muffins	2, split and toasted	White flour English muffins — check label, some brands add calcium phosphate
Eggs	4 large (2 for poaching, 2 yolks for hollandaise)	~380mg P total across 4 eggs, split into 2 servings
Turkey bacon or Canadian bacon	4 slices	Turkey bacon preferred — lower Na/P than traditional Canadian bacon
White vinegar	1 tbsp (for poaching water)	
Fresh chives	For garnish	
Paprika	Pinch, for garnish	

CKD Hollandaise:

Ingredient	Amount	CKD Notes
Egg yolks	2 large	
Margarine	1/2 cup (1 stick), melted and hot	Lower P than butter
Lemon juice	1 tbsp	Fresh — bottled has additives
Cayenne pepper	Pinch	
Salt	1/8 tsp	Traditional hollandaise uses 1/2 tsp+ — this is plenty with the lemon
Water	1 tbsp (warm)	To adjust consistency

Method — Hollandaise (make first, keep warm): 1. Whisk egg yolks + lemon juice in a heatproof bowl over a pot of barely simmering water (double boiler). Whisk constantly until yolks thicken and lighten in color (2-3 min). The bowl should NEVER touch the water. 2. Remove from heat. Slowly drizzle in hot melted margarine while whisking vigorously — a thin steady stream. It will emulsify into a creamy sauce. 3. Add cayenne, salt, warm

water to adjust consistency. It should coat the back of a spoon. 4. Keep warm by leaving the bowl over the pot (heat OFF). Stir occasionally.

Method — Assembly: 1. Heat turkey bacon in a skillet until crispy. Set aside. 2. Bring a wide pot of water to a gentle simmer (NOT a rolling boil — turbulence shreds the whites). Add vinegar. 3. Crack each egg into a small cup. Create a gentle whirlpool with a spoon, then slide the egg into the center. Poach 3-4 min for runny yolk. 4. Remove with a slotted spoon, drain on a paper towel. 5. Toast English muffin halves. Layer: muffin → bacon → poached egg → hollandaise → chives + paprika.

Per serving (2 halves): ~280mg Na | ~230mg P | ~200mg K

---

5. Sunrise Wrap Burrito

"The breakfast burrito as we know it was popularized in the 1970s in New Mexico, with Tia Sophia's restaurant in Santa Fe often credited as the first to put a complete breakfast inside a flour tortilla."

Ingredient	Amount	CKD Notes
Low-sodium flour tortillas (10")	2 large	Look for <300mg Na per tortilla — Mission has a low-sodium line
Eggs	4 large, scrambled	
Turkey breakfast sausage	4 oz (2 patties), crumbled	Read label — no sodium phosphate
Bell pepper (red or green)	1/2 cup, diced	Red peppers slightly higher K than green, but both fine in this quantity
White onion	1/4 cup, diced	
Sharp cheddar cheese	1/4 cup, shredded	
Avocado oil	1 tbsp	
Garlic powder	1/4 tsp	
Cumin	1/4 tsp	
Paprika	1/4 tsp	
Black pepper	1/4 tsp	
Salt	Pinch	The sausage and cheese carry enough salt
Hot sauce	To taste	

Optional toppings:

Topping	CKD Notes
Sour cream (1 tbsp)	Lower P than extra cheese
Pico de gallo (2 tbsp)	Moderate K from tomato — small portion OK
Salsa verde	Often lower Na than red salsa — check label

Method: 1. Brown crumbled turkey sausage in a skillet over medium heat until cooked through. Remove, set aside. 2. In the same skillet, add oil. Saute bell pepper and onion until soft (3-4 min). Add garlic powder, cumin, paprika, pepper. 3. Push veggies to one side. Add beaten eggs to the other side. Scramble on medium-low, stirring gently — large soft curds, not rubber. Pull off heat when eggs are STILL slightly wet (carryover cooking finishes them). 4. Mix eggs, sausage, and veggies together. Add cheese while hot so it melts in. 5. Warm tortillas in a dry skillet 15 seconds per side (or 10 seconds in microwave under a damp paper towel). 6. Load filling down the center, fold sides in, then roll from the bottom. Tight but not bursting. 7. Optional: sear the seam side down in a dry skillet for 30 seconds for a crispy seal.

Per burrito: ~350mg Na | ~220mg P | ~280mg K

---

6. Sunday Gravy Biscuits

"Biscuits and gravy became a staple of the American South during the Revolutionary War era, when wheat flour biscuits served with gravy made from pan drippings provided a cheap, calorie-dense meal for laborers and soldiers."

Flaky CKD Biscuits:

Ingredient	Amount	CKD Notes
All-purpose flour	2 cups	White flour — lower P
Phosphorus-free baking powder (Rumford)	1 tbsp	The single most important swap in CKD baking
Sugar	1 tsp	
Salt	1/2 tsp	
Cold margarine, cubed	1/3 cup	Keep COLD — visible margarine chunks = flaky layers
Unsweetened almond milk	3/4 cup, cold	

Turkey Sausage Gravy:

Ingredient	Amount	CKD Notes
Turkey breakfast sausage	8 oz	No sodium phosphate on the label
Margarine	2 tbsp	
All-purpose flour	3 tbsp	The roux — equal parts fat and flour
Unsweetened almond milk	2 cups	Whole milk would add ~460mg P. Almond milk adds ~10mg.
Black pepper	1 tsp (generous)	Pepper IS the seasoning in gravy — don't be timid
Garlic powder	1/4 tsp	
Onion powder	1/4 tsp	
Salt	1/4 tsp	The sausage has salt already
Dried sage	1/4 tsp	Optional but traditional

Method — Biscuits: 1. Whisk flour, baking powder, sugar, salt in a large bowl. 2. Add cold cubed margarine. Cut in with a pastry cutter (or two knives, or your hands — fast) until mixture resembles coarse crumbs with pea-sized margarine pieces. Those chunks become flaky layers. 3. Add cold almond milk. Stir with a fork until JUST combined. The dough should be shaggy, not smooth. 4. Turn onto a floured surface. Pat (don't roll) to 1" thick. Fold in half, pat again. Repeat 3 times. This lamination creates layers. 5. Pat to final 1" thickness. Cut with a 2.5" biscuit cutter (or a glass). Press straight down — don't twist (twisting seals the edges and kills the rise). 6. Place on a parchment-lined baking sheet with biscuits touching (they help each other rise). Brush tops with almond milk. 7. Bake at 425F for 12-15 min until golden on top. Let rest 5 min.

Method — Gravy: 1. Brown turkey sausage in a skillet over medium heat, breaking into small crumbles (5-6 min). If the sausage is very lean, add the margarine now to compensate for missing fat. 2. Add margarine to the pan (if not already added). Once melted, sprinkle flour over the sausage. Stir and cook 1-2 min — this is the roux, it should smell nutty, not raw. 3. Slowly pour in almond milk, whisking constantly. The gravy will look thin — keep whisking. It thickens as it simmers (3-5 min). 4. Add pepper (generous), garlic powder, onion powder, sage, salt. Taste and adjust. Good sausage gravy should be peppery. 5. Split biscuits, ladle gravy over both halves. Eat immediately.

Per serving (2 biscuits + 1/2 cup gravy): ~320mg Na | ~170mg P | ~190mg K

---

7. Kanel Morning Rolls

"The kanelbulle, Sweden's cinnamon roll, is so culturally important that October 4th is officially 'Kanelbullens Dag' (Cinnamon Roll Day) — a national holiday since 1999."

Dough:

Ingredient	Amount	CKD Notes
All-purpose flour	3.5 cups	White flour — lower P
Unsweetened almond milk	1 cup, warmed to 110F	
Active dry yeast	2.25 tsp (1 packet)	
Sugar	1/4 cup	Feeds the yeast and sweetens the dough
Egg	1 large	
Margarine	1/4 cup, melted	
Salt	1/2 tsp	

Filling:

Ingredient	Amount	CKD Notes
Margarine	1/4 cup, softened	Spread on rolled dough
Brown sugar	1/2 cup, packed	
Ground cinnamon	1.5 tbsp	

Cream Cheese Frosting:

Ingredient	Amount	CKD Notes
Cream cheese	4 oz, softened	Lower P than butter-based frosting
Powdered sugar	1 cup	
Vanilla extract	1 tsp	
Unsweetened almond milk	1-2 tbsp	To adjust drizzle consistency

Method — Dough: 1. Warm almond milk to 110F (not hotter — you'll kill the yeast). Stir in yeast + 1 tsp of the sugar. Let sit 5-10 min until foamy. If it doesn't foam, your yeast is dead — get new yeast. 2. In a large bowl (or stand mixer with dough hook), combine flour, remaining sugar, salt. 3. Add yeast mixture, egg, melted margarine. Mix until a soft dough forms. 4. Knead 8-10 min (by hand) or 5 min (dough hook on medium) until smooth and elastic. The dough should spring back when poked. 5. Place in an oiled bowl, cover with plastic wrap or damp towel. Let rise in a warm spot 1-1.5 hours until doubled.

Method — Assembly: 1. Punch down dough. Roll out on a floured surface to a 16x12" rectangle. 2. Spread softened margarine evenly over the entire surface. 3. Mix brown sugar + cinnamon. Sprinkle evenly over the margarine. Press gently so it sticks. 4. Roll up tightly from the long side (you want a 16" log). Pinch the seam. 5. Cut into 12 equal rolls. Dental floss or unflavored thread works better than a knife (slide under the log, cross the ends, pull to cut — clean slices). 6. Place in a greased 9x13 baking pan, cut side up. Cover and let rise 30-45 min until puffy and touching. 7. Bake at 350F for 22-28 min until golden on top. Center rolls should be set but still soft. 8. Let cool 10 min (not longer — they need to be warm for the frosting).

Method — Frosting: 1. Beat cream cheese until smooth. Add powdered sugar and vanilla. Beat until fluffy. 2. Add almond milk 1 tbsp at a time until you reach a thick but pourable consistency. 3. Spread or drizzle over warm cinnamon rolls. The warmth melts it slightly — that's the point.

Makes: 12 rolls

Per roll: ~190mg Na | ~80mg P | ~85mg K

---

8. Dawn Patrol Breakfast Sandwich

"The Egg McMuffin was invented by Herb Peterson, a McDonald's franchise owner in Santa Barbara, California, in 1972 — he was trying to create a fast-food version of Eggs Benedict."

Ingredient	Amount	CKD Notes
White English muffin	1, split and toasted	Check label — avoid brands with calcium phosphate
Egg	1 large	
Turkey breakfast sausage	1 patty (2 oz)	Or turkey bacon (2 slices)
American cheese	1 slice	Yes, processed — but 1 slice is ~260mg Na, which fits the budget. The meltability matters here.
Margarine	1 tsp (for egg ring)	
Salt	Tiny pinch	
Black pepper	To taste	

Method: 1. Form turkey sausage into a thin patty roughly the diameter of the English muffin. Season with pepper, a tiny bit of garlic powder. Cook in a skillet over medium heat — 3 min per side until cooked through and slightly crispy. Set aside. 2. **The egg ring trick:** Use a metal ring mold (or a clean tuna can with both ends removed) in the same skillet. Grease with margarine. Crack egg into the ring. Pierce the yolk gently with a fork (this is a fast food dupe — flat egg, not a fried egg). Season with salt and pepper. Cook 2 min, flip the ring with the egg in it, cook 1 more min. 3. Toast English muffin halves in the toaster or face-down in a dry skillet. 4. Build: bottom muffin → sausage patty → cheese slice (place on hot sausage so it melts) → egg → top muffin. 5. Wrap in foil or parchment for 1 min. The steam inside melds everything together. This is the step that separates homemade from sad.

Per sandwich: ~380mg Na | ~200mg P | ~170mg K

Compared to McDonald's Egg McMuffin: ~820mg Na, ~300mg P. You just cut sodium in half.

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9. Crispy Skillet Hash Browns

"The term 'hash brown' first appeared in print in 1888 in a menu from Dayton, Ohio, described as 'hashed brown potatoes' — referring to the technique of hashing (chopping) and browning."

Ingredient	Amount	CKD Notes
Russet potatoes	2 large (~1 lb)	MUST BE K-LEACHED — see step 1
Avocado oil	3 tbsp	For crispy pan-fry
Salt	1/4 tsp	After leaching, these need some seasoning back
Black pepper	1/4 tsp	
Onion powder	1/4 tsp	
Garlic powder	1/4 tsp	Optional

Method: 1. **K-LEACH (NON-NEGOTIABLE):** Peel and shred potatoes using a box grater or food processor shredding disc. Place shredded potatoes in a large bowl of cold water. Soak for **minimum 4 hours** — overnight is better. Change the water at least once halfway through. This removes 40-50% of the potassium. Drain, rinse under cold water, then squeeze dry in a clean kitchen towel or cheesecloth. Squeeze HARD — the drier they are, the crispier they get. Moisture is the enemy of crunch. 2. Toss the squeezed-dry shreds with salt, pepper, onion powder, garlic powder. 3. Heat avocado oil in a large cast iron or non-stick skillet over medium-high heat. The oil should shimmer. 4. Spread the potatoes in an even thin layer. Press down with a spatula. DO NOT TOUCH THEM for 5-6 min. Let the bottom crust form undisturbed. 5. When the bottom is deep golden (lift a corner to check), flip in sections. Press down again. Cook another 4-5 min. 6. The edges should be lacy and shatteringly crispy. The center should be tender. If your hash browns are pale and floppy, your oil wasn't hot enough or your potatoes were too wet.

Per serving (1/2 the batch): ~120mg Na | ~55mg P | ~250mg K *(without leaching this would be ~450mg K — leaching is critical)*

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10. Garden Fold Omelette Bar

"The word 'omelette' derives from the French 'alumelle,' meaning thin blade — a reference to the flat shape of the egg dish, which first appeared in French cookbooks in the 1600s."

Base (same for all three):

Ingredient	Amount	CKD Notes
Eggs	3 large	~285mg P, ~210mg Na for 3 eggs
Unsweetened almond milk	1 tbsp	Makes eggs silkier
Salt	Pinch	
Black pepper	To taste	
Margarine	1 tbsp (for pan)	

Method (The French Technique — works for all three): 1. Whisk eggs, almond milk, salt, pepper until uniform — no streaks of white. 2. Heat an 8-10" non-stick skillet over medium heat. Add margarine, swirl to coat. 3. Pour in egg mixture. Let it set for 30 seconds without touching. 4. Using a silicone spatula, gently push the edges toward the center while tilting the pan to let raw egg flow to the edges. Repeat around the pan. 5. When the top is STILL slightly wet (it finishes cooking from residual heat), add filling to one half. 6. Fold the other half over. Slide onto plate. The inside should be barely set, not dry.

Filling Combo 1: The Western

Ingredient	Amount	CKD Notes
Diced ham (low-sodium)	2 tbsp	Use low-sodium deli ham — regular ham is a Na bomb
Bell pepper, diced	2 tbsp	

Ingredient	Amount	CKD Notes
White onion, diced	2 tbsp	
Sharp cheddar, shredded	2 tbsp	

Saute ham, pepper, onion in a separate pan first (2 min). Add to omelette.

Per omelette: ~310mg Na | ~290mg P | ~250mg K

Filling Combo 2: The Mediterranean

Ingredient	Amount	CKD Notes
Fresh spinach	Small handful (1/4 cup)	Wilted — raw spinach is HIGH K, but a small wilted amount is acceptable
Sun-dried tomatoes (not in oil)	2 pieces, chopped	Small portion — concentrated K, keep it minimal
Feta cheese, crumbled	1 tbsp	Salty — 1 tbsp keeps Na in check
Fresh basil	3-4 leaves, torn	

Wilt spinach in the pan before adding eggs, or add raw and let the omelette's heat wilt it.

Per omelette: ~290mg Na | ~280mg P | ~270mg K

Filling Combo 3: The Garden

Ingredient	Amount	CKD Notes
White mushrooms, sliced	3-4 mushrooms	Lower K than portobello
Zucchini, diced small	2 tbsp	Low K vegetable
Red bell pepper, diced	2 tbsp	
Fresh herbs (chives, parsley)	1 tbsp, chopped	
Swiss cheese	1 slice, torn	

Saute veggies 3-4 min until tender before adding to omelette.

Per omelette: ~270mg Na | ~275mg P | ~280mg K

11. Candlemas Crepes

"The tradition of eating crepes on Candlemas (February 2) in France dates back to the 5th century, when Pope Gelasius I distributed crepes to pilgrims arriving in Rome — the round golden shape symbolized the sun and the approaching spring."

Crepe Batter:

Ingredient	Amount	CKD Notes
All-purpose flour	1 cup	White flour
Eggs	2 large	
Unsweetened almond milk	1.25 cups	
Water	1/4 cup	Thins the batter — crepes need to be thin
Avocado oil	2 tbsp	In the batter for non-stick and tender crepes
Sugar	1 tbsp	For sweet crepes. Omit for savory.
Salt	Pinch	
Vanilla extract	1 tsp	For sweet crepes. Omit for savory.

Method: 1. Blend ALL batter ingredients in a blender for 15 seconds. Scrape sides, blend 5 more seconds. (You can whisk by hand, but blender = perfectly smooth batter.) 2. Refrigerate batter 30 min minimum (1 hour ideal). This lets the gluten relax — no rubbery crepes. 3. Heat an 8-10" non-stick skillet over medium heat. Lightly oil with a paper towel dipped in avocado oil. 4. Pour ~3 tbsp batter into the center, then IMMEDIATELY tilt and swirl the pan in a circle to spread the batter into a thin even layer. Speed matters — you have about 3 seconds before it sets. 5. Cook 1-2 min until the edges lift and the bottom is light golden with brown lace spots. 6. Flip with a thin spatula (or your fingers if you're brave). Cook 30 seconds more. 7. Stack finished crepes with parchment between them to prevent sticking. They'll stay pliable.

Makes: 10-12 crepes

Sweet Fillings:

Strawberry Cream Cheese:

Filling	Amount
Cream cheese, softened	2 oz
Powdered sugar	2 tbsp
Fresh strawberries, sliced	1/2 cup
Maple syrup drizzle	1 tbsp

Spread cream cheese mixture on crepe, layer strawberries, fold into quarters, drizzle syrup.

Cinnamon Sugar: Margarine + cinnamon + sugar. The Parisian street-cart classic.

Savory Fillings:

Ham & Cheese:

Filling	Amount
Low-sodium deli ham	2 slices
Swiss cheese	1 slice
Dijon mustard	1/2 tsp

Layer ham and cheese on crepe, fold into quarters, heat in pan until cheese melts.

Egg & Veggie: Scrambled egg + sauteed bell pepper + onion + herbs. Breakfast crepe.

Per crepe (unfilled): ~55mg Na | ~45mg P | ~40mg K **Per crepe (strawberry cream cheese filling):** ~90mg Na | ~65mg P | ~80mg K

12. Maple Crunch Granola

"Granola was invented in 1863 by Dr. James Caleb Jackson at a health spa in Dansville, New York — he called it 'granula' and it was so hard it had to be soaked overnight before eating."

Ingredient	Amount	CKD Notes
Old-fashioned rolled oats	3 cups	Oats are moderate P (~150mg/cup) — portion control matters, but homemade avoids phosphate additives
Rice cereal (puffed rice or Rice Krispies)	1 cup	Bulks up the granola with a low-P filler — plus the crunch is excellent
Avocado oil	1/4 cup	
Honey	1/3 cup	CKD-aware sweetener
Brown sugar	2 tbsp	
Vanilla extract	1 tsp	
Ground cinnamon	1 tsp	
Salt	1/4 tsp	
Unsweetened coconut flakes	1/3 cup	Lower P than almonds/walnuts
Dried cranberries	1/3 cup	Lower K than raisins or dried apricots

What's NOT in here (and why):

Common Granola Ingredient	Why It's Excluded
Almonds/walnuts/cashews	High P (130-160mg per oz) — if you MUST, limit to 1 tbsp sliced almonds
Dried banana chips	High K
Raisins	High K (~300mg per 1/4 cup)
Chocolate chips	Often contain phosphate additives — check label if adding
Store-bought granola	Almost always contains sodium phosphate, calcium phosphate, or other P additives in the ingredient list

Method: 1. Preheat oven to 300F. Line a large sheet pan with parchment. 2. Mix oats and rice cereal in a large bowl. 3. In a small saucepan, warm oil + honey + brown sugar over low heat until sugar dissolves. Stir in vanilla, cinnamon, salt. 4. Pour wet mixture over dry. Toss until every flake is coated. 5. Spread in an even layer on the sheet pan. Press down firmly with a spatula (this creates clusters). 6. Bake 40-45 min, stirring ONCE at the 20-

minute mark. The granola should be golden and fragrant. It will still feel soft — it crisps as it cools. 7. Let cool COMPLETELY on the pan without touching it. Seriously. This is how clusters form. 8. Once cool, break into chunks. Fold in coconut flakes and dried cranberries. 9. Store in an airtight container. Lasts 2 weeks at room temperature.

Per 1/2 cup serving: ~60mg Na | ~95mg P | ~110mg K

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13. Morning Jar Oats

"Bircher muesli, the direct ancestor of overnight oats, was created around 1900 by Swiss physician Maximilian Bircher-Benner for patients at his sanatorium in Zurich."

Base Recipe:

Ingredient	Amount	CKD Notes
Old-fashioned rolled oats	1/2 cup	~150mg P per cup, so 1/2 cup = ~75mg P
Unsweetened almond milk	1/2 cup	
Plain yogurt (non-Greek)	2 tbsp	Regular yogurt, NOT Greek — Greek yogurt has nearly double the P
Maple syrup or honey	1 tbsp	
Vanilla extract	1/2 tsp	
Chia seeds	1 tsp	Small amount — chia is moderate P, 1 tsp is fine

Method: 1. Combine all ingredients in a jar or container with a lid. 2. Stir well (or shake with lid on). 3. Refrigerate overnight (minimum 6 hours). 4. In the morning, stir. Add a splash more almond milk if too thick. 5. Eat cold or microwave 1-2 min if you prefer warm.

Flavor variations (mix in before refrigerating or top in the morning):

Variation	Add-ins	Extra CKD Notes
Blueberry Vanilla	1/4 cup blueberries + extra vanilla	Blueberries are one of the lowest-K fruits
Cinnamon Apple	1/4 cup diced apple + 1/2 tsp cinnamon + 1 tsp brown sugar	Apples are renal-aware, ~150mg K per medium apple
Strawberry	1/4 cup sliced strawberries + 1 tsp honey drizzle	
PB&J	1 tbsp peanut butter + 1 tbsp strawberry jam	PB adds ~60mg P per tbsp — occasional treat, not daily
Cranberry Coconut	2 tbsp dried cranberries + 1 tbsp coconut flakes	Low K combo

Per serving (base recipe): ~50mg Na | ~100mg P | ~140mg K

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14. North African Skillet Eggs

"Shakshuka likely originated in Ottoman North Africa — the word comes from the Berber or Arabic for 'a mixture,' and the dish traveled across the Middle East before becoming Israel's national breakfast by the mid-20th century."

Ingredient	Amount	CKD Notes
Eggs	4 large	Poached directly in the sauce
Canned diced tomatoes (no salt added)	1 can (14.5 oz)	NO SALT ADDED is critical — regular canned tomatoes = 400mg+ Na per can. Tomatoes are moderate K, but the portion per serving is controlled.
Red bell pepper	1 medium, diced	
White onion	1 medium, diced	
Garlic	3 cloves, minced	
Avocado oil	2 tbsp	
Cumin	1 tsp	
Paprika	1 tsp	
Smoked paprika	1/2 tsp	The smoky depth that separates OK shakshuka from great shakshuka
Cayenne	1/4 tsp (or to taste)	
Black pepper	1/2 tsp	
Salt	1/4 tsp	
Sugar	1/2 tsp	Cuts tomato acidity
Fresh cilantro or parsley	For garnish	
Crusty white bread	For serving	For dipping — sourdough or white baguette
Feta cheese	1 tbsp crumbled (optional)	Small portion — adds salt and tang

Method: 1. Heat oil in a deep 10-12" skillet (cast iron ideal) over medium heat. 2. Saute onion and bell pepper until soft (5-6 min). 3. Add garlic, cook 30 seconds until fragrant. Add cumin, paprika, smoked paprika, cayenne, black pepper. Stir and toast spices 1 min — they should bloom in the oil and smell incredible. 4. Add diced tomatoes (with liquid), salt, sugar. Stir and bring to a simmer. Cook 10-12 min, stirring occasionally, until the sauce thickens and reduces slightly. You want a thick sauce, not soup. 5. Taste and adjust seasoning. The sauce should be bold and slightly smoky. 6. Make 4 wells in the sauce with the back of a spoon. Crack one egg into each well. 7. Cover the skillet with a lid. Reduce heat to medium-low. Cook 5-8 min: 5 min for runny yolks, 8 min for set yolks. Check frequently. 8. Remove from heat. Garnish with cilantro/parsley and optional feta crumbles. 9. Serve in the skillet with crusty white bread for scooping. Shakshuka is communal — everyone eats from the pan.

Per serving (2 eggs + 1/2 the sauce): ~250mg Na | ~200mg P | ~380mg K

The K is on the higher side from the tomatoes. If you're on a strict K limit, use 3/4 of the tomato can instead of the full can, and add 2 tbsp water to compensate.

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15. Stale-Tortilla Magic Chilaquiles

"Chilaquiles comes from the Nahuatl word 'chilaquilitl,' meaning 'chilis and greens' — the dish was originally an ancient Aztec method for using stale tortillas, predating European contact in the Americas."

Ingredient	Amount	CKD Notes
Corn tortillas	6-8 (stale or oven-dried)	Cut into triangles and fried/baked — corn tortillas are lower Na than flour
Avocado oil	3 tbsp (for frying chips)	Or bake for a lighter version
Salsa verde (homemade or low-sodium store)	1 cup	Tomatillo-based — LOWER K than red tomato salsa. Check Na on store brands (<300mg per 1/2 cup)
Eggs	2-4, fried or scrambled	Served on top
Queso fresco or feta	2 tbsp, crumbled	Lower Na per oz than cheddar
Sour cream or Mexican crema	2 tbsp	
White onion	2 tbsp, thinly sliced	
Fresh cilantro	For garnish	
Lime	1 wedge per serving	
Avocado	2-3 slices per serving (optional)	Moderate K (~150mg per 1/4 avocado) — small portion OK

Quick CKD Salsa Verde (if making from scratch):

Ingredient	Amount
Tomatillos	6 medium, husked and rinsed
Jalapeno	1, halved and seeded
Garlic	2 cloves
White onion	1/4, chunked
Cilantro	Small bunch
Lime juice	1 tbsp
Salt	1/4 tsp
Water	2-3 tbsp (to thin)

Broil tomatillos, jalapeno, garlic, onion on a sheet pan 5-6 min until charred. Blend with cilantro, lime, salt, water. This salsa is MUCH lower Na than anything in a jar.

Method: 1. **Make chips:** Cut corn tortillas into triangles (6 per tortilla). Either fry in oil until golden and crispy (2-3 min per batch) OR brush with oil and bake at 375F for 12-15 min. 2. Warm salsa verde in a large skillet over medium heat. 3. Add the chips to the salsa. Toss gently to coat. Cook 2-3 min — you want the chips to soften slightly on the outside but stay crispy in the center. This is the soul of chilaquiles: the tension between crisp and sauced. 4. While chips cook in salsa, fry eggs in a separate skillet (sunny side up or over easy — runny yolk is mandatory). 5. Plate the sauced chips. Top with fried eggs. Garnish with crumbled cheese, sour cream, sliced onion, cilantro, lime wedge, avocado slices. 6. Eat immediately. Chilaquiles wait for no one — they go from perfect to mush in 5 minutes.

Per serving (half the batch + 2 eggs): ~290mg Na | ~210mg P | ~320mg K

CKD Breakfast Safety Reference

CKD Principle	Application in This Chapter
Phosphorus-free baking powder	Used in ALL baked items: waffles, pancakes, biscuits, cinnamon rolls. Rumford aluminum-free is the standard. Regular baking powder contains sodium aluminum phosphate — a phosphorus additive with near-100% absorption rate.
White flour > whole wheat	Every recipe specifies all-purpose or brioche. Whole wheat has ~120mg more P per cup and higher K. Refined flour is one of the rare cases where the "less healthy" option is the correct CKD choice.
K-leaching potatoes	Hash browns require 4+ hour cold water soak. Non-negotiable. Removes 40-50% of potassium. Without leaching, a serving of hash browns can hit 500mg+ K.
Turkey sausage > pork sausage	Lower P and Na per ounce. Always check the label for "sodium phosphate" in the ingredients — some turkey sausage brands add it back. If it says phosphate anywhere, put it back on the shelf.
Almond milk replaces dairy	~5mg P per cup vs ~230mg P per cup (whole milk). Used in every recipe that would traditionally call for milk. Unsweetened only — flavored varieties add unnecessary sugar and sometimes phosphate.
Eggs: 2-3 per meal	Eggs are CKD's best breakfast protein. High biological value, ~95mg P per egg, ~70mg Na per egg. Two eggs is one example serving. A larger serving changes phosphorus and protein totals, so compare it with your individualized targets and the rest of the day.
Maple syrup: check the portion and glucose plan	~40mg K, ~3mg P, ~2mg Na per tablespoon. Basically sugar and water with trace minerals. Use it.
Cream cheese for frosting	28mg P per oz (cream cheese) vs 40mg P per oz (butter). Also lower Na. And it tastes better on cinnamon rolls anyway.

Quick Renal Number Reference — All 15 Recipes

#	Recipe	Na (mg)	P (mg)	K (mg)
1	French Toast (2 slices + syrup)	120	105	130
2	Waffles (1 waffle)	110	95	90
3	Pancakes (3 + compote)	140	90	150
4	Eggs Benedict (2 halves)	280	230	200
5	Breakfast Burrito (1)	350	220	280
6	Biscuits & Gravy (2 + gravy)	320	170	190
7	Cinnamon Roll (1)	190	80	85
8	Breakfast Sandwich (1)	380	200	170
9	Hash Browns (1/2 batch, leached)	120	55	250
10a	Omelette — Western	310	290	250
10b	Omelette — Mediterranean	290	280	270
10c	Omelette — Garden	270	275	280
11	Crepe (strawberry cream cheese)	90	65	80
12	Granola (1/2 cup)	60	95	110
13	Overnight Oats (base)	50	100	140
14	Shakshuka (2 eggs + sauce)	250	200	380
15	Chilaquiles (half batch + 2 eggs)	290	210	320

General CKD daily targets for reference: Na <2,000mg | P <800-1,000mg | K varies by labs (typically 2,000-3,000mg). These are breakfast numbers — plan your other meals accordingly.

CHAPTER 2

American Soul Food

"Comfort has no restrictions."

Country Fried Steak, Fried Chicken, Mac & Cheese, Gumbo, BBQ, Breakfast

"Comfort has no restrictions."

> *"One cannot think well, love well, sleep well, if one has not dined well." — Virginia Woolf*

FAMILY FAVORITES

Bob, Susan, and Stephanie recipes gathered into the Comfort chapter.

BOB'S RECIPES

Bob's Split Pea Soup

"No one who cooks, cooks alone." — Laurie Colwin

Ingredient	Amount	CKD Notes
Green split peas	1 cup, rinsed	Moderate K — rinse well, and the serving size controls it
Low-sodium chicken broth	4 cups	NOT regular broth
Turkey bacon	4 strips, chopped	Bob's version would have ham. Turkey bacon keeps the smoke.
Onion	1 medium, diced	
Carrots	2, diced	Moderate K — small amount across 6 servings
Celery	2 stalks, diced	
Garlic	3 cloves, minced	
Dried thyme	1 tsp	
Bay leaf	1	
Black pepper	1/2 tsp	
Salt	1/4 tsp	
Apple cider vinegar	1 tsp (finish)	Brightens everything at the end

Method: 1. Cook turkey bacon in Dutch oven until crispy. Remove, leave drippings. 2. Sauté onion + carrots + celery in drippings 5 min. 3. Add garlic 1 min. 4. Add split peas + broth + thyme + bay leaf + pepper. 5. Bring to boil. Reduce to low simmer. Cover. 6. Cook 45-60 min, stirring occasionally, until peas dissolve into thick soup. 7. Remove bay leaf. Stir in vinegar + salt. 8. Serve topped with crumbled turkey bacon. 9. Make enough for six. Give five bowls away.

Per serving (6 servings): ~180mg Na | ~130mg P | ~350mg K

Bob's Box - "The Costco Run & Wine Pairing"

Costco runs. Good wine. Enough for everyone.

Compartment	What Goes In	Why
1 — Cheese	Aged cheddar, Brie wedge, or Kirkland Manchego — wine demands real cheese	Bob knows wine. Wine demands a cheese board. Costco's cheese section is elite.
2 — Crackers	Costco water crackers or fig & olive crisps	The cracker that doesn't compete with the wine or the cheese.
3 — Nuts	Marcona almonds or Costco roasted cashews (1/4 cup)	The wine pairing nut. Marcona > regular almonds. Bob knows.
4 — Fruit	Red grapes + dried apricots + fresh figs (when in season)	Classic wine accompaniments. Grapes with wine is redundant and perfect.
5 — Meat	Costco Columbus salami or prosciutto (thin-sliced, rolled)	The charcuterie lane. Wine + cured meat = civilization.
6 — Sweet	Dark chocolate (70%+) squares + Kirkland chocolate covered almonds	The wine closer. Dark chocolate + a good red = the end of the evening.

Wine note: Bob pairs. Red wine is lower-K than white (Andrew's CKD note if sharing). A 4oz glass is manageable. Bob would know the vintage, the region, and the story behind the bottle before the cork is pulled.

Bob's Theorem applied: This box costs ~$5 to fill from Costco bulk — but it pairs with a $40 bottle he already has. Bob would fill 10 boxes and hand them out with a wine recommendation card tucked in. That's who he is.

Box style: No-frills clear Gladware. Function over form. Bob doesn't need a sticker. Bob IS the sticker.

BOB'S SPECIALS

> *"Generosity is the only rational economic strategy." — Bob's Theorem*

Bob's Ultra-Fresh Sweet & Spicy Ceviche

"Raw fish cured in citrus. No heat required. The acid does the cooking. The chili does the rest."

Base (works with any seafood):

Ingredient	Amount	CKD Notes
Fresh seafood (pick one or mix):		
Wild shrimp, peeled + deveined	1 lb	Andrew's #1 — lowest P seafood
Wild salmon, sushi-grade, 1/2" dice	1 lb	Wild only — never farmed
Wild cod or tilapia, 1/2" dice	1 lb	Mild, clean, takes the marinade well
Scallops, quartered	1 lb	Sweet + luxurious

The Cure (sweet + spicy + ultra fresh):

Ingredient	Amount	CKD Notes
Lime juice	1 cup (8-10 limes)	The house fix — best fresh squeezed, not bottled
Lemon juice	1/4 cup	Brightens the lime
Fresh mango, small dice	1/2 cup	Sweet counterpoint
Fresh pineapple, small dice	1/4 cup	More sweet acid
Red onion, finely diced	1/4 cup	Rinse in cold water first to tame raw bite
Jalapeño	1, seeded, minced	Seeds out = sweet heat, seeds in = war
Serrano	1, minced	The real spice — add half, taste, then decide
Habanero	1/4, minced (optional — for the brave)	Bob would want this in there
Fresh cilantro	1/2 cup, rough chopped	
Cucumber, peeled, seeded, diced	1/2 cup	Cool + crunch
Avocado	1, diced (add at the end)	Moderate K — worth it for texture
Olive oil	1 tbsp	Silky finish
Honey	1 tbsp	The sweet in sweet & spicy
Salt	1/4 tsp	

Method: 1. Cut seafood into 1/2" pieces. Place in glass bowl (never metal — acid reacts). 2. Pour lime + lemon juice over seafood. Every piece must be submerged. Cover. 3. Refrigerate **minimum 30 min** (shrimp) to **2 hours** (firm fish). The acid "cooks" the protein — flesh turns opaque. 4. Drain about half the citrus juice (too much = rubbery). 5. Fold in mango, pineapple, cucumber, onion, jalapeño, serrano, cilantro, honey, olive oil. 6. Add habanero if Bob's ghost is watching. 7. Add avocado last — fold gently so it doesn't mush. 8. Serve immediately in small bowls or on tostadas. Or eat it with a spoon standing at the counter.

Per serving (4 servings): ~130mg Na | ~180mg P | ~350mg K

Makes 4 servings.

Bob's Drumstick Ice Cream Cone Dupe

"The ice cream truck isn't coming. But this is better anyway."

Chocolate-Dipped Waffle Cone:

Ingredient	Amount	CKD Notes
Sugar cones (store-bought)	6	Low P, low Na — read label for phosphate additives
Semi-sweet chocolate chips	1/2 cup	
Coconut oil	1 tsp	Thins the chocolate for dipping
Chopped peanuts	3 tbsp	Moderate P — small amount for the crunch coating

CKD Vanilla Ice Cream Filling:

Ingredient	Amount	CKD Notes
Heavy cream	1 cup	Moderate P — portion controlled across 6 cones
Unsweetened almond milk	1 cup	Cuts the dairy P in half
Sugar	2/3 cup	
Vanilla extract	2 tsp	Real vanilla
Egg yolks	3	
Pinch of salt		

The Magic Shell Top:

Ingredient	Amount
Semi-sweet chocolate chips	1/2 cup
Coconut oil	2 tbsp

Method: 1. **Ice cream:** Heat cream + almond milk + sugar until steaming. Temper into yolks. Return to heat, stir to 170F. Strain, add vanilla. Chill overnight. Churn in ice cream maker. 2. **Prep cones:** Melt 1/2 cup chocolate + 1 tsp coconut oil. Dip inside rim of each cone in chocolate (seals the bottom so it doesn't leak). Roll outer rim in chopped peanuts. Set upside down on parchment. Freeze 10 min. 3. **Fill:** Scoop ice cream into prepared cones. Pack it tight. Round the top into a dome. Freeze 1 hour until firm. 4. **Magic shell:** Melt 1/2 cup chocolate + 2 tbsp coconut oil. Let cool 2 min (still liquid but not screaming hot). 5. **Dip:** Dip the ice cream dome into magic shell. It hardens on contact (the coconut oil is the trick). Immediately press a few more chopped peanuts into the wet chocolate. 6. Eat immediately or wrap individually in plastic and freeze.

Per cone: ~110mg Na | ~95mg P | ~140mg K — That's a real Drumstick at half the phosphorus.

Makes 6 cones. $0.80 each.

Bob's Mushroom Theorem

A dish that proves, mathematically, that generosity is the only rational economic strategy.

Ingredient	Amount
Mushrooms	As many as you can carry
Rice	1 cup
Margarine	Some
Garlic	4 cloves
Thyme	Fresh

Ingredient	Amount
The knowledge that you're making this for someone else	Required

Method: Cook the mushrooms. Cook the rice. Combine them. Put them on two plates. Give one away. The plate you gave away tastes better than the plate you kept. This is not a metaphor. This is thermodynamics.

Proof: Let G = generosity, R = return. For all $G > 0$, R approaches ∞ as the number of plates given away increases. The limit does not exist because there is no upper bound on what comes back when you feed someone without asking for anything. ■

SUSAN'S KITCHEN

> *"After a good dinner, one can forgive anybody, even one's own relatives." — Oscar Wilde*

Susan's Cornbread with Hot Dogs

It's exactly what it sounds like. It's perfect.

The Original (Susan's Way): Cut hot dogs into coins. Pour cornbread batter over them in a cast iron skillet. Bake until golden. Eat with mustard. Don't explain it to anyone. Don't apologize.

CKD Version:

Ingredient	Amount	CKD Notes
Turkey hot dogs	4, sliced into coins	Lower Na than beef franks
Cornbread batter (GF cornbread recipe, Ch 11)	1 batch	Rumford BP, almond milk, margarine
Yellow mustard	For serving	Lowest Na condiment

Method: Grease cast iron skillet. Scatter hot dog coins across the bottom. Pour cornbread batter over them. Bake 400F 20-25 min until golden. Flip onto cutting board. The hot dogs are embedded in the bottom like fossils. Cut into wedges. Dip in mustard. Remember.

Susan's Cream of Mushroom Everything

She put cream of mushroom soup in things that had no business containing cream of mushroom soup. It worked every time.

The Original: 1 can Campbell's Cream of Mushroom + literally any protein + rice or noodles = dinner.

CKD Version — The Susan Casserole Formula:

Ingredient	Amount	CKD Notes
Homemade cream of mushroom soup (recipe #2 above)	2 cups	Not the can. The can has 870mg Na per cup.
Chicken thighs, cooked and shredded	1 lb	
Jasmine rice, cooked	2 cups	
Frozen green beans	1 cup	Frozen is fine here — Susan would insist
Sharp cheddar, shredded	1/2 cup (on top)	
Black pepper	1/4 tsp	

Method: Mix mushroom soup + chicken + rice + green beans in a baking dish. Top with cheddar. Bake 375F 20 min until bubbly. This is Susan's dinner. The mushroom soup is the glue. The recipe is the love.

Per serving (4 servings): ~190mg Na | ~180mg P | ~360mg K (vs canned version: ~900mg Na)

Susan's Sprite with Splenda

A beverage that exists because Susan said it did.

The Original: Sprite. Splenda. Stir. Serve. That's it. That's the recipe.

CKD Note: Sprite is actually one of the more renal-aware sodas — no phosphoric acid (that's Coke/Pepsi), moderate K. Adding Splenda cuts sugar if you're watching glucose. Susan was accidentally ahead of her time.

The CKD upgrade (if you want one): Sparkling water + fresh lime juice + Splenda or stevia. Same vibe. Zero sodium. Susan would say the original was fine and she'd be right.

Susan's Tuna Noodle Casserole

The Midwest's answer to everything.

The Original: Egg noodles + canned tuna + cream of mushroom soup + frozen peas + crushed potato chips on top.

CKD Version:

Ingredient	Amount	CKD Notes
Egg noodles (or GF rice noodles)	8 oz, cooked	
Canned tuna in water	1 can (5oz), drained and rinsed	Andrew doesn't like canned fish — sub shredded chicken for him. Vespa gets the tuna.
Homemade cream of mushroom soup (recipe #2)	1.5 cups	
Frozen peas	1/2 cup	Moderate K — small amount is fine
Sharp cheddar	1/4 cup, shredded	
Panko breadcrumbs	1/3 cup	Replaces potato chips — still crunchy
Margarine	1 tbsp (melted, tossed with panko)	
Black pepper	1/4 tsp	

Method: Mix noodles + tuna (or chicken) + mushroom soup + peas in baking dish. Top with cheddar + buttered panko. Bake 375F 20 min. The panko gets golden. The cheese bubbles. Susan nods.

Susan's Hamburger Helper (From Scratch)

Because Susan's version came from a box and it was still good and that's okay.

Ingredient	Amount	CKD Notes
Ground turkey or chicken	1 lb	No pork. Lower P than beef.
Elbow pasta	8 oz, cooked	
No-salt-added tomato paste	2 tbsp	
Low-sodium beef broth	1 cup	
Unsweetened almond milk	1/2 cup	
Sharp cheddar	1/2 cup, shredded (stir in at end)	
Onion powder	1 tsp	
Garlic powder	1 tsp	
Paprika	1/2 tsp	
Costco no-salt seasoning	1 tsp	
Black pepper	1/4 tsp	
Salt	1/4 tsp	

Method: Brown meat, drain fat. Add tomato paste, stir 1 min. Add broth + almond milk + all seasonings. Simmer 5 min. Add cooked pasta + cheddar. Stir until melted and creamy. Serve in bowls. Tell no one it's homemade. Let them think it came from a box. Susan would.

Per serving (4 servings): ~200mg Na | ~190mg P | ~320mg K

Susan's Jell-O "Salad"

It's not a salad. It never was. Midwest calls it a salad anyway.

The Original: Lime Jell-O + cottage cheese + crushed pineapple + Cool Whip. Called "salad" at potlucks. Brought in a Pyrex dish with tin foil. Nobody questions it.

CKD Version:

Ingredient	Amount	CKD Notes
Lime Jell-O	1 small box	Low K/P/Na — one of the safest CKD desserts
Boiling water	1 cup	

Ingredient	Amount	CKD Notes
Cold water	1/2 cup	
Crushed pineapple, drained	1/2 cup (canned, drained well)	Draining removes K
Whipped topping (Cool Whip or coconut whipped cream)	1 cup	

Method: Dissolve Jell-O in boiling water. Add cold water. Chill until partially set (~45 min). Fold in drained pineapple + whipped topping. Refrigerate until firm. Cut into squares. Call it salad. Bring it in a Pyrex dish. Cover with tin foil. Susan's spirit is in the tin foil.

Susan's Meatloaf

Every Midwest mom's meatloaf is different. Every Midwest mom's meatloaf is the same.

Ingredient	Amount	CKD Notes
Ground turkey	1.5 lbs	Susan used beef. We use turkey. She'd understand.
Breadcrumbs	1/2 cup	
Egg	1	
Onion, finely diced	1/2 cup	
Garlic powder	1 tsp	
Costco no-salt seasoning	1 tsp	
Worcestershire sauce	1 tbsp	Small amount = controlled Na
Black pepper	1/2 tsp	
Salt	1/4 tsp	

Glaze:

Ingredient	Amount
No-salt-added tomato paste	2 tbsp
Brown sugar	1 tbsp
Yellow mustard	1 tsp
Apple cider vinegar	1 tsp

Method: Mix everything (except glaze) with your hands. Don't overmix — tough meatloaf is a crime. Shape into loaf on sheet pan or in loaf pan. Mix glaze, brush on top. Bake 375F 45-50 min until 165F internal. Rest 10 min before slicing. Serve with mashed potatoes (K-leached, recipe in Ch 1). The glaze caramelizes and gets sticky and sweet and Susan would say "it's ready" without checking the temperature because she always knew.

Per serving (6 servings): ~190mg Na | ~170mg P | ~280mg K

Susan's Totino's Pizza Rolls (From Scratch)

Invented 1968 by Jeno Paulucci in Duluth, Minnesota. 290+ billion sold since. Wonton wrapper version.

Filling:

Ingredient	Amount	CKD Notes
Turkey pepperoni, diced small	1/4 cup	Lower Na than regular pepperoni
No-salt-added tomato paste	2 tbsp	
Water	2 tbsp	
Italian seasoning	1/2 tsp	
Garlic powder	1/4 tsp	
Mozzarella, shredded	1/2 cup	Fresh mozz diced small works too
Black pepper	Pinch	

Wrappers:

Option	Notes
Wonton wrappers	Easiest — buy at Fred Meyer/Asian aisle
Egg roll wrappers, cut into 3" squares	Thicker, crunchier
Homemade: flour + water + salt dough, rolled thin	Control everything

Method: 1. Mix tomato paste + water + Italian seasoning + garlic powder into a thick sauce. 2. Lay wonton wrappers flat. Drop 1 tsp sauce + a few pepperoni pieces + pinch of mozzarella in center. 3. Wet edges with finger dipped in water. Fold corner to corner (triangle) or bring all corners to center (bundle). Press to seal. 4. **Bake:** 400F on parchment, brush with olive oil, 12-15 min until golden and blistered. 5. **Or fry:** 350F oil, 2 min per side until golden and puffy. 6. Let cool 2 min. The inside is molten. Susan knew this and ate them immediately anyway.

Makes ~30 rolls. Per 5 rolls: ~140mg Na | ~65mg P | ~80mg K (vs Totino's: ~400mg Na per 6 rolls)

Vespa's Ham & Cheese Hot Pockets / Toaster Strudels

"The after-school food that Vespa elevated to a lifestyle."

Dough (makes 8 pockets):

Ingredient	Amount
All-purpose flour	2 cups
Cold margarine, cubed	1/2 cup
Cream cheese	2 oz, cold
Cold water	3-4 tbsp
Salt	1/2 tsp

Ham & Cheese Filling:

Ingredient	Amount	CKD Notes
Deli turkey (sub for ham — or use real ham for anyone at the table who is not on a kidney diet)	4 oz, chopped	Turkey for Andrew, ham for Vespa
Havarti, shredded	1/2 cup	Vespa's cheese
Mozzarella, shredded	1/4 cup	
Dijon mustard	1 tsp	Inside the pocket
Black pepper	Pinch	

Method: 1. **Dough:** Pulse flour + salt + margarine + cream cheese in food processor until pea-sized. Add cold water until dough holds. Wrap, chill 30 min. 2. Roll dough thin. Cut into rectangles (~4x6"). 3. Spoon filling onto one half. Fold over. Crimp edges with fork. Poke top twice with fork (steam vents). 4. **Egg wash:** Brush with beaten egg. 5. **Bake:** 400F on parchment, 18-22 min until deep golden and puffed.

Toaster Strudel version: Same recipe but thinner dough, pipe cream cheese icing on top after baking (2 oz cream cheese + 1/4 cup powdered sugar + splash of almond milk, whisked). The icing is the move.

Per pocket: ~180mg Na | ~95mg P | ~100mg K

Girl Scout Samoa Cookie Dupe

"Caramel. Coconut. Chocolate. The cookie that funds an empire."

Ingredient	Amount	CKD Notes
Shortbread base:		
All-purpose flour	1.5 cups	
Margarine, softened	1/2 cup	
Powdered sugar	1/3 cup	
Vanilla	1/2 tsp	
Salt	1/4 tsp	
Caramel-coconut topping:		
Caramels (unwrapped)	25 pieces (~8oz)	Or homemade: sugar + margarine + cream
Unsweetened almond milk	2 tbsp	Thin the caramel
Shredded coconut, toasted	2 cups	Toast in dry skillet until golden
Salt	Pinch	
Chocolate drizzle:		
Semi-sweet chocolate chips	1/2 cup	
Coconut oil	1 tsp	

Method: 1. **Shortbread:** Cream margarine + sugar + vanilla. Mix in flour + salt. Roll to 1/4" thick. Cut 2" rounds. Use a small cutter or bottle cap to punch center hole (the Samoa ring). Bake 325F 12-14 min until just barely golden. Cool completely. 2. **Caramel-coconut:** Melt caramels with almond milk in saucepan over low heat, stirring constantly. Fold in toasted coconut. Work fast — it sets up. 3. **Assemble:** Spoon caramel-coconut onto each cookie ring, pressing to coat the top and sides. Set on parchment. 4. **Chocolate:** Melt chocolate + coconut oil. Dip bottoms of cookies in chocolate. Then drizzle stripes across the top. Refrigerate 15 min to set. 5. Try not to eat them all while they're setting. You will fail. That's okay.

Per cookie (makes ~20): ~55mg Na | ~30mg P | ~45mg K

> *"The shared meal elevates eating from a mechanical process to a ceremony." — Wendell Berry*

CKD Considerations

```
RENAL CHECK — Mushroom Farm & Susan's Kitchen
K (Potassium): LOW-MED (mushrooms are moderate K, but per-serving
amounts are controlled)
P (Phosphorus): LOW-MED (homemade cream of mushroom = no phosphate
preservatives from cans)
Na (Sodium): LOW (homemade everything, no canned soups, low-sodium
broth)
NOTE: The cream of mushroom soup recipe (#2) replaces canned in ALL
Susan recipes.
One batch of homemade = 140mg Na/serving. One can of Campbell's =
870mg Na/serving.
Susan's recipes live on. The sodium doesn't.
```

> *"There is no sincerer love than the love of food." — George Bernard Shaw*

STEPHANIE'S CLASSICS

"Tell me what you eat, and I will tell you what you are. — Brillat-Savarin"

S.O.S., Beijing Beef, Empanadas & Stroganoff

"Tell me what you eat, and I will tell you what you are." — Brillat-Savarin

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S.O.S. — Mashed Potatoes with Hamburger Gravy

Originally "Creamed Chipped Beef on Toast" — U.S. military mess halls, WWII era. Soldiers called it S.O.S. The name stuck longer than the war.

K-Leached Mashed Potatoes:

Ingredient	Amount	CKD Notes
Russet potatoes	2 lbs, peeled, 1" cubes	LEACH: soak 2-4 hours in cold water, drain, rinse, boil in fresh water, drain again
Unsweetened almond milk	1/2 cup, warmed	
Margarine	3 tbsp	
Garlic powder	1/2 tsp	
Black pepper	1/4 tsp	
Salt	1/4 tsp	

Hamburger Gravy:

Ingredient	Amount	CKD Notes
Ground beef (90/10)	1 lb	Mom used beef. We use beef.
All-purpose flour	3 tbsp	
Low-sodium beef broth	2 cups	
Onion powder	1/2 tsp	
Garlic powder	1/2 tsp	
Worcestershire sauce	1 tsp	
Black pepper	1/2 tsp (generous)	The pepper is the whole point
Salt	1/4 tsp	

Method: 1. Brown ground beef in skillet, breaking into small crumbles. Drain most fat, keep 2 tbsp. 2. Sprinkle flour over meat + fat. Stir 1 min. 3. Slowly add broth, whisking. Add all seasonings. 4. Simmer until thick and bubbling, 4-5 min. 5. Mash the leached potatoes with almond milk + margarine + seasonings. 6. Pile potatoes on plate. Ladle hamburger gravy over the top. The gravy goes on the potatoes. The potatoes go in your mouth. Nothing else matters.

Per serving (4 servings): ~220mg Na | ~210mg P | ~350mg K

Mom's Beijing Beef (Panda Express Dupe)

Panda Express dupe. Crispy flank steak in sweet ginger-tomato sauce.

Ingredient	Amount	CKD Notes
Flank steak	1 lb, sliced thin against the grain	
Cornstarch	1/4 cup (for coating)	
Avocado oil	For frying (1" deep)	
Bell peppers (red + green)	1 each, cut into 1" pieces	
Onion	1/2, cut into wedges	
Dried red chili peppers	4-6 (for wok toss, not eating)	

Beijing Sauce:

Ingredient	Amount	CKD Notes
No-salt-added tomato paste	2 tbsp	
Rice vinegar	2 tbsp	
Low-sodium soy sauce	1 tbsp	Small amount — the sauce is sweet-forward
Brown sugar	3 tbsp	The sweetness IS the dish
Garlic	3 cloves, minced	
Ginger	1" piece, minced	
Sesame oil	1 tsp	
Cornstarch slurry	1 tbsp cornstarch + 2 tbsp water	

Method: 1. Slice steak thin. Toss in cornstarch until fully coated. 2. Fry in 1" of oil at 375F, 2-3 min per batch until crispy. Drain on rack. 3. Mix all sauce ingredients (except slurry) in a bowl. 4. Hot wok: stir-fry peppers + onion + dried chilies 2 min. 5. Add sauce. Bring to bubble. Add cornstarch slurry. Stir until thick and glossy. 6. Toss in crispy beef. Coat everything. Serve immediately over jasmine rice. 7. The beef stays crispy for about 4 minutes. Eat fast. Mom did.

Per serving (4 servings): ~250mg Na | ~200mg P | ~380mg K

Mom's Green Chile Beef Empanadas

Green chile + beef + cream cheese in crispy dough.

Filling:

Ingredient	Amount	CKD Notes
Ground beef (90/10)	1 lb	
Canned green chiles (diced, mild or hot)	1 can (4oz)	Low K, low Na
Onion	1/2, finely diced	
Garlic	3 cloves, minced	
Cumin	1 tsp	
Chili powder	1/2 tsp	
Cream cheese	2 oz	Binds the filling, adds richness
Salt	1/4 tsp	
Black pepper	1/4 tsp	

Dough (or shortcut):

Ingredient	Amount
All-purpose flour	2.5 cups
Cold margarine, cubed	1/2 cup
Cold water	6-8 tbsp
Salt	1/2 tsp

Ingredient	Amount
Egg wash	1 egg beaten with 1 tbsp water

Shortcut: Use Goya discos (frozen empanada dough) — Mom would understand.

Method: 1. **Filling:** Brown beef + onion. Add garlic 1 min. Add chiles + spices. Stir in cream cheese until melted and combined. Cool 15 min. 2. **Dough:** Pulse flour + salt + margarine in food processor until pea-sized. Add cold water 1 tbsp at a time until dough holds together. Wrap, chill 30 min. Roll thin, cut 5" circles. (Or: use Goya discos.) 3. **Assemble:** Spoon 2 tbsp filling onto each circle. Fold in half. Crimp edges with fork. 4. **Bake:** Brush with egg wash. Bake 400F on parchment-lined sheet, 18-22 min until golden. 5. **Or fry:** 350F oil, 3 min per side until golden and blistered.

Per empanada (makes ~14): ~130mg Na | ~75mg P | ~110mg K

The green chiles + cream cheese inside the crispy shell is the move. Mom knew.

Mom's Beef Stroganoff

"Egg noodles. Sour cream. Beef. Mushrooms. Nothing else needed to happen."

Ingredient	Amount	CKD Notes
Beef sirloin or top round	1 lb, sliced into thin strips	
Egg noodles (wide)	8 oz	Or GF rice noodles
White mushrooms	8 oz, sliced	
Onion	1 medium, sliced thin	
Garlic	3 cloves, minced	
Margarine	2 tbsp	
All-purpose flour	2 tbsp	
Low-sodium beef broth	1.5 cups	
Sour cream	1/2 cup	Stir in OFF HEAT — boiling curdles it
Worcestershire sauce	1 tbsp	
Dijon mustard	1 tsp	Mom's secret — most people skip this
Black pepper	1/2 tsp	
Salt	1/4 tsp	
Fresh parsley	For garnish	

Method: 1. Season beef strips with pepper + salt. Sear in hot skillet with 1 tbsp margarine, 2 min per side. Remove. Don't crowd — do batches. 2. Same pan: add remaining margarine. Sauté mushrooms 5 min until golden. Add onion 3 min. Add garlic 1 min. 3. Sprinkle flour over vegetables. Stir 1 min. 4. Add broth + Worcestershire + mustard. Simmer until thickened, 4-5 min. 5. Return beef to pan. Simmer 2 min. 6. **REMOVE FROM HEAT.** Stir in sour cream. (If you add sour cream to boiling liquid it breaks. Mom learned this once and never forgot.) 7. Serve over egg noodles. Garnish with parsley. The sauce should coat everything like velvet.

Per serving (4 servings): ~240mg Na | ~220mg P | ~400mg K

> *"Cooking is at once child's play and adult joy. And cooking done with care is an act of love." — Craig Claiborne*

CKD Considerations

```
RENAL CHECK — Mom's Classics
K (Potassium): MED (leached potatoes, controlled portions)
P (Phosphorus): MED (beef is moderate P — portion to 4oz per serving)
Na (Sodium): LOW (homemade everything — no canned soups, no packets)
NOTE: Mom used regular salt, regular butter, regular everything.
We use margarine, almond milk, low-sodium broth, leached potatoes.
Same food. Same taste. Different math.
```

> *"People who love to eat are always the best people." — Julia Child*

BREAKFAST

1. Country Fried Steak & Gravy

Ingredient	Amount	CKD Notes
Cube steak	4 pieces (4-5oz each)	Tenderized beef — Andrew's #1 protein
All-purpose flour	1 cup	
Egg	1, beaten	
Unsweetened almond milk	1/4 cup	Mixed with egg for wash
Garlic powder	1 tsp	
Onion powder	1 tsp	
Paprika	1 tsp	
Black pepper	1/2 tsp	
Cayenne	1/4 tsp	
Salt	1/4 tsp	Minimal — the gravy adds flavor
Avocado oil	For frying (1/2" deep)	

White Country Gravy:

Ingredient	Amount	CKD Notes
Pan drippings	3 tbsp	From frying the steak
All-purpose flour	3 tbsp	
Unsweetened almond milk	1.5 cups	Instead of whole milk — lower P
Black pepper	1/2 tsp (generous)	The pepper IS the gravy
Salt	1/4 tsp	
Garlic powder	1/4 tsp	

Method: 1. Season flour with garlic powder, onion powder, paprika, pepper, cayenne, salt 2. Dip steaks in egg/milk wash, then dredge in seasoned flour. Double-dredge for extra crispy (egg wash again, flour again) 3. Fry in avocado oil (350F) 3-4 min per side until deep golden. Drain on wire rack. 4. **Gravy:** Keep 3 tbsp drippings in pan. Whisk in flour, cook 1 min. Slowly add almond milk, whisking constantly. Simmer until thick (3-4 min). Season with pepper + salt + garlic powder. 5. Serve steak with gravy poured over. Pair with CKD mashed potatoes (below).

2. Brown Gravy (Mushroom)

Ingredient	Amount
Margarine	2 tbsp
White mushrooms, sliced	1 cup
All-purpose flour	2 tbsp
Low-sodium beef broth	1.5 cups
Worcestershire sauce	1 tsp
Black pepper	1/2 tsp
Garlic powder	1/4 tsp
Onion powder	1/4 tsp

Method: Saut mushrooms in margarine 5 min. Add flour, stir 1 min. Gradually add broth, whisking. Add Worcestershire + spices. Simmer until thick. Serve over mashed potatoes, steak, or chicken.

3. Hearty Breakfast Plate

Component	CKD Version
Eggs	Scrambled (2 eggs, cooked in avocado oil) — moderate P, 2 is fine
Bacon	Turkey bacon (lower Na/P than pork bacon) — 2 strips max
Hash browns	LEACHED potatoes: shred, soak in cold water 2+ hours, rinse, squeeze dry, then fry. Leaching removes ~50% of potassium.
Toast	Sourdough, lightly toasted, with margarine
Grits	CKD-aware as portioned — low K/P/Na. Cook with almond milk + margarine. Add sharp cheddar.
Biscuits	Homemade with phosphorus-free baking powder (see below)
Gravy	White country gravy (recipe above)

4. Cloud Biscuits

Ingredient	Amount
All-purpose flour	2 cups
Phosphorus-free baking powder (Rumford)	1 tbsp
Sugar	1 tsp
Salt	1/2 tsp
Cold margarine, cubed	1/3 cup
Unsweetened almond milk	3/4 cup

Method: Mix flour + BP + sugar + salt. Cut in cold margarine until pea-sized. Add milk, stir until just combined (DON'T overmix). Pat to 1" thick, cut rounds. Bake 425F 12-15 min until golden top.

MAINS

5. Golden Skillet Fried Chicken

The big one. Fried chicken is usually a CKD disaster (phosphate-injected meat, high-Na brine). Homemade fixes everything.

Ingredient	Amount	CKD Notes
Chicken thighs or drumsticks	8 pieces	FRESH, not injected/marinated — check label for "enhanced"
Unsweetened almond milk	1 cup	Buttermilk sub (add 1 tbsp vinegar, let sit 10 min)
All-purpose flour	1.5 cups	
Cornstarch	1/4 cup	Extra crunch
Paprika	1 tbsp	
Garlic powder	1 tsp	
Onion powder	1 tsp	
Cayenne	1/2 tsp	
Black pepper	1 tsp	
Dried thyme	1/2 tsp	
Salt	1/2 tsp	Way less than KFC
Avocado oil	For deep frying (3-4" deep)	

Method: 1. Soak chicken in almond milk "buttermilk" for 1 hour minimum (overnight better) 2. Mix flour + cornstarch + ALL spices in a bowl 3. Remove chicken from milk, dredge in flour mix. Press firmly. Let sit on rack 15 min (this sets the coating) 4. Heat oil to 325F (NOT 350 — lower temp = juicier interior, crispier exterior, less oil absorption) 5. Fry in batches, don't crowd. 14-16 min total, turning once. Internal temp 165F. 6. Rest on wire rack 5 min before serving. DO NOT rest on paper towels (traps steam, gets soggy).

Per 2 pieces: ~180mg Na, ~220mg P, ~350mg K (vs KFC: ~1,200mg Na per 2 pieces)

6. Velvet Mac & Cheese

Ingredient	Amount	CKD Notes
Elbow pasta (or GF)	8 oz	
Cream cheese	4 oz	Lower P than making roux with milk
Sharp cheddar, shredded	1 cup	Andrew's preferred cheese
Smoked gouda, shredded	1/2 cup	Andrew's preferred — adds smoky depth
Unsweetened almond milk	1/2 cup	
Margarine	2 tbsp	
Garlic powder	1/2 tsp	
Paprika	1/4 tsp	
Dry mustard	1/4 tsp	Secret ingredient — lifts the cheese flavor
Black pepper	1/4 tsp	
Salt	1/4 tsp	
Panko breadcrumbs	1/3 cup (optional topping)	

Method: 1. Cook pasta 1 min SHORT of al dente. Drain. 2. In same pot: melt margarine, add cream cheese + almond milk, stir until smooth 3. Add shredded cheddar + gouda, stir until melted 4. Add garlic powder, paprika, mustard, pepper, salt 5. Add pasta, fold gently 6. **Optional baked:** Transfer to baking dish, top with panko + paprika, bake 375F 15 min until golden bubbling top

Why cream cheese base: Traditional mac uses a flour roux + lots of milk = higher phosphorus. Cream cheese gives the SAME creamy texture with lower P. The smoked gouda adds the depth that the missing parmesan would have provided.

7. Bayou Sunday Gumbo

Ingredient	Amount	CKD Notes
Avocado oil	1/4 cup	For the roux
All-purpose flour	1/4 cup	For the roux
Onion	1, diced	The trinity
Celery	2 stalks, diced	The trinity — moderate K, small amount
Bell pepper	1 green, diced	The trinity
Garlic	4 cloves	
Chicken thighs	1 lb, boneless, cubed	
Andouille sausage	6 oz, sliced	Watch Na — use sparingly or sub chicken sausage
Low-sodium chicken broth	4 cups	NOT regular broth
No-salt-added diced tomatoes	1 can (14oz)	
Okra	1 cup, sliced	Thickener + vegetable — low K
Bay leaves	2	
Dried thyme	1 tsp	
Cayenne	1/2 tsp	
Paprika	1 tsp	
File powder	1 tsp (optional — sassafras leaf, traditional)	
Hot sauce (homemade)	To taste	

Method: 1. **THE ROUX:** Oil + flour in heavy pot over medium heat. Stir CONSTANTLY 20-30 min until dark chocolate brown. This is the soul of gumbo. Do not walk away. Do not answer the phone. Stir. 2. Add trinity (onion, celery, bell pepper). Stir 5 min. 3. Add garlic, stir 1 min. 4. Add broth SLOWLY (it will bubble violently). Stir smooth. 5. Add tomatoes, bay leaves, thyme, cayenne, paprika. 6. Add chicken + sausage. Simmer 30 min. 7. Add okra. Simmer 15 min more. 8. Remove bay leaves. Serve over jasmine rice with hot sauce + file powder.

Per serving: ~350mg Na (vs restaurant gumbo: 1,500mg+), ~250mg P, ~450mg K

8. Big Easy Jambalaya

Ingredient	Amount
Jasmine rice (dry)	1.5 cups
Chicken thighs, cubed	1 lb
Andouille or chicken sausage	6 oz, sliced
Shrimp	8 oz, peeled (optional — Andrew likes shrimp)
Onion	1, diced
Bell pepper	1, diced
Celery	2 stalks, diced
Garlic	4 cloves
No-salt-added diced tomatoes	1 can (14oz)
Low-sodium chicken broth	2.5 cups

Ingredient	Amount
Cajun seasoning (homemade — see below)	2 tbsp
Bay leaf	1
Hot sauce	To taste

Homemade CKD Cajun Seasoning (NO SALT):

Spice	Amount
Paprika	2 tbsp
Garlic powder	1 tbsp
Onion powder	1 tbsp
Cayenne	1 tsp
Black pepper	1 tsp
Dried oregano	1 tsp
Dried thyme	1 tsp
White pepper	1/2 tsp

Method: 1. Season chicken with Cajun seasoning. Brown in oil 4 min. Remove. 2. Brown sausage 3 min. Remove. 3. Saut trinity 5 min. Add garlic 1 min. 4. Add tomatoes + broth + remaining Cajun seasoning + bay leaf. Bring to boil. 5. Add rice + chicken + sausage. Cover tightly. Reduce to LOW. 6. Cook 20-25 min without lifting lid. 7. Add shrimp in last 5 min (they cook fast — don't overcook). 8. Remove bay leaf. Fluff with fork. Serve with hot sauce.

BBQ / COOKOUT

9. Backyard Smokehouse Ribs

Ingredient	Amount	CKD Notes
Beef back ribs or beef short ribs	1 rack (~2.5 lbs)	Beef over pork — Andrew's preference. Lamb ribs also work.
Dry Rub (NO SALT):		
Brown sugar	2 tbsp	
Paprika	1 tbsp	
Garlic powder	1 tsp	
Onion powder	1 tsp	
Cumin	1 tsp	
Chili powder	1 tsp	
Black pepper	1 tsp	
Cayenne	1/2 tsp	
Mustard powder	1/2 tsp	

CKD BBQ Sauce:

Ingredient	Amount
No-salt-added tomato paste	3 tbsp
Water	3 tbsp
Brown sugar	2 tbsp
Apple cider vinegar	2 tbsp
Garlic powder	1/2 tsp
Onion powder	1/2 tsp
Smoked paprika	1 tsp
Cayenne	1/4 tsp
Worcestershire	1 tsp
Liquid smoke	1/2 tsp

Method (Oven — no smoker needed): 1. Remove membrane from back of ribs 2. Rub both sides generously with dry rub. Wrap in foil. 3. Bake 300F for 2.5-3 hours until tender 4. Unwrap. Brush with BBQ sauce. 5. Broil 3-4 min or grill over high heat 2-3 min per side until caramelized 6. Rest 10 min. Cut between bones. Serve with extra sauce.

Store-bought BBQ sauce: 300-600mg Na per 2 tbsp. This homemade version: ~40mg Na per 2 tbsp.

10. Double-Rinse Mashed Potatoes

THE trick that makes mashed potatoes CKD-possible

Ingredient	Amount	CKD Notes
Russet potatoes	2 lbs, peeled and cubed 1"	
Unsweetened almond milk	1/2 cup, warmed	
Margarine	3 tbsp	
Garlic powder	1/2 tsp	
Black pepper	1/4 tsp	
Salt	1/4 tsp	

THE LEACHING METHOD (critical): 1. Peel potatoes. Cut into small 1" cubes (more surface area = more K removed) 2. Soak in a large bowl of cold water for **MINIMUM 2 hours** (4 hours better, overnight best) 3. **DRAIN. RINSE. REFILL** with fresh cold water at least once during soaking 4. Drain AGAIN. Place in pot with fresh cold water. 5. Boil 15-20 min until fork-tender. 6. DRAIN. (You're throwing away the K-loaded water) 7. Mash with almond milk + margarine + seasonings

The science: Raw potatoes have ~900mg K per cup. Leaching (soaking + double-boiling) removes 40-50% of potassium. Final mashed potatoes: ~450-500mg K per cup. A reasonable serving (1/2 cup) = ~225-250mg K. That's manageable.

For both gravies: Pour white or brown gravy over the leached mashed potatoes. The whole plate together is a CKD-legal country dinner.

11. Backyard Baked Beans Dupe

Baked beans are EXTREMELY high-K (600mg+ per cup). This version uses a trick.

Ingredient	Amount	CKD Notes
Canned white beans (cannellini)	1 can (15oz), DRAINED AND RINSED x3	Rinsing removes 30-40% of K + Na
No-salt-added tomato paste	2 tbsp	
Water	1/4 cup	
Brown sugar	2 tbsp	
Apple cider vinegar	1 tbsp	
Yellow mustard	1 tsp	
Garlic powder	1/2 tsp	
Onion powder	1/2 tsp	
Smoked paprika	1/2 tsp	
Liquid smoke	1/4 tsp	
Turkey bacon	2 strips, chopped and cooked	
Cayenne	Pinch	

Method: 1. DRAIN + RINSE beans 3 times (critical for K reduction) 2. Mix tomato paste + water + brown sugar + vinegar + mustard + spices 3. Combine beans + sauce + bacon in oven-safe dish 4. Bake 350F 25-30 min until thick and bubbly

Per 1/2 cup: ~280mg K (vs regular baked beans: 400mg+). The triple-rinse is the difference.

12. Pulled Beef or Chicken (Slow Cooker)

Ingredient	Amount
Beef chuck roast or boneless chicken thighs	3-4 lbs
Homemade Cajun seasoning (above)	2 tbsp
Garlic powder	1 tsp
Onion, quartered	1
Apple cider vinegar	2 tbsp
Low-sodium beef or chicken broth	1/2 cup
CKD BBQ sauce (above)	For serving

Method: Rub meat with seasoning. Place in slow cooker with onion + vinegar + broth. Cook LOW 8-10 hours (beef) or 5-6 hours (chicken). Shred with two forks. Toss with BBQ sauce. Serve on sourdough buns with coleslaw.

DATE NIGHT

13. Steak Dinner (Andrew's Ultimate Meal)

Component	CKD Version
Steak	Ribeye or NY strip (6-8oz), seasoned with salt + pepper + garlic powder ONLY. Cast iron sear: avocado oil screaming hot, 3-4 min per side for medium-rare. Rest 5 min.
Compound butter	Margarine softened + minced garlic + fresh herbs (thyme, rosemary) + squeeze of lemon. Form into log, chill, slice medallion on top of resting steak.
Mashed potatoes	K-leached recipe above, piped through star tip for fancy presentation
Asparagus	Moderate K — 6 spears max. Roast 400F 12 min with olive oil + garlic.
Wine	Small glass (4oz). Red wine is lower K than white.

14. Shrimp Scampi

Ingredient	Amount
Large shrimp, peeled	1 lb
Olive oil	2 tbsp
Margarine	2 tbsp
Garlic	6 cloves, minced
Dry white wine	1/3 cup (or sub low-Na chicken broth)
Lemon juice	2 tbsp
Red pepper flakes	1/4 tsp
Fresh parsley	2 tbsp, chopped
GF or regular pasta (or rice)	8 oz

Method: Cook pasta. Heat oil + margarine. Saut garlic 1 min. Add shrimp, cook 2 min per side. Add wine + lemon + pepper flakes. Simmer 2 min. Toss with pasta. Top with parsley.

Shrimp is actually one of the LOWEST phosphorus proteins. Lower P than chicken. Andrew's #3 protein choice and perfect for date night.

15. Lobster Tail (Special Occasion)

Ingredient	Amount
Lobster tails	2 (6-8oz each)
Margarine, melted	3 tbsp
Garlic	2 cloves, minced
Lemon juice	1 tbsp
Paprika	1/4 tsp
Fresh parsley	Garnish

Method: Split lobster tails down the top. Gently pull meat up and rest on top of shell (butterfly style). Mix margarine + garlic + lemon + paprika. Brush over meat. Broil 8-10 min until meat is opaque and slightly charred on edges. Serve with remaining garlic margarine for dipping + lemon wedges.

STATE FAIR / SPECIAL OCCASION

16. Rosemary-Crusted Lamb Chops with Mint Jelly

Andrew requested. Vespa's favorite.

Ingredient	Amount	CKD Notes
Rack of lamb (or 8 individual loin chops)	~2 lbs	Fresh, not pre-marinated — check for sodium phosphate
Panko breadcrumbs	1/2 cup	
Fresh rosemary, minced	1 tbsp	
Fresh thyme, minced	1 tbsp	
Garlic, minced	3 cloves	
Olive oil	2 tbsp	Binds the crust
Dijon mustard	1 tbsp	Thin coat — adhesive for crumbs
Black pepper	1/2 tsp	
Salt	1/4 tsp	Lamb is naturally flavorful — needs less

Homemade Mint Jelly (not that neon abomination):

Ingredient	Amount	CKD Notes
Fresh mint leaves, packed	1 cup	
Apple juice (unsweetened)	1 cup	Lower K than grape juice
Sugar	1/4 cup	
Apple cider vinegar	2 tbsp	
Unflavored gelatin	1 packet (1/4 oz)	

Method — Lamb: 1. Season chops with salt + pepper. Let sit 20 min at room temp. 2. Mix breadcrumbs + rosemary + thyme + garlic + olive oil in a bowl. 3. Sear chops in screaming hot cast iron with avocado oil — 2 min per side. Remove. 4. Brush thin layer of Dijon on the meat side (not the bone). 5. Press herb-crumb mixture firmly onto the mustard. 6. Roast 400F for 12-15 min (medium-rare 130F internal). Rest 5 min.

Method — Mint Jelly: 1. Bring apple juice + vinegar + sugar to a boil. Stir until sugar dissolves. 2. Remove from heat. Add mint leaves. Steep 15 min (like tea). 3. Strain out mint. Return liquid to low heat. 4. Bloom gelatin in 2 tbsp cold water (1 min), then whisk into warm liquid. 5. Pour into small jar. Refrigerate 2+ hours until set. 6. Serve a spoonful alongside each chop. The color is natural pale green — real mint, not dye.

Per serving (2 chops + 1 tbsp jelly): ~160mg Na | ~190mg P | ~280mg K

17. Green Spark Chimichurri

Two versions. Both slap. Put it on anything that used to be alive.

Classic Green Chimichurri:

Ingredient	Amount	CKD Notes
Fresh flat-leaf parsley, finely chopped	1 cup	Low K herb — the base
Fresh cilantro, finely chopped	1/2 cup	Optional — some people have the gene
Garlic, minced	4 cloves	
Red wine vinegar	3 tbsp	
Extra virgin olive oil	1/2 cup	The carrier
Dried oregano	1 tsp	
Red pepper flakes	1/2 tsp	
Black pepper	1/4 tsp	
Salt	1/4 tsp	Barely any — the vinegar does the work

Red Chimichurri (variation):

Additional/Swap	Amount	CKD Notes
Roasted red pepper (jarred, drained + rinsed)	1/2 cup, finely diced	Rinse to cut Na from brine
Smoked paprika	1 tsp	Replaces some red pepper flakes
Fresh parsley	Reduce to 1/2 cup	Red pepper takes center stage

Method (both versions): 1. Combine all chopped herbs + garlic in a bowl. 2. Add vinegar + oil + spices. Stir. 3. That's it. No blender. No food processor. Knife and a cutting board. This is Argentine, not French. 4. Let sit 30 min minimum before serving — the flavors need to meet each other. 5. Keeps 5-7 days in the fridge. Gets better on day 2.

Pairs with: Steak (recipe #13), lamb chops (#16), grilled chicken, shrimp, roasted vegetables, eggs. Honestly — a spoon.

Per 1 tbsp (green): ~15mg Na | ~5mg P | ~20mg K **Per 1 tbsp (red):** ~20mg Na | ~6mg P | ~25mg K

18. County Fair Corn Dogs

Midway classic. Turkey dog, homemade batter, stick included. Dignity optional.

Ingredient	Amount	CKD Notes
Turkey hot dogs	8	Lower Na/P than beef franks — still check label
All-purpose flour	1 cup	
Yellow cornmeal	3/4 cup	
Sugar	2 tbsp	
Phosphorus-free baking powder (Rumford)	1 tbsp	
Salt	1/4 tsp	
Egg	1	
Unsweetened almond milk	3/4 cup	
Honey	1 tbsp	Helps browning
Avocado oil	For deep frying (3-4" deep)	
Wooden skewers or chopsticks	8	

Method: 1. Pat hot dogs VERY dry with paper towels. Insert sticks. Dust lightly with flour (batter won't stick to wet dogs). 2. Whisk flour + cornmeal + sugar + baking powder + salt. 3. Whisk egg + almond milk + honey. Combine wet into dry. Batter should be thick enough to coat — add flour if too thin. 4. Heat oil to 350F. Pour batter into a tall glass for easy dipping. 5. Dip each dog, twirl to coat evenly. Straight into oil. 6. Fry 3-4 min, turning once, until deep golden brown. 7. Drain on wire rack. Serve with yellow mustard (lowest Na condiment at the fair).

Per corn dog: ~280mg Na | ~95mg P | ~120mg K

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19. Midway Funnel Cake

Fried dough with powdered sugar at a carnival. What exactly was the kidney problem here? Right — there wasn't one.

Ingredient	Amount	CKD Notes
All-purpose flour	1.5 cups	
Egg	1	
Sugar	2 tbsp	
Unsweetened almond milk	1 cup	Lower P than whole milk
Vanilla extract	1 tsp	
Phosphorus-free baking powder (Rumford)	1 tsp	
Salt	Pinch	
Avocado oil	For deep frying (1.5" deep)	
Powdered sugar	For dusting	

Method: 1. Whisk flour + sugar + baking powder + salt. 2. Beat egg + almond milk + vanilla. Pour into dry. Whisk until smooth — should be pourable like thin pancake batter. 3. Heat oil to 375F in a wide skillet or Dutch oven. 4. Pour batter into a squeeze bottle or funnel (or a zip-lock bag with the corner snipped). 5. Drizzle batter in a circular/crisscross pattern into hot oil. Work fast. 6. Fry 1-2 min per side until golden. Flip carefully with tongs + spatula. 7. Drain on wire rack. Blizzard of powdered sugar on top. Serve immediately.

Per funnel cake (1/4 batch): ~85mg Na | ~55mg P | ~70mg K — A lower-estimated-mineral dessert option; confirm the portion and ingredients against your plan.

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20. Midway Fried Cookie Bites

The state fair food that shouldn't work but does. Surprisingly low in everything that matters.

Ingredient	Amount	CKD Notes
Oreos	12	Regular, not double-stuf — P is in the filling
Pancake mix (just-add-water kind)	1 cup	Check label — avoid brands with sodium aluminum phosphate
Water	2/3 cup	Or per pancake mix instructions
Vanilla extract	1/2 tsp	
Avocado oil	For deep frying (2" deep)	
Powdered sugar	For dusting	

Method: 1. Heat oil to 350F. 2. Mix pancake batter with water + vanilla. Should coat a spoon thickly. 3. Freeze Oreos 15 min first (they hold up better in the fryer). 4. Dip each Oreo in batter, fully coating. Let excess drip off. 5. Fry 2-3 min, flipping once, until golden and puffed. 6. Drain on wire rack. Dust with powdered sugar while hot. 7. Eat within 5 minutes. These do not age well. They age like milk.

Per 2 deep fried Oreos: ~180mg Na | ~40mg P | ~55mg K

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21. State Fair Turkey Legs

The food that makes you feel like Henry VIII at a Renaissance fair.

Ingredient	Amount	CKD Notes
Turkey legs (drumsticks)	4 (~1 lb each)	Fresh, not pre-brined — this is critical
CKD Carnival Dry Rub:		
Smoked paprika	1 tbsp	
Brown sugar	1 tbsp	
Garlic powder	1 tsp	
Onion powder	1 tsp	
Black pepper	1 tsp	
Cumin	1/2 tsp	
Cayenne	1/4 tsp	
Chili powder	1/2 tsp	
Salt	1/2 tsp	Split across 4 legs — minimal per serving

Method (Oven — no smoker needed): 1. Pat turkey legs dry. Coat generously with dry rub on all sides. Press it in. 2. Wrap each leg individually in foil. 3. Bake 300F for 2.5 hours (low and slow — collagen breaks down, meat falls off the bone). 4. Unwrap. Brush with a thin coat of CKD BBQ sauce (recipe #9) if desired. 5. Broil 4-5 min until skin is dark and crispy, turning once. 6. Rest 5 min. Grab by the bone. Walk around your yard like you own the kingdom.

Smoker version: 250F for 3-4 hours over apple or cherry wood. Skip the foil. Spritz with apple juice every hour.

Per turkey leg: ~220mg Na | ~250mg P | ~380mg K — Turkey is LOWER in P than chicken breast, ounce for ounce.

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22. Sweet-Salty Kettle Corn

Sweet, salty, crunchy, and one of the most kidney-friendly snacks on earth. Not a typo.

Ingredient	Amount	CKD Notes
Popcorn kernels	1/3 cup	Plain popcorn: 1mg Na, 30mg P, 30mg K per cup
Avocado oil	3 tbsp	
Sugar	2 tbsp	Added right in the pot
Salt	1/4 tsp	Total. For the whole batch.

Method: 1. Heat oil in a large pot with a lid over medium-high. Toss in 3 test kernels. 2. When test kernels pop, add ALL remaining kernels + sugar + salt at once. 3. Shake the pot continuously (lid cracked for steam). The sugar caramelizes ON the kernels as they pop. 4. When popping slows to 2 seconds between pops, dump immediately into a large bowl. 5. Toss. Let cool 2 min (the sugar coating hardens). Eat by the fistful.

Per 3 cups: ~75mg Na | ~30mg P | ~35mg K — This is basically free food on a renal diet. Snack without guilt.

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23. Street-Corner Elote

Grilled corn, creamy sauce, spice, lime. The cotija sub is the only detour — everything else is authentic.

Ingredient	Amount	CKD Notes
Ears of corn, husked	6	Corn is moderate K — 1 ear is fine per serving
Avocado oil mayonnaise	3 tbsp	Lower Na than regular mayo
Cream cheese, softened	2 tbsp	Cotija substitute — similar tang, way less Na/P
Lime juice	2 tbsp	
Chili powder	1 tsp	
Smoked paprika	1/2 tsp	
Garlic powder	1/4 tsp	
Cayenne	1/4 tsp	
Fresh cilantro, chopped	2 tbsp	
Lime wedges	For serving	

Why cream cheese instead of cotija: Cotija has ~400mg Na per ounce. Cream cheese has ~85mg Na per ounce. Same creamy crumble effect when you dollop it on. Your tongue won't know. Your labs will.

Method: 1. Grill corn directly over high heat (or broil), turning every 2-3 min until charred in spots all around. ~8-10 min total. 2. Mix mayo + cream cheese + lime juice + chili powder + paprika + garlic powder + cayenne in a bowl. 3. While corn is hot, brush or smear the cream mixture all over each ear. 4. Sprinkle with extra chili powder + cilantro. Squeeze lime over the top. 5. Insert a stick or skewer in the bottom if you want the full street vendor experience.

Per ear: ~95mg Na | ~80mg P | ~240mg K

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24. Vespa's Prosciutto & Brie Board (Date Night Fondue Prep)

"Twenty-four cheeses in the fridge at once. This is not a phase."

Component	What	Notes
Prosciutto	4 oz, thin-sliced, draped in rosettes	Vespa's favorite. The fancy fold matters.
Brie	4 oz wedge, room temp 30 min	Let it breathe. Cold Brie is a crime.
Havarti	3 oz, sliced	Creamy, mild, Vespa-approved
Fresh mozzarella	4 oz, torn by hand	Burrata if New Seasons has it
Accompaniments	Marcona almonds, fig jam, honeycomb, Raincoast Crisps, champagne grapes, cornichons	The supporting cast

Assembly: Arrange on a slate or wooden board. Brie center stage. Prosciutto draped like fabric. Mozzarella torn, not sliced. Almonds scattered. Fig jam in a tiny bowl. Honeycomb broken, not cut. The board should look like it belongs in a magazine Vespa would actually buy.

CKD note for Andrew: Cheese is moderate-P. If sharing this board, Andrew sticks to 2-3 oz total cheese + prosciutto and loads up on crackers + fruit.

PIZZA

Saturday Supreme Pizza

The supreme was invented by Pizza Hut in 1958. "Supreme" just means "everything on it." The only pizza where olives are acceptable. — Andrew

Component	CKD Version
Dough	GF pizza dough (recipe in Ch 11) OR store-bought (check Na — Trader Joe's is lowest)
Sauce	Fresh blender marinara (recipe in Ch 8) — NOT jarred
Cheese	Shredded mozzarella (2/3 cup — controlled P)
Turkey pepperoni	15-20 slices — lower Na than pork pepperoni
Turkey sausage	1/4 cup crumbled, browned — homemade breakfast sausage (Ch 3)
Bell peppers	1/4 cup mixed colors, diced
Red onion	2 tbsp, thinly sliced
Mushrooms	1/4 cup, sliced
Black olives	2 tbsp sliced — the ONE place olives are allowed

Method: Stretch dough on oiled sheet pan or pizza stone. Spread sauce thin (1/3 cup — too much = soggy). Layer cheese, then ALL toppings. Bake 450F directly on stone/lowest rack, 12-15 min until crust is golden and cheese bubbles. The supreme doesn't hold back and neither should you.

Per 2 slices: ~280mg Na | ~180mg P | ~300mg K

Experimental Pizza Lab

The Breakfast Pizza Scrambled eggs + turkey sausage + sharp cheddar + hot sauce drizzle on pizza dough. Bake. Eat at noon. Call it breakfast.

The Mac & Cheese Pizza CKD mac & cheese (Ch 1) spread on pizza dough as the "sauce." Extra cheddar on top. Bake. The carb-on-carb crime that tastes like a warm hug.

The Taco Pizza Seasoned ground turkey + nacho cheese sauce (Ch 8) instead of marinara. Top with shredded lettuce + pico de gallo + sour cream AFTER baking. Taco Bell on a crust.

The Thai Peanut Pizza Peanut sauce (from PB&J chapter) as base instead of marinara. Chicken thighs + bean sprouts + cilantro + lime + sriracha drizzle. Southeast Asian decoder pizza.

The Dessert Pizza Sugar cookie dough pressed into pizza pan. Bake 350F 12 min. Spread cream cheese frosting. Top with fresh fruit (strawberries, blueberries, kiwi slices). Drizzle honey. The Vorathic Rainbow Dessert Pizza if you use all the colors.

The Hot Sauce Gauntlet Pizza 8 slices. Each slice gets a DIFFERENT hot sauce from the NorthStar lineup (Ch 9). Slice 1: Baby's Bathwater (mild). Slice 8: The Final Session (500K SHU). Eat in order. The pizza that's also a dare.

The Nothing Pizza Dough. Olive oil. Salt. Garlic. That's it. No sauce. No cheese. No toppings. Focaccia energy. The pizza equivalent of Recipe #42 — it orders you.

CKD Considerations for Soul Food

The reason these foods are "banned" is that RESTAURANT/PROCESSED versions are sodium and phosphorus bombs. Homemade versions with CKD substitutions are dramatically safer:

Swap	Why
Homemade seasoning → store packets	Eliminates 500-1000mg Na per serving
Margarine → butter	Lower P
Almond milk → whole milk	Lower P
Phosphorus-free baking powder → regular	Eliminates phosphorus additive
Leached potatoes → regular	Cuts K by 40-50%
Triple-rinsed canned beans → straight from can	Cuts K by 30-40%
Homemade BBQ sauce → store-bought	Cuts Na by 80%
Fresh chicken → "enhanced"/injected chicken	Eliminates sodium phosphate injection

The thesis: You don't have to eat like you're dying. You eat like you're LIVING. The restrictions are in the INGREDIENTS, not the RECIPES. Same plate, same flavors, same Saturday morning breakfast — different margarine, different milk, leached potatoes. Your kidneys can't tell the difference. Your taste buds can't either.

Chicken & Protein Mains

"The KitchenAid grinder attachment earns its keep tonight."

Chicken Sausage Spaghetti, Chicken Tinga, Chicken Cacciatore, Steak Tacos w/ Pico

Plus: From-Scratch Sausage Grinding & Sauce Canning

"The KitchenAid grinder attachment earns its keep tonight."

1. Grinder-Night Chicken Sausage Spaghetti

From-Scratch Chicken Sausage (KitchenAid Grinder)

Making your own sausage = total sodium/phosphorus control. No preservatives, no mystery meat.

Ingredient	Amount	CKD Notes
Chicken thighs, boneless skinless	2 lbs	Cut into 1" cubes, partially freeze 30 min (grinds better cold)
Garlic	4 cloves, minced	Mix into meat
Fresh basil	2 tbsp, chopped	
Fresh parsley	2 tbsp, chopped	
Dried oregano	1 tsp	
Fennel seeds	1 tsp, lightly crushed	THE Italian sausage flavor
Red pepper flakes	1/2 tsp	
Black pepper	1/2 tsp	
Paprika	1 tsp	
Salt	1/2 tsp (total — vs 800mg+ per link in store-bought)	
Olive oil	1 tbsp	

KitchenAid Grinder Method: 1. Cut chicken into 1" cubes. Spread on sheet pan, freeze 20-30 min (firm but not solid) 2. Set up KitchenAid with grinder attachment, medium plate 3. Mix all seasonings in a bowl 4. Feed chicken through grinder into a large bowl 5. Add seasoning mix to ground chicken. Mix with hands until evenly distributed (don't overmix — gets tough) 6. Form into patties, links (using casings if you have them), or just crumble directly into the pan

Cooking: Brown sausage in skillet over medium-high, breaking into chunks, 6-8 min.

Per 4oz serving: ~120mg Na (vs store-bought ~600mg), ~180mg P, ~250mg K

Sunday Red Sauce (Canning-Ready)

Makes ~4 pints — can in mason jars for shelf storage

Ingredient	Amount	CKD Notes
No-salt-added crushed tomatoes	1 can (28oz)	Lowest sodium option
No-salt-added tomato paste	2 tbsp	Concentrate flavor without more liquid K
Olive oil	2 tbsp	
Onion	1 medium, diced	
Garlic	6 cloves, minced	
Fresh basil	1/4 cup, torn	Add at end
Dried oregano	1 tsp	
Dried thyme	1/2 tsp	
Sugar	1 tsp	Balances acidity
Red pepper flakes	1/4 tsp	
Black pepper	1/2 tsp	
Salt	1/4 tsp only	
Bay leaf	1	Remove before canning

Method: 1. Saut?? onion in olive oil 5 min until soft 2. Add garlic, cook 1 min 3. Add tomato paste, stir 1 min (caramelizes) 4. Add crushed tomatoes, all dried spices, sugar, bay leaf 5. Simmer LOW 30-45 min, stirring occasionally 6. Remove bay leaf. Add fresh basil. 7. Taste — adjust salt/sugar/pepper

Canning (water bath method): 1. Sterilize mason jars + lids in boiling water 10 min 2. Add 1 tbsp lemon juice per pint jar (REQUIRED for acidity/safety) 3. Ladle hot sauce into hot jars, leave 1/2" headspace 4. Wipe rims. Apply lids + rings finger-tight 5. Process in boiling water bath: pints 35 min, quarts 40 min 6. Remove, cool undisturbed 12 hours. Check seal (lid shouldn't flex) 7. Sealed jars store 12-18 months at room temp

Per 1/2 cup sauce: ~45mg Na, ~30mg P, ~280mg K

Assembly

Cook spaghetti per package (no salt in the water — you don't need it). Toss with red sauce + crumbled chicken sausage. Top with a little shredded mozzarella if desired (small amount).

2. Smoky Chicken Tinga

Mexican shredded chicken in smoky chipotle tomato sauce — served in tacos, tostadas, or over rice

Ingredient	Amount	CKD Notes
Chicken thighs, boneless	1.5 lbs	Thighs stay moist when braised
No-salt-added diced tomatoes	1 can (14oz)	
Chipotle pepper in adobo	2 peppers + 1 tbsp sauce	From the can you added to cart
Onion	1 medium, sliced	
Garlic	4 cloves	
Oregano	1 tsp	Mexican oregano if available
Cumin	1/2 tsp	
Bay leaf	1	
Oil	1 tbsp	
Salt	1/4 tsp	
Lime juice	1 tbsp (finish)	

Method: 1. Sear chicken thighs in oil 3 min per side (browning = flavor). Remove. 2. Same pan: cook onion 5 min. Add garlic 1 min. 3. Add diced tomatoes, chipotles + adobo sauce, oregano, cumin, bay leaf 4. Nestle chicken back in. Bring to simmer. 5. Cover. Low heat 25-30 min until chicken shreds easily 6. Remove chicken. Shred with two forks. 7. Return shredded chicken to sauce. Simmer uncovered 5 min to thicken 8. Remove bay leaf. Finish with lime juice.

Serve in: Guerrero corn tortillas, over rice, on tostadas, or in a bowl with sour cream + cilantro + pickled onion

Per serving (4 servings): ~200mg Na, ~190mg P, ~380mg K

3. Hunter's Chicken Cacciatore

Italian hunter's chicken — braised with tomatoes, olives, capers, peppers

Ingredient	Amount	CKD Notes
Chicken thighs, bone-in skin-on	4 pieces (~2 lbs)	Bone-in = more flavor. Remove skin after browning to cut fat if desired
No-salt-added crushed tomatoes	1 can (14oz)	
Bell pepper	1, sliced	Any color
Onion	1, sliced	
Garlic	4 cloves, sliced	
Black olives	1/4 cup, sliced	OPTIONAL — Andrew: skip (dislikes olive flavor)
Capers	1 tbsp, rinsed	RINSE to reduce sodium

Ingredient	Amount	CKD Notes
Dry white wine	1/4 cup (or sub chicken broth)	Alcohol cooks off
Dried oregano	1 tsp	
Dried basil	1 tsp	
Red pepper flakes	1/4 tsp	
Fresh parsley	Garnish	
Oil	2 tbsp	
Salt	1/4 tsp	

Method: 1. Season chicken lightly with salt + pepper. Brown skin-side down in oil 5 min. Flip 3 min. Remove. 2. Same pan: cook onion + bell pepper 5 min 3. Add garlic 1 min 4. Deglaze with wine, scrape up browned bits 5. Add crushed tomatoes, oregano, basil, red pepper flakes 6. Nestle chicken back in, skin-side up 7. Add capers (skip olives per Andrew preference) around chicken 8. Cover. Simmer 30-35 min until chicken is 165F and falling off bone 9. Garnish with parsley

Serve over: Spaghetti, rice, or with crusty bread

Per serving (4 servings): ~250mg Na, ~220mg P, ~420mg K

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4. Midnight Steak Tacos with Pico de Gallo

The Steak

Ingredient	Amount
Flank steak	1 lb
Lime juice	2 tbsp
Garlic	3 cloves, minced
Cumin	1 tsp
Chili powder	1 tsp
Paprika	1/2 tsp
Oil	1 tbsp
Salt	1/4 tsp
Black pepper	1/2 tsp

Marinate steak minimum 30 min (overnight better). Grill or cast-iron sear over HIGH heat 4-5 min per side for medium. Rest 5 min. Slice THIN against the grain.

Fresh Pico de Gallo

Ingredient	Amount	CKD Notes
Fresh tomato	1 medium, diced small	Moderate K — one tomato across 4 servings = controlled
White onion	1/4 cup, finely diced	Low K
Cilantro	1/4 cup, chopped	
jalapeño	1, seeded and minced	Seeds out = less heat, the pepper amount is nutritionally tiny
Lime juice	2 tbsp	
Salt	Pinch	

Mix everything. Let sit 15 min for flavors to meld. Best fresh, same day.

Per 1/4 cup pico: ~80mg K, ~8mg P, ~25mg Na

Assembly

Guerrero corn tortillas (warmed on dry skillet 30 sec per side) → sliced steak → pico → squeeze of lime → optional sour cream drizzle

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Hot sauce recipes are in the Hot Sauces chapter — 30+ sauces across three lineups.

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6. FROM-SCRATCH SAUSAGE GRINDING & STORAGE

KitchenAid Grinder Setup

1. Attach grinder to KitchenAid stand mixer
2. Use **medium grinding plate** for Italian-style sausage (coarse for breakfast, fine for hot dogs)
3. Keep meat COLD — partially freeze 20-30 min before grinding
4. Cut into 1" cubes that fit the feed tube
5. Run through once for standard texture, twice for smoother

Sausage Flavors to Grind

Italian Sweet (chicken or turkey)

Fennel seeds + garlic + basil + parsley + paprika + black pepper

Italian Hot

Same as sweet + red pepper flakes + cayenne

Breakfast Style (Andrew's Favorite — Costco/Inesto's Clone)

"The link that makes the whole plate make sense."

Ingredient	Amount
Chicken thighs, boneless	2 lbs, cubed + partially frozen
Sage (dried, rubbed)	1 tbsp
Thyme (dried)	1 tsp
Black pepper	1 tsp
Brown sugar	1 tbsp
Nutmeg	1/4 tsp
Costco no-salt seasoning blend	1 tsp (or sub garlic powder 1/2 tsp + onion powder 1/2 tsp)
Cayenne	1/4 tsp
Salt	1/2 tsp
Maple syrup	1 tsp (optional — maple breakfast sausage variant)

Grind chicken through medium plate. Mix in all seasonings by hand. Form into 2oz patties or links. Pan-fry in avocado oil 3-4 min per side until 165F.

Per 2oz patty: ~80mg Na | ~90mg P | ~130mg K (vs Costco/store: ~400mg Na)

Sausage Gravy (Biscuits & Gravy)

Ingredient	Amount
Chicken breakfast sausage (above)	4 patties, crumbled
All-purpose flour	3 tbsp
Unsweetened almond milk	2 cups
Black pepper	1/2 tsp (generous)
Garlic powder	1/4 tsp
Salt	1/4 tsp

Method: Brown crumbled sausage in skillet. Add flour, stir 1 min. Slowly add almond milk, whisking. Simmer until thick. Season. Serve over CKD biscuits (recipe in soul food chapter).

Thanksgiving Turkey-Sausage Stuffing

"The stuffing that earns the bird's respect."

Ingredient	Amount
Chicken or turkey breakfast sausage (above)	1 lb, crumbled and browned
Sourdough bread, cubed and dried	6 cups
Onion, diced	1 medium
Celery, diced	2 stalks
Margarine	3 tbsp
Low-sodium chicken broth	1.5 cups
Fresh sage	1 tbsp, chopped
Fresh thyme	1 tsp
Black pepper	1/2 tsp
Salt	1/4 tsp
Egg	1, beaten

Method: Sauté onion + celery in margarine 5 min. Combine with bread cubes, browned sausage, herbs, pepper. Toss with broth + egg until evenly moist. Transfer to greased baking dish. Bake 375F 30-35 min until golden top. The sausage makes this — every bite has sage and thyme and meat.

Per serving (8 servings): ~180mg Na | ~140mg P | ~200mg K

Mexican Chorizo Style

Chili powder + paprika + cumin + oregano + garlic + vinegar

Thai Basil (fusion)

Thai basil + lemongrass (minced fine) + garlic + ginger + lime zest + chili flakes

Storage

- **Fresh (fridge):** Use within 3 days in sealed container
- **Frozen patties:** Form into 3oz patties, separate with parchment, freeze in ziplock. Good 3 months.
- **Vacuum sealed:** If you get a vacuum sealer, frozen sausage keeps 6+ months
- **Casings (optional):** Natural hog casings from the butcher counter. Soak 30 min in water, feed onto grinder stuffing tube, fill while grinding. Twist into links every 5-6".

CKD Advantage of Homemade Sausage

	Store-Bought (per link)	Homemade (per link)
Sodium	500-800mg	80-120mg
Phosphorus	200-350mg	150-180mg
Preservatives	Nitrites, phosphates, MSG	NONE
Cost	$1.50-2.50/link	~$0.80/link

You control EVERYTHING. No hidden sodium phosphate (a common meat preservative that's a kidney killer). No nitrites. No mystery.

CKD Considerations

```
RENAL CHECK — Chicken Mains
K (Potassium): MED (no-salt-added tomato products, controlled
portions)
P (Phosphorus): LOW-MED (homemade sausage = no phosphate
preservatives)
Na (Sodium): LOW (homemade everything, no-salt-added canned goods)
Protein: GOOD (chicken thighs = quality renal protein)
```

"The KitchenAid earned its spot on the counter tonight. Every link is a ceremony."

CHAPTER 4

Tex-Mex & Fast Food Dupes

“Cravings don’t negotiate.”

Renal-Aware Fast Food at Home

"Cravings don't negotiate."

Why Taco Bell Dupes?

Taco Bell is one of the most CKD-hostile fast food chains: high sodium (1000-2000mg per item), high phosphorus (cheese, beans, processed meat), high potassium (tomatoes, beans, guac). A single Crunchwrap Supreme has more sodium than most people on a renal diet should eat in an ENTIRE DAY.

These dupes recreate the flavor and experience with renal-aware substitutions.

The Recipes

1. Bellbreaker Crunchwrap

The original: ~1,300mg sodium, ~400mg phosphorus **The dupe:** ~450mg sodium, ~180mg phosphorus

Component	Original	CKD Dupe
Tortilla	12" flour tortilla	12" low-sodium flour tortilla (Mission low-sodium)
Meat	Seasoned ground beef	Ground turkey + homemade taco seasoning (cumin, paprika, garlic, onion powder, oregano — NO packet mix, packets are sodium bombs)
Nacho cheese	Nacho cheese sauce	Homemade cheese sauce: cream cheese + a little cheddar + milk + paprika, melted (cream cheese is lower P than processed cheese)
Sour cream	Regular sour cream	Regular sour cream (actually CKD-okay in small amounts)
Tostada shell	Flat tostada	Baked corn tortilla round (lower sodium than store tostada)
Lettuce	Iceberg	Iceberg (fine — low K, low P)
Tomato	Diced tomato	SKIP or use 1 tbsp max (tomatoes are high-K) — sub with diced bell pepper for crunch+color

Assembly: Tortilla flat → meat → cheese sauce → tostada shell → sour cream → lettuce → pepper. Fold edges in, flip seam-down, toast in dry skillet 2 min per side.

Per serving: ~450mg Na, ~180mg P, ~280mg K

2. Soft-Crunch Gordita

Component	CKD Dupe
Outer flatbread	Low-sodium flour tortilla, warmed
Spicy ranch	Avocado oil mayo + a pinch of cayenne + garlic powder + dried dill
Inner taco shell	Regular hard taco shell (moderate sodium, 1 is okay)
Meat	Turkey taco meat (same seasoning as above)
Three cheese blend	Small amount of cheddar + cream cheese blend (portion control)
Lettuce	Iceberg shredded

3. Borderline Mexican Pizza

Component	CKD Dupe
Pizza "crust"	Two flour tortillas, brushed with oil, baked crispy at 400F for 5 min
Beef layer	Turkey taco meat
Bean layer	SKIP refried beans (very high K+P) — use a thin layer of cream cheese as the "glue" instead
Pizza sauce	1 tbsp low-sodium marinara (not more — tomato = K)
Cheese	Small amount of shredded cheddar
Toppings	Diced green onion (low K), diced bell pepper, a few black olive slices

Bake assembled pizza at 400F for 8-10 min until cheese melts and tortilla is crispy.

4. Griddle-Melt Chicken Quesadilla

Component	CKD Dupe
Tortilla	Low-sodium flour tortilla
Chicken	Plain grilled chicken breast, shredded (no pre-marinated — marinades are sodium bombs)
Cheese	Cream cheese + small amount of mozzarella (lower P than cheddar)
Creamy jalapeño sauce	Avocado oil mayo + a few drops of jalapeño hot sauce + garlic powder

Cook in skillet with light oil spray, 3 min per side until golden and cheese melts.

5. Five-Layer Beef Burrito

Component	CKD Dupe
Tortilla	Large low-sodium flour tortilla
Beef	Turkey taco meat
Beans	SKIP (too high K+P) — add extra rice instead
Rice	White rice (renal-aware, low K when cooked)

Component	CKD Dupe
Sour cream	Regular sour cream, 2 tbsp
Nacho cheese	Homemade cream cheese sauce

6. Big Bell Nachos

Component	CKD Dupe
Chips	Unsalted tortilla chips (or low-sodium)
Beef	Turkey taco meat
Beans	SKIP
Cheese	Homemade cream cheese sauce drizzled
Sour cream	Dollop
Tomato	1 tbsp max diced, or sub diced bell pepper
Green onion	Small amount (low K)

7. Cinnamon Cloud Bites

Component	CKD Dupe
Dough	Bisquick (phosphorus-free baking powder version) + milk + sugar, rolled into balls
Filling	Cream cheese + powdered sugar + vanilla
Coating	Cinnamon sugar (Ceylon cinnamon — Cinnamon Cloud crossover!)

Scoop dough, press flat, add cream cheese filling, seal into ball, deep fry at 350F for 2-3 min until golden. Roll in cinnamon sugar while warm.

8. Baja Storm Freeze

The original: Mountain Dew Baja Blast + ice **The CKD issue:** Phosphoric acid in Mountain Dew is a phosphorus source + high sugar + fluid counts

Component	CKD Dupe
Base	Sprite Zero or 7UP Zero (no phosphoric acid, unlike Dew)
Color	Blue food coloring + green food coloring (2 drops each for the teal)
Flavor	Lime juice (1 tbsp) + a few drops of pineapple extract
Freeze	Blend with ice, serve in clear cup

Fluid note: This counts toward daily fluid restriction. Make it a treat, not a daily thing. ~8oz serving.

The Master Taco Seasoning (make a jar, use for everything)

Spice	Amount	Notes
Cumin	3 tbsp	The backbone
Paprika	2 tbsp	Color + mild heat
Garlic powder	1 tbsp	Not garlic salt!
Onion powder	1 tbsp	Not onion salt!
Oregano	1 tsp	Mexican oregano if you can find it
Cayenne	1/2 tsp	Adjust to heat preference
Black pepper	1 tsp	
Coriander	1/2 tsp	Optional — adds authenticity

NO SALT in this mix. The whole point is controlling sodium yourself. Store in a jar. Use 2 tbsp per pound of meat + 1/4 cup water, simmer until absorbed.

Masa Press Lab: Tortilla Press Technique + Four Masa Harina Colors

White, yellow, blue, and red masa harina behave like siblings, not clones. The press is simple; the hydration is the craft.

Tortilla Press Setup

Tool	Best Setup	Why It Matters
Tortilla press	Cast iron or aluminum press on a stable counter	Even pressure. Do not crank the handle like a clamp; press in stages.
Liners	Cut a zip-top freezer bag into two thick plastic sheets	Better than flimsy wrap. Peels cleanly without tearing the masa.
Scale	35g balls for street tacos, 45-50g for 6 inch tortillas	Consistent balls make consistent cook times.
Comal or skillet	Dry cast iron, carbon steel, or heavy nonstick	No oil for tortillas. Heat and steam create the puff.
Towel warmer	Clean towel in a covered bowl or tortilla keeper	Steam finishes the tortilla and keeps it flexible.

Master Press Technique

1. **Hydrate by feel, not just by the cup.** Start with the recipe amount below, mix with your hand, then add warm water 1 tsp at a time until the dough feels like soft Play-Doh. It should not crumble at the edges or smear wet onto your palm.
2. **Rest the dough.** Cover 20-30 minutes. Masa harina keeps drinking water after mixing. Blue and red masa usually need the full 30 minutes.
3. **Re-check hydration after resting.** Pinch a golf-ball-size piece and flatten it between your palms. Cracked edge = add water. Sticky surface = dust in 1 tsp masa harina and wait 5 minutes.
4. **Roll smooth balls.** No cracks before pressing. A cracked ball becomes a cracked tortilla.
5. **Press in two light passes.** Place the ball slightly behind center, close press gently, open, rotate the plastic 180 degrees, press again. This keeps the tortilla round and avoids one thick edge.
6. **Peel plastic from tortilla, not tortilla from plastic.** Hold the tortilla flat on your palm and pull the plastic away slowly. If it tears, the dough is too wet, too dry, or unrested.
7. **Cook hot and fast.** Preheat until a drop of water skates. Cook side 1 for 20-30 seconds, flip, cook side 2 for 45-60 seconds, flip again and press gently with a spatula for 15-30 seconds. Puff is the win.
8. **Steam stack immediately.** Move each tortilla into a towel-lined bowl and cover. Ten minutes in its own steam makes it bend instead of crack.

Heat Target

Medium-high is usually right: about 425-475F surface heat. Too cool gives pale, dry tortillas. Too hot burns spots before the center sets. The first tortilla is the test tortilla; adjust before making the whole batch.

White Masa Harina Tortillas

Ingredient	Amount	Notes
White masa harina	2 cups	Clean baseline flavor; best for tacos and enchiladas.
Warm water	1 1/2 cups, plus 1-3 tbsp as needed	Warm tap water hydrates faster than cold.
Fine salt	1/4 tsp optional	Skip or reduce for stricter sodium days.
Avocado oil	1 tsp optional	Not traditional; helps flexibility for beginners.

Method: Mix, rest 20 minutes, portion into 12 balls, press, cook hot, steam stack. Best use: everyday taco, quesadilla, enchilada dip-and-roll.

Yellow Masa Harina Tortillas

Ingredient	Amount	Notes
Yellow masa harina	2 cups	More roasted-corn aroma and deeper color.
Warm water	1 2/3 cups, plus 1-2 tbsp as needed	Yellow often drinks slightly more water than white.
Fine salt	1/4 tsp optional	Optional.
Avocado oil	1 tsp optional	Useful if making tostadas or reheating later.

Method: Same as white, but rest 25 minutes. Best use: crunchy tacos, tostadas, tortilla chips, breakfast chilaquiles.

Blue Masa Harina Tortillas

Ingredient	Amount	Notes
Blue masa harina	2 cups	Earthier, nuttier, more dramatic on camera.

Ingredient	Amount	Notes
Warm water	1 3/4 cups, plus 1-4 tbsp as needed	Blue masa usually needs more hydration and longer rest.
Fine salt	1/4 tsp optional	Optional.
Lime juice	1/2 tsp optional	Brightens flavor; keep tiny so the dough does not tighten.

Method: Mix thoroughly, rest 30 minutes, press slightly thicker than white masa, cook 5-10 seconds longer per side. Best use: steak tacos, photo plates, tostadas, three-color tortilla flights.

Red Masa Harina Tortillas

Ingredient	Amount	Notes
Red corn masa harina	2 cups	If you have true red masa harina, use it straight.
Warm water	1 2/3 to 1 3/4 cups	Hydrate like blue masa: patient and warm.
Fine salt	1/4 tsp optional	Optional.
Avocado oil	1 tsp optional	Helps flexibility.

If you only have white or yellow masa: make red adobo masa with 2 cups masa harina, 1 2/3 cups warm water, 1 tbsp mild chile powder or paprika, 1 tsp annatto or achiote powder, 1/4 tsp cumin, and 1 tsp vinegar. Rest 30 minutes. This is not true red corn, but it gives the red taco-shop look and a gentle chile aroma.

Tostadas, Chips, and Taco Shells

Cook tortillas first, then crisp them. Raw pressed masa does not become a good chip. For tostadas, dry cooked tortillas uncovered 20-30 minutes, then fry at 350F until rigid and lightly browned, or brush with oil and bake at 375F for 10-14 minutes, flipping once. For crunchy taco shells, fry a cooked tortilla 10 seconds flat, fold with tongs, then hold open in the oil until crisp.

Troubleshooting

Problem	Cause	Fix
Cracked edge after pressing	Dough too dry or unrested	Knead in water 1 tsp at a time; rest 10 more minutes.
Sticks to plastic	Dough too wet	Dust in masa harina 1 tsp at a time; wait 5 minutes.
No puff	Heat too low, tortilla too dry, or first side cooked too long	Raise heat; cook first side only until dry spots appear.
Hard after cooking	Overcooked or left uncovered	Shorten cook time and steam stack immediately.
One side thick	Ball centered wrong or one heavy press	Place ball slightly behind center; press, rotate, press again.

```
RENAL CHECK - Masa Press Lab
K (Potassium): LOW-MED by portion; corn is usually manageable in small tortillas.
P (Phosphorus): LOW-MED; avoid phosphate-added packaged tortillas when possible.
Na (Sodium): CONTROLLED; salt is optional and can be skipped.
Fluid: Water in dough mostly cooks off, but count beverages served with the meal.
```

MEXICAN RESTAURANT DUPES

9. Carne Asada Fry Plate

Origin: San Diego, CA — emerged from taco shops in the 1990s as border-town street food. Now a stadium staple from Petco Park to backyard parties.

Component	CKD Dupe
Fries	Russet potatoes, peeled, cut into fries, **soaked in water 4+ hours** (K-leaching — pulls out ~50% potassium), drained, patted dry, fried in avocado oil at 375F until crispy
Carne asada	Flank steak marinated in Master Carne Asada Marinade (Recipe 14 below), grilled hot and fast, sliced thin against the grain
Nacho cheese	Homemade cheese sauce (Ch 8 recipe — cream cheese + cheddar + milk + paprika)
Sour cream	Regular sour cream, 2 tbsp
Pico de gallo	2 tbsp max — diced tomato + white onion + cilantro + lime juice + pinch of salt (portion-controlled for K)
Guacamole	1/4 avocado mashed with lime juice + cilantro + pinch of garlic powder (small portion — avocado is high-K, but 1/4 is manageable)

Assembly: Fries on plate → sliced carne asada → drizzle cheese sauce → dollops of sour cream + guac → scatter pico. Eat immediately.

Per serving: ~480mg Na | ~200mg P | ~520mg K

10. Sizzle Plate Carne Asada

Origin: The standard plate at every taqueria from Tijuana to East LA — meat, rice, beans, tortillas. Simple. Complete.

Component	CKD Dupe
Carne asada	Flank steak, Master Marinade (Recipe 14), grilled, sliced against the grain
Spanish rice	White rice cooked with 1 tbsp no-salt-added tomato sauce + cumin + garlic powder + onion powder + avocado oil. Low-sodium chicken broth or water as liquid
Refried beans	Canned pinto beans — **drain, rinse 3x thoroughly** (removes ~40% sodium + potassium), mash in skillet with avocado oil + cumin + garlic powder. No lard
Tortillas	Guerrero corn tortillas (corn, water, lime — 3 ingredients, low sodium)
Pico de gallo	2 tbsp, same as Recipe 9

Plate it: Steak sliced fanned on one side, rice + beans side by side, two warm corn tortillas, pico on top of the meat. Lime wedge on the side.

Per serving: ~440mg Na | ~220mg P | ~580mg K

11. Green-Chile Chicken Enchiladas

Origin: Enchiladas predate the Spanish conquest — Aztec markets in Tenochtitlan served tortillas dipped in chili sauce. The cream-cheese filling twist is Tex-Mex, circa 1960s-70s.

Component	CKD Dupe
Tortillas	Guerrero corn tortillas, lightly fried in avocado oil to soften (5 seconds per side)
Filling	Shredded chicken breast (poached or baked, no marinade packets) + 2 oz cream cheese per 4 enchiladas, mixed together
Enchilada sauce	1 can (8 oz) no-salt-added tomato sauce + 1 tbsp chili powder + 1 tsp cumin + 1/2 tsp garlic powder + 1/2 tsp oregano + 1/4 tsp cayenne + 1/4 cup water. Simmer 10 min
Cheese topping	Shredded cheddar, light layer (~1 oz per 2 enchiladas — portion control keeps P in check)

Assembly: Dip each softened tortilla in warm enchilada sauce. Fill with chicken-cream cheese mixture, roll seam-down in baking dish. Pour remaining sauce over top, sprinkle cheddar. Bake 375F for 20 min until bubbly.

Makes 4 enchiladas (2 per serving).

Per serving (2 enchiladas): ~390mg Na | ~210mg P | ~420mg K

12. Mazatlan Fajita Burrito

Origin: Named for Mazatlan Mexican Restaurant — the kind of neighborhood spot where the burrito is the size of your forearm and one order is two meals. Sinaloan port-city energy, Pacific coast heat.

Component	CKD Dupe
Tortilla	Large (12") flour tortilla (regular — one tortilla's sodium is acceptable in context)
Chicken	Boneless skinless chicken thighs (more flavor than breast, similar renal profile), sliced thin, seasoned with homemade fajita seasoning: 1 tsp cumin + 1 tsp chili powder + 1 tsp paprika + 1/2 tsp garlic powder + 1/2 tsp onion powder + 1/2 tsp oregano. Grilled or pan-seared in avocado oil, high heat
Peppers + onions	Sliced bell peppers (green + red) + white onion, sauteed in avocado oil until charred edges, still crisp
Rice	White rice, plain or Spanish-style (same as Recipe 10)
Cheese	Shredded cheddar or Monterey Jack, ~1 oz
Sour cream	2 tbsp inside the wrap

Assembly: Warm tortilla on dry skillet. Layer: rice down the center → chicken → peppers and onions → cheese → sour cream. Fold bottom up,

sides in, roll tight. Cut in half on the bias. Serve with a lime wedge.

Per serving (1 burrito): ~520mg Na | ~240mg P | ~490mg K

13. Vespa's Warm Campechana

Origin: Campechana is a Gulf Coast Mexican seafood cocktail from Campeche/Veracruz — traditionally served cold in a copa. Vespa's version is served warm, which changes the whole character. The heat opens up the citrus and softens the seafood without making it rubbery.

Component	CKD Dupe
Shrimp	1/2 lb medium shrimp, peeled and deveined, poached in lightly salted water until just pink (~3 min), chopped
Crab	4 oz imitation crab (surimi) — lower phosphorus than real crab, or use real lump crab if budget allows (portion-control for P)
Cocktail sauce base	1 cup no-salt-added tomato sauce + 1 tbsp lime juice + 1 tsp hot sauce (or to taste) + 1/2 tsp cumin. Warm in saucepan over medium heat
Avocado	1/4 avocado, diced (portion-controlled for K)
Vegetables	2 tbsp diced white onion + 2 tbsp diced cucumber + 1 tbsp diced jalapeno (seeded) + 2 tbsp chopped cilantro
Citrus	Juice of 1 lime, plus wedges for serving

Assembly: Warm the tomato sauce base in a saucepan. Add chopped shrimp and crab, stir gently, heat through 2 min (do not boil — keeps the seafood tender). Remove from heat, fold in onion, cucumber, jalapeno, cilantro, avocado, lime juice. Serve warm in a bowl or copa glass with tostadas or low-sodium crackers on the side.

The "warm not cold" move: Heating the cocktail base first and adding the seafood to it — instead of chilling everything — blooms the cumin and lime, gives it a soup-adjacent comfort without losing the bright acidity. Vespa's call.

Per serving: ~380mg Na | ~190mg P | ~450mg K

14. Citrus Fire Carne Asada Marinade

Origin: Every taqueria has a version. The lime-soy-cilantro trinity is northern Mexico meets Pacific Rim — the soy sauce arrived via Chinese immigrants in Baja California in the 1800s and never left.

Ingredient	Amount	Notes
Lime juice	1/4 cup (fresh)	The acid — tenderizes + brightens. Andrew's sour/citrus preference lives here
Low-sodium soy sauce	2 tbsp	Umami depth without the sodium bomb of regular soy (~50% less Na)
Garlic	4 cloves, minced	Fresh, not powder — marinade wants the moisture
Cilantro	1/4 cup, chopped	Stems included — that's where the flavor hides
Cumin	1 tsp	Warmth
Chili powder	1 tsp	Heat + color
Avocado oil	2 tbsp	Carries the fat-soluble flavors into the meat
Black pepper	1/2 tsp	No salt needed — the soy and lime do the work

Method: Whisk everything together. Place flank steak in a zip-lock bag or glass dish, pour marinade over, coat all surfaces. Refrigerate minimum 2 hours, overnight is better. Remove from fridge 30 min before grilling.

Grilling: Hottest part of the grill (or cast iron screaming hot with avocado oil). 4-5 min per side for medium-rare on a 1-inch flank steak. Rest 5 min. Slice thin, against the grain, on the bias.

Yield: Enough for 1.5-2 lbs flank steak (4 servings).

Per serving (marinade contribution only): ~180mg Na | ~30mg P | ~90mg K

CKD Considerations (every recipe)

```
RENAL CHECK — Taco Bell CKD Dupes (Recipes 1-8)
K (Potassium): LOW-MED (beans removed, tomato minimized)
P (Phosphorus): LOW-MED (cream cheese over cheddar, no processed
cheese)
Na (Sodium): LOW (no-salt seasoning, low-sodium tortillas)
Fluid: Count beverages toward daily limit
Protein: MODERATE (turkey is good renal protein)
```

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RENAL CHECK — Mexican Restaurant Dupes (Recipes 9-14)
K (Potassium): MED (K-leached potatoes, portion-controlled
avocado/tomato, triple-rinsed beans)
P (Phosphorus): LOW-MED (cream cheese sauces, cheddar portion-
controlled, fresh proteins over processed)
Na (Sodium): LOW-MED (low-sodium soy in marinade, no-salt-added tomato
sauce, homemade seasoning throughout)
Fluid: Campechana broth counts toward daily limit
Protein: MODERATE-HIGH (flank steak, chicken thighs, shrimp — all
quality renal proteins)
```

"The Drive-Thru closed. Your kitchen opened."

REESER'S BURRITO DUPES

Reeser's Fine Foods has been making frozen burritos in Topeka, Kansas since 1969 — the same year as the moon landing.

15. Reeser's Red Hot Beef Burrito

"Reeser's first plant opened at 31st and Topeka Blvd — a building that had been a dairy. By the mid-1970s they were shipping a million burritos a week across the Great Plains."

The original: Gas station legend. Red chile sauce, seasoned beef, processed cheese, flour tortilla. ~900mg sodium, ~350mg phosphorus per burrito. **The dupe:** ~380mg sodium, ~160mg phosphorus

Component	Original	CKD Dupe
Tortilla	10" flour tortilla	10" low-sodium flour tortilla
Meat	Seasoned ground beef	Ground turkey, browned and drained, seasoned with Master Taco Seasoning (2 tbsp per lb)
Red chile sauce	Processed red chile sauce (sodium bomb + phosphate additives)	Homemade CKD red chile sauce (see below)
Cheese	Processed cheese food	Cream cheese (2 tbsp per burrito) — lower P than processed cheese, melts smooth

Homemade CKD Red Chile Sauce:

Ingredient	Amount	Notes
No-salt-added tomato sauce	1 cup (8 oz can)	Controls sodium — regular tomato sauce has 600mg+ Na per cup
Chili powder	1 tbsp	The heat backbone
Cumin	1 tsp	Warmth + earthiness
Garlic powder	1/2 tsp	Not garlic salt
Onion powder	1/2 tsp	Depth
Cayenne	1/4 tsp	Adjust up for more heat — the original is SPICY
Water	2 tbsp	Thin to saucy consistency

Whisk all together in a small saucepan, simmer 5 min. Makes enough for 4-5 burritos.

Method: Spoon ~3 tbsp turkey down the center of the tortilla. Drizzle 2 tbsp red chile sauce over the meat. Add 2 tbsp cream cheese in small dollops. Fold bottom up, sides in, roll tight. Wrap individually in foil. **Bake at 375F for 20 min** OR **microwave unwrapped on a plate for 2 min**, flipping halfway.

Per serving (1 burrito): ~380mg Na | ~160mg P | ~290mg K

16. Reeser's BBQ Beef Burrito

"Reeser's BBQ variant showed up in the early 1980s — Kansas is barbecue country, and someone in Topeka figured if you could put red chile in a tortilla, you could put KC-style sweet smoke in one too."

The original: Sweet-tangy BBQ sauce, seasoned beef, flour tortilla. ~850mg sodium, ~330mg phosphorus. **The dupe:** ~360mg sodium, ~155mg phosphorus

Component	Original	CKD Dupe
Tortilla	10" flour tortilla	10" low-sodium flour tortilla
Meat	Seasoned ground beef	Ground turkey, browned and drained, seasoned with Master Taco Seasoning (light hand — 1 tbsp per lb, the BBQ sauce carries the flavor)

Component	Original	CKD Dupe
BBQ sauce	Processed BBQ sauce (high-fructose corn syrup + sodium + phosphates)	Homemade CKD-aware BBQ sauce (see below)
Cheese	Processed cheese food	Cream cheese (2 tbsp per burrito)

Homemade CKD-Aware BBQ Sauce:

Ingredient	Amount	Notes
No-salt-added ketchup OR no-salt-added tomato paste	1/2 cup ketchup or 3 tbsp paste + 1/4 cup water	Tomato paste is more concentrated — either works
Brown sugar	2 tbsp (packed)	The KC-style sweetness
Apple cider vinegar	1 tbsp	Tang — the soul of BBQ sauce
Smoked paprika	1 tsp	Smoke without the sodium of liquid smoke
Garlic powder	1/2 tsp	
Onion powder	1/2 tsp	
Worcestershire sauce	1/2 tsp	Just a whisper — Worcestershire has sodium but 1/2 tsp across the whole batch is negligible
Black pepper	1/4 tsp	
Cayenne	Pinch	Optional heat

Whisk all together in a small saucepan, simmer 5-8 min until thickened slightly. Makes enough for 4-5 burritos.

Method: Same as Recipe 15. Spoon ~3 tbsp turkey down the center, drizzle 2 tbsp BBQ sauce, add 2 tbsp cream cheese. Fold, roll, wrap in foil. **Bake at 375F for 20 min** OR **microwave unwrapped 2 min**, flipping halfway.

Per serving (1 burrito): ~360mg Na | ~155mg P | ~280mg K

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17. Reeser's Bean & Cheese Burrito

"The bean and cheese is the oldest burrito format in the Americas — pre-Columbian Mesoamerican people wrapped beans in corn flatbreads centuries before flour tortillas existed. Reeser's just figured out how to freeze it and sell it at a Shell station."

The original: Refried beans, processed cheese, flour tortilla. ~780mg sodium, ~300mg phosphorus, ~450mg potassium. **The dupe:** ~340mg Na, ~150mg P, ~310mg K

Component	Original	CKD Dupe
Tortilla	10" flour tortilla	10" low-sodium flour tortilla
Beans	Refried beans (high Na, high K, high P)	Triple-rinsed pinto beans, mashed (see K-management note below)
Cheese	Processed cheese food	Cream cheese (2 tbsp) + small amount of shredded cheddar (~1 tbsp) for flavor contrast

Bean Prep — K-Management Protocol:

1. Start with canned pinto beans (low-sodium if available, but regular works because you're rinsing)
2. Drain ALL liquid — the canning liquid is where most of the sodium hides
3. Rinse under cold running water in a colander for 30 seconds
4. Soak in fresh cold water for 5 minutes
5. Drain and rinse again — two more times (three total rinses)
6. **This triple-rinse removes approximately 40% of potassium and 40-50% of sodium**
7. Mash beans in a skillet with 1 tsp avocado oil + 1/2 tsp cumin + 1/4 tsp garlic powder. Add water 1 tbsp at a time to reach refried consistency

CKD Note on Beans: Beans are the most misunderstood renal food. The National Kidney Foundation updated guidance — properly prepared beans CAN fit a renal diet. The triple-rinse + portion control (1/4 cup per burrito) keeps K and P in the safe zone. Don't skip the rinse steps.

Method: Spoon ~1/4 cup mashed beans down the center. Add 2 tbsp cream cheese in dollops + sprinkle of cheddar. Fold, roll, wrap in foil. **Bake at 375F for 20 min** OR **microwave unwrapped 2 min**, flipping halfway.

Per serving (1 burrito): ~340mg Na | ~150mg P | ~310mg K

MEAL PREP: Reeser's Freezer Stash

"Reeser's whole business model was: make it once, freeze it, eat it later. Your kitchen can do the same thing — minus the phosphate preservatives."

Batch Size: 20 burritos (mix and match any of Recipes 15-17)

What You Need: - 20 low-sodium flour tortillas (10") - 2 lbs ground turkey (for ~12-14 meat burritos) - 2 cans pinto beans (for ~6-8 bean burritos) - 1 block cream cheese (8 oz = 16 tbsp, covers all 20) - 1 batch red chile sauce + 1 batch BBQ sauce (or double one if you have a favorite) - 20 sheets of aluminum foil (~12" squares) - Gallon freezer bags or a large freezer bin - A Sharpie

Assembly Line Method:

1. **Cook all protein first.** Brown 2 lbs turkey in a large skillet, drain, season with Master Taco Seasoning. Set aside. Prep beans (triple-rinse, mash, season) in a second skillet. Set aside.
2. **Make both sauces.** Red chile and BBQ — 10 min total.
3. **Set up the line:** Tortillas laid out flat (work in batches of 5) → protein/beans → sauce → cream cheese → fold → wrap.
4. **Fill each burrito:** ~3 tbsp filling + ~2 tbsp sauce + ~2 tbsp cream cheese. Don't overfill — they need room to fold without tearing.
5. **Roll tight:** Bottom up, sides in, roll away from you. Tight = no air pockets = no freezer burn.
6. **Wrap in foil:** Place burrito seam-down on foil square, wrap snugly. Fold foil ends under.
7. **Label with Sharpie:** Write the flavor + date directly on the foil. ("RH 4/12" = Red Hot, April 12th. "BBQ 4/12". "B&C 4/12".)
8. **Flash freeze:** Lay flat on a sheet pan in a single layer, freeze 2 hours until solid.
9. **Store:** Transfer to gallon freezer bags or stack in a freezer bin. Remove as much air as possible from bags.

Reheat Instructions:

Method	From Frozen	From Fridge
Oven (best texture)	Remove foil. Place on baking sheet. 375F for 25-30 min, flipping once at 15 min. Tortilla gets slightly crispy.	375F for 15-18 min
Microwave (fastest)	Remove foil (!). Wrap in damp paper towel. Microwave 2.5-3 min, flipping halfway. Let stand 1 min.	1.5-2 min
Air Fryer	Remove foil. 350F for 12-15 min, flipping once.	350F for 8-10 min

Freezer Life: 3 months at 0F or below. After 3 months they're still safe but quality drops — the tortilla gets tough and the filling dries out. Label your date and rotate stock.

Thaw Option: Move from freezer to fridge the night before — thaw overnight, then reheat from fridge temps for faster/more even heating.

Yield per batch: - ~60 min total prep + assembly - 20 burritos = roughly 2-3 weeks of grab-and-go meals - Total cost: ~$15-20 for 20 burritos ($0.75-1.00 each vs. $1.50-2.00 at the gas station, and yours won't destroy your kidneys)

```
RENAL CHECK — Reeser's Burrito Dupes (Recipes 15-17)
K (Potassium): LOW-MED (triple-rinsed beans, no raw tomato, cream
cheese over processed cheese)
P (Phosphorus): LOW (cream cheese base, no phosphate additives — the
additives in gas station burritos are the real P danger)
Na (Sodium): LOW (low-sodium tortillas, no-salt-added tomato sauce,
homemade seasoning throughout)
Fluid: Minimal fluid content — these are grab-and-go solid meals
Protein: MODERATE (turkey is quality renal protein, beans add plant
protein without the P load of processed meat)
```

"The Drive-Thru closed. Your kitchen opened."

Baja Blast Zero + Chicken Chalupa + Grilled 5-Layer Burrito + Crunchy Taco

Every sauce. Every component. Every ingredient. Built for the renal kitchen.

"$7 at Taco Bell could put you in the ER. $7 at home keeps you alive AND full."

THE ORIGINAL $7 LUXE BOX PROBLEM

Item	Sodium	Phosphorus	Potassium
Chicken Chalupa Supreme	~800mg Na	~350mg P	~400mg K
Beefy 5-Layer Burrito	~1,100mg Na	~400mg P	~500mg K
Crunchy Taco	~310mg Na	~200mg P	~200mg K
Baja Blast (medium)	~65mg Na	~50mg P (phosphoric acid)	~10mg K
BOX TOTAL	**~2,275mg Na**	**~1,000mg P**	**~1,110mg K**

That's MORE than the entire daily sodium limit in ONE MEAL.

THE HOMEMADE DUPE: EVERY COMPONENT

ITEM 1: Chicken Chalupa Supreme

The Chalupa Shell

Ingredient	Amount	CKD Notes
All-purpose flour	1 cup	Fine
Baking powder	1 tsp	Use PHOSPHORUS-FREE (Rumford aluminum-free)
Salt	1/4 tsp	Minimal — the original shell has ~400mg Na alone
Warm water	1/3 cup	Counts toward fluid
Oil for frying	Enough to shallow-fry	Canola or vegetable

Method: Mix flour + baking powder + salt. Add warm water, knead 2 min until smooth. Rest 15 min. Divide into 4 balls. Roll each into oval, ~6". Fry in 1" oil at 350F for ~45 seconds per side until puffed and golden. Drain on paper towels. Shape over a rolling pin while warm to form the taco-boat shape.

The Chicken Filling

Ingredient	Amount	CKD Notes
Chicken breast	1 large, diced small	Good renal protein
Homemade taco seasoning	1.5 tbsp (see master recipe)	NO PACKET — packets are 500mg+ Na each
Water	2 tbsp	To simmer seasoning into chicken
Oil	1 tsp	For cooking

Method: Dice chicken into 1/2" pieces. Cook in oil over medium-high 4-5 min. Add seasoning + water, stir until absorbed and chicken is coated.

The Toppings

Topping	Amount	CKD Notes
Lettuce	1/4 cup shredded iceberg	Low everything — safe
Sour cream	1 tbsp	Fine in small amounts
Cheese	1 tbsp shredded cheddar	Small portion keeps P low
Tomato	1 tbsp diced	OR skip and use diced bell pepper — tomato = K

Chalupa Assembly

Shell → chicken → sour cream → cheese → lettuce → tomato/pepper

Per chalupa: ~180mg Na, ~150mg P, ~200mg K (vs original's 800/350/400)

ITEM 2: Grilled Five-Layer Burrito

The Components

Layer	Ingredient	Amount	CKD Notes
Tortilla	Low-sodium flour tortilla (10")	1	Mission low-sodium has ~300mg Na vs standard ~600mg
Layer 1: Beef	Ground turkey + taco seasoning	2 oz	Turkey is lower P than beef
Layer 2: Beans	SKIP	—	Beans are very high K + P. Replace with:
Layer 2 ALT: Rice	White rice, cooked	2 tbsp	Low-K, acts as the "filler" layer
Layer 3: Sour cream	Regular sour cream	1.5 tbsp	The creamy layer
Layer 4: Cheese	Nacho cheese sauce (homemade)	1 tbsp	See sauce recipes below
Layer 5: Cheese	Shredded cheddar	1 tbsp	Small amount

Assembly & Grilling

1. Lay tortilla flat
2. Spread sour cream across center third
3. Layer: rice → meat → nacho cheese → shredded cheese
4. Fold bottom up, sides in, top down (burrito fold)
5. Place seam-down in dry skillet or panini press
6. Grill 2 min per side until golden brown and cheese melts
7. Cut in half diagonally

Per burrito: ~380mg Na, ~180mg P, ~250mg K (vs original's 1,100/400/500)

ITEM 3: Crunchy Taco

The Shell

Option	CKD Notes
Store-bought hard taco shell	~120mg Na per shell — acceptable
OR: Fry your own corn tortilla	Lower sodium, crispier

The Filling

Component	Amount	CKD Notes
Turkey taco meat	2 oz	Same seasoning as above
Lettuce	2 tbsp shredded iceberg	
Cheese	1 tbsp shredded cheddar	Small portion
Sour cream	1 tsp	Optional
Hot sauce	Dash	See CKD hot sauce below

Per taco: ~200mg Na, ~120mg P, ~150mg K (vs original's 310/200/200 — close but still lower)

ITEM 4: Baja Blast Zero

Ingredient	Amount	CKD Notes
Sprite Zero	12 oz	No phosphoric acid (Mountain Dew HAS phosphoric acid — that's why we sub)
Blue food coloring	2 drops	
Green food coloring	1 drop	
Lime juice	1 tsp	That citrus tang
Pineapple extract	2-3 drops	OR 1 tbsp pineapple juice (adds ~15mg K)
Ice	Fill cup	

Method: Mix Sprite Zero + food coloring + lime + pineapple in glass with ice. Stir. That's it. Looks and tastes like Baja Blast, zero phosphoric acid.

Per serving: ~40mg Na, ~0mg P (vs Dew's ~50mg phosphoric acid P), ~15mg K

Fluid note: This is 12+ oz of fluid. Counts toward daily limit.

ITEM 5: Cinnamon Twists Dupe

The important trick: use Mexican *duros de harina* or wheat twist pellets. Do not use dry rotini pasta; pasta stays hard and unpleasant. Duros puff in hot oil in seconds.

Ingredient	Amount	CKD Notes
Duros de harina / wheat twist pellets	1 cup dry pellets	Check label; choose low-sodium pellets with no phosphate additives.
Neutral oil	2 inches in a small pot	Avocado, canola, or vegetable oil.
Granulated sugar	1/3 cup	Coating.
Ceylon cinnamon	1 1/2 tsp	Cinnamon Cloud crossover; use Ceylon for the house standard.
Fine salt	Pinch optional	Optional; skip for tighter sodium days.

1. Mix sugar, cinnamon, and optional tiny pinch of salt in a large bowl.
2. Heat oil to 350-365F. Test one pellet: it should puff within 3-5 seconds.
3. Fry a small handful at a time. They expand hard and fast, so do not crowd the pot.
4. Remove as soon as fully puffed, usually 10-20 seconds. Drain briefly on a rack or paper towel.
5. While still hot, toss in cinnamon sugar until every ridge is coated.
6. Cool completely before bagging. Store airtight up to 3 days.

Air fryer note: raw duros are unreliable in an air fryer. If avoiding deep frying, buy plain puffed duros/chicharrones de harina and warm them 1-2 minutes before tossing with cinnamon sugar.

Per small handful: sodium depends on pellet label; homemade coating keeps phosphorus additives out and avoids the heavy restaurant sodium load.

ALL THE SAUCES (Lower-Sodium Dupes)

Taco Bell Creamy jalapeño Sauce

Ingredient	Amount
Avocado oil mayo (Primal Kitchen)	3 tbsp
Pickled jalapeño juice	1 tsp (from a jar of jalapeños)
Minced pickled jalapeño	1 tsp
Garlic powder	1/4 tsp
Cumin	Pinch
Cayenne	Pinch
Lime juice	1/2 tsp

Mix and refrigerate 30 min for flavors to meld. Keeps 1 week.

Taco Bell Nacho Cheese Sauce

Ingredient	Amount
Cream cheese	2 oz (1/4 block)
Unsweetened almond milk	3 tbsp
Cheddar cheese, shredded	2 tbsp
Paprika	1/4 tsp
Garlic powder	1/8 tsp
Cayenne	Pinch
Turmeric	Pinch (for yellow color)

Microwave cream cheese 20 sec. Add milk, stir smooth. Add cheddar, microwave 15 sec, stir. Add spices. Adjust thickness with milk.

Why cream cheese base: Velveeta/processed cheese = very high phosphorus + sodium. Cream cheese is lower P and you control the sodium.

Taco Bell Red Sauce

Ingredient	Amount
Tomato paste	1 tbsp (small amount = controlled K)
Water	3 tbsp
Cumin	1/4 tsp
Chili powder	1/4 tsp
Garlic powder	1/8 tsp
Onion powder	1/8 tsp
Cayenne	Pinch
Vinegar	1/2 tsp

Whisk everything together. Simmer 2 min. Thin, pourable, tastes exactly like the packets.

Why small tomato paste: Tomato is high-K, but 1 tbsp of paste across 4 servings = ~30mg K per serving. Controlled.**

Taco Bell Hot Sauce (packet dupe)

Ingredient	Amount
Cayenne pepper	1/2 tsp
Cumin	1/4 tsp
Garlic powder	1/4 tsp
Onion powder	1/4 tsp
Vinegar	2 tbsp
Water	1 tbsp
Tomato paste	1/2 tsp
Sugar	1/4 tsp

Blend or whisk. Store in small squeeze bottle. Dime-sized squirts on tacos.

Taco Bell Chipotle Sauce

Ingredient	Amount
Avocado oil mayo (Primal Kitchen)	2 tbsp
Chipotle pepper in adobo	1 pepper, minced (canned — use one pepper, not the whole can)
Adobo sauce	1/2 tsp
Lime juice	1/2 tsp
Garlic powder	Pinch

Mix. Smoky, creamy, a little spicy. One canned chipotle pepper goes a long way.

Taco Bell Avocado Ranch

Ingredient	Amount
Avocado oil mayo (Primal Kitchen)	2 tbsp
1/4 avocado	Mashed smooth
Lime juice	1 tsp
Garlic powder	1/8 tsp
Dried dill	1/8 tsp
Dried chives	1/8 tsp
Onion powder	Pinch

Mix smooth. Use within 2 days (avocado browns).

K note: 1/4 avocado = ~180mg K. Use sparingly or skip for stricter K limits.

CKD LUXE BOX TOTAL vs ORIGINAL

Nutrient	Original $7 Luxe Box	CKD Dupe Box	Reduction
Sodium	~2,275mg	~800mg	**65% less**
Phosphorus	~1,000mg	~450mg	**55% less**
Potassium	~1,110mg	~615mg	**45% less**
Cost	$7.00 + tax + gas	~$5-6 in ingredients (feeds 2)	Cheaper
Flavor	Taco Bell	95% identical	Worth it

MEAL PREP VERSION

Make a batch on Sunday, eat Taco Bell all week: 1. Cook 2 lbs turkey taco meat with seasoning. Portion into 4 containers. 2. Make all sauces. Store in squeeze bottles. 3. Fry 8 chalupa shells. Store in airtight container with paper towels. 4. Shred lettuce, cheese. Store separately. 5. Make Baja Blast mix (minus the Sprite) as a concentrate. Add Sprite when serving.

Assembly time per meal: 5 minutes. Faster than the drive-thru.

CKD Considerations

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RENAL CHECK — $7 Luxe Box CKD Dupe
K (Potassium): MODERATE (bell pepper over tomato, no beans, controlled
avocado)
P (Phosphorus): LOW-MED (cream cheese sauces, no processed cheese,
turkey over beef)
Na (Sodium): LOW (no-salt seasoning, low-sodium tortillas, homemade
sauces)
Fluid: Baja Blast = 12+ oz fluid — TRACK IT
Protein: GOOD (chicken + turkey = quality renal protein)
```

"The whole box. Every sauce. Every crunch. Your kidneys don't even know."

10 Wings. 10 Sauces. Zero Compromise.

"The best questions come after the fourth wing." -- Sean Evans, sort of

THE WINGS (Base Recipe)

Baked Crispy Wings -- Universal Base for All 10 Rounds

In 1964, Teressa Bellissimo at the Anchor Bar in Buffalo, NY deep-fried leftover wings and tossed them in cayenne hot sauce, accidentally inventing the "Buffalo wing" -- previously, wings were considered throwaway parts only fit for stock. (Source: The New Yorker, 1980)

Ingredient	Amount	CKD Note
Chicken wing sections (flats + drums)	3 lbs (~24 pieces)	Good protein source; rinse and pat dry
Baking powder (aluminum-free)	1 Tbsp	Low Na; creates crispiness without frying
Garlic powder	1 tsp	Low K alternative to fresh garlic
Onion powder	1 tsp	Lower K than raw onion
Smoked paprika	1 tsp	Negligible minerals
Black pepper	1/2 tsp	Negligible minerals
Olive oil spray	light coating	Heart-healthy fat

Method:

1. Pat wings completely dry with paper towels. Moisture is the enemy of crispiness.
2. Toss wings in a large bowl with baking powder, garlic powder, onion powder, smoked paprika, and black pepper until evenly coated.
3. Arrange wings on a wire rack set over a rimmed baking sheet. Single layer, no touching.
4. Refrigerate uncovered for 1 hour (or up to overnight) to dry the skin further.
5. Preheat oven to 425 F (220 C).
6. Spray wings lightly with olive oil.
7. Bake 25 minutes. Flip each wing. Bake another 20-25 minutes until skin is golden and crackling.
8. Toss 4-6 wings at a time in the sauce of your chosen round.

Yield: ~24 wings (serves 4-6, ~4-6 wings per person)

Per Serving (6 plain wings, no sauce):

Na	P	K
95 mg	145 mg	180 mg

THE LINEUP

Wing #1: "The Handshake" (Mild) -- Frank's RedHot Dupe

~450 Scoville Heat Units

Frank's RedHot was created in 1920 in New Iberia, Louisiana by Adam Estilette and Jacob Frank, using aged cayenne peppers -- the same sauce was used in the original 1964 Anchor Bar Buffalo wing recipe. (Source: McCormick & Company archives)

Sauce Ingredients:

Ingredient	Amount	CKD Note
Cayenne pepper, ground	2 Tbsp	Negligible minerals at this amount
White vinegar	1/2 cup	Na-free acid base
Water	1/4 cup	--
Garlic powder	1/2 tsp	Low K
Unsalted butter	2 Tbsp	Low Na; adds classic buffalo richness
Honey	1 tsp	Low mineral sweetener to round flavor

Method:

1. Whisk cayenne, vinegar, water, and garlic powder in a small saucepan over medium heat.
2. Bring to a simmer and cook 5 minutes, stirring occasionally.
3. Remove from heat. Whisk in butter until melted and emulsified.
4. Stir in honey. Let cool 5 minutes before tossing with wings.

Per Serving (sauce only, ~2 Tbsp):

Na	P	K
5 mg	12 mg	35 mg

Wing #2: "Smoky Crossroads" (Mild-Medium) -- Cholula Dupe

~1,000 Scoville Heat Units

Cholula hot sauce is named after the city of Cholula, Puebla, Mexico -- a city continuously inhabited for over 2,500 years, making it one of the oldest still-living cities in the Americas. Its Great Pyramid has a larger base than Giza's. (Source: INAH, Mexico)

Sauce Ingredients:

Ingredient	Amount	CKD Note
Arbol chiles, dried	6 whole	Low Na heat source
Piquin chiles, dried	1 Tbsp	Concentrated heat, negligible minerals
White vinegar	1/3 cup	Na-free
Water	1/4 cup	--
Cumin, ground	1/2 tsp	Negligible minerals
Oregano, dried	1/2 tsp	Negligible minerals
Garlic powder	1/2 tsp	Low K
Onion powder	1/4 tsp	Low K

Method:

1. Toast arbol and piquin chiles in a dry skillet over medium heat for 60 seconds, turning frequently. Remove stems.
2. Soak toasted chiles in hot water for 15 minutes. Drain.
3. Blend soaked chiles with vinegar, water, cumin, oregano, garlic powder, and onion powder until smooth.
4. Strain through a fine-mesh sieve for a pourable consistency.
5. Simmer strained sauce in a small pot for 5 minutes to meld flavors.

Per Serving (sauce only, ~2 Tbsp):

Na	P	K
3 mg	10 mg	45 mg

Wing #3: "Red Line" (Medium) -- Tapatio Dupe

~3,000 Scoville Heat Units

Tapatio hot sauce was created in 1971 by Jose-Luis Saavedra, Sr. in a small warehouse in Maywood, California. The name "Tapatio" is a colloquial term for people from Guadalajara, Jalisco -- Saavedra's hometown. It remained family-owned for over 50 years. (Source: Los Angeles Times, 2011)

Sauce Ingredients:

Ingredient	Amount	CKD Note
Arbol chiles, dried	10 whole	Low Na heat source
Guajillo chiles, dried	2 whole	Mild, fruity backbone; low Na
White vinegar	1/3 cup	Na-free
Water	3 Tbsp	--
Garlic powder	1 tsp	Low K
Cumin, ground	1/4 tsp	Negligible

Ingredient	Amount	CKD Note
Oregano, dried	1/4 tsp	Negligible
Smoked paprika	1/4 tsp	Negligible

Method:

1. Remove stems and most seeds from arbol and guajillo chiles.
2. Toast in a dry skillet 60-90 seconds. Soak in hot water 15 minutes. Drain.
3. Blend chiles with vinegar, water, garlic powder, cumin, oregano, and smoked paprika.
4. Strain through a fine-mesh sieve.
5. Simmer 5 minutes in a small saucepan. It should coat a spoon.

Per Serving (sauce only, ~2 Tbsp):

Na	P	K
4 mg	14 mg	55 mg

Wing #4: "Rooster Walk" (Medium-Hot) -- Sriracha Dupe

~2,200 Scoville Heat Units

Sriracha sauce is named after Si Racha, a coastal town in Chonburi Province, Thailand. David Tran, a Vietnamese-Chinese refugee, began bottling his version in Los Angeles in 1980 using a van. His rooster logo represents his Chinese zodiac birth year. (Source: Bon Appetit, 2009)

Sauce Ingredients:

Ingredient	Amount	CKD Note
Red Fresno chiles, fresh	8 oz (~8 chiles)	Fresh chiles = lower Na than bottled sauce
Garlic cloves	4	Moderate K; small amount per serving
White vinegar	1/4 cup	Na-free
Honey	1 Tbsp	Low mineral sweetener
Water	2 Tbsp	--

Method:

1. Stem and roughly chop Fresno chiles (keep seeds for heat).
2. Blend chiles, garlic, vinegar, honey, and water until a coarse paste forms.
3. Transfer to a saucepan. Simmer on low heat 10 minutes, stirring often.
4. Let cool slightly, then blend again until smooth.
5. Strain if you want classic smooth texture, or leave chunky for rustic style.
6. Rest in the fridge 24 hours for flavors to marry -- this step matters.

Per Serving (sauce only, ~2 Tbsp):

Na	P	K
6 mg	18 mg	70 mg

Wing #5: "Habanero Sunrise" (Hot) -- Tabasco Habanero Dupe

~7,000 Scoville Heat Units

The Tabasco pepper gets its name from the Mexican state of Tabasco, but the sauce has been produced exclusively on Avery Island, Louisiana since 1868. Avery Island is actually a salt dome -- a geological column of rock salt pushing up through the earth -- which the McIlhenny family has mined since the Civil War. (Source: Smithsonian Magazine, 2007)

Sauce Ingredients:

Ingredient	Amount	CKD Note
Habanero peppers, fresh	4 (about 2 oz)	Extreme heat; wear gloves
Mango, fresh	1/2 cup diced	Moderate K -- portion controlled
White vinegar	1/4 cup	Na-free
Lime juice, fresh	2 Tbsp	Low Na acid; moderate K in small qty
Honey	1 Tbsp	Low mineral sweetener
Garlic powder	1/2 tsp	Low K
Ground mustard	1/4 tsp	Negligible

Method:

1. Stem and halve habaneros (keep seeds for full heat, remove some to dial back).
2. Roast habaneros and mango under the broiler for 5-7 minutes until charred.
3. Blend roasted habaneros, mango, vinegar, lime juice, honey, garlic powder, and mustard until smooth.
4. Simmer in a saucepan 5 minutes.
5. Strain for a smooth, pourable hot sauce.

Per Serving (sauce only, ~2 Tbsp):

Na	P	K
4 mg	10 mg	85 mg

Wing #6: "Black Label Smoke" (Hotter) -- El Yucateco Dupe

~11,600 Scoville Heat Units

El Yucateco was founded in 1968 in Merida, Yucatan by Priamo Gamboa. Its distinctive green and black label sauces use habaneros grown in the Yucatan Peninsula, where the chile is native -- archaeologists have found domesticated habanero seeds in Yucatecan sites dating to 8,500 years ago. (Source: Proceedings of the National Academy of Sciences, 2014)

Sauce Ingredients:

Ingredient	Amount	CKD Note
Habanero peppers, fresh	6 (about 3 oz)	Wear gloves; ventilate kitchen
Chipotle chile in adobo	1 chile only	Watch Na -- use only the chile, not the adobo liquid
White vinegar	1/4 cup	Na-free
Lime juice, fresh	1 Tbsp	Low Na
Garlic powder	1/2 tsp	Low K
Cumin, ground	1/4 tsp	Negligible
Smoked paprika	1 tsp	Smoky depth
Water	2 Tbsp	--

Method:

1. Char habaneros in a dry cast iron skillet over high heat, turning, until blistered on all sides (~5 minutes).
2. Stem the charred habaneros.
3. Blend habaneros, chipotle chile, vinegar, lime juice, garlic powder, cumin, smoked paprika, and water.
4. Strain through a fine-mesh sieve, pressing with a spoon to extract all liquid.
5. Simmer 5 minutes. The color should be deep brownish-red with visible smoke wisps.

Per Serving (sauce only, ~2 Tbsp):

Na	P	K
25 mg	12 mg	75 mg

Wing #7: "Aardvark's Garden" (Very Hot) -- Secret Aardvark Dupe

~15,000 Scoville Heat Units

Secret Aardvark Habanero Hot Sauce was born in Portland, Oregon in 2004, created by Scott Moritz. It became a cult favorite at Portland food carts before going national. The name came from a childhood nickname -- Moritz's friends called him "Aardvark" because he had a long nose. (Source: Portland Mercury, 2016)

Sauce Ingredients:

Ingredient	Amount	CKD Note
Habanero peppers, fresh	6 (about 3 oz)	Wear gloves
Roasted red bell pepper	1 medium	Moderate K; roasting concentrates flavor
White vinegar	1/4 cup	Na-free
Mustard powder	1 tsp	Secret Aardvark's signature tang
Cumin, ground	1/2 tsp	Negligible
Black pepper	1/4 tsp	Negligible
Garlic powder	1 tsp	Low K

Ingredient	Amount	CKD Note
Onion powder	1/2 tsp	Low K
Honey	2 tsp	Balances heat with sweetness

Method:

1. Roast bell pepper directly over a gas flame or under broiler until fully charred. Steam in a covered bowl 10 minutes, then peel and seed.
2. Stem and halve habaneros.
3. Blend roasted bell pepper, habaneros, vinegar, mustard powder, cumin, black pepper, garlic powder, onion powder, and honey until very smooth.
4. Simmer in a saucepan 10 minutes on low, stirring frequently.
5. Do not strain -- the roasted pepper body is what gives this sauce its signature thickness.

Per Serving (sauce only, ~2 Tbsp):

Na	P	K
8 mg	16 mg	95 mg

Wing #8: "Caliente Doble" (Extremely Hot) -- Hot Ones Los Calientes Dupe

~36,000 Scoville Heat Units

"Hot Ones" debuted on YouTube's First We Feast channel in March 2015. Host Sean Evans intentionally chose to avoid celebrity-friendly softball questions, instead using progressively hotter wings to break down guests' media-trained composure. The show has generated over 4 billion total views. (Source: The New York Times, 2019)

Sauce Ingredients:

Ingredient	Amount	CKD Note
Habanero peppers, fresh	6 (about 3 oz)	High heat base
Serrano peppers, fresh	4	Medium heat layering
Passionfruit pulp (frozen)	3 Tbsp	Moderate K; tropical tang
Pineapple, fresh	2 Tbsp minced	Moderate K in small amount
White vinegar	3 Tbsp	Na-free
Lime juice, fresh	1 Tbsp	Low Na
Garlic powder	1 tsp	Low K
Smoked paprika	1/2 tsp	Depth
Ground cumin	1/4 tsp	Negligible

Method:

1. Stem and roughly chop habaneros and serranos.
2. Dry-roast all chiles in a cast iron skillet until blistered.
3. Blend roasted chiles with passionfruit pulp, pineapple, vinegar, lime juice, garlic powder, smoked paprika, and cumin.
4. Simmer 10 minutes in a saucepan. The fruit sugars will caramelize slightly.
5. Blend again for a silky finish. Strain only if you want a thinner pour.

Per Serving (sauce only, ~2 Tbsp):

Na	P	K
5 mg	14 mg	110 mg

Wing #9: "Beyond Reason" (Savage) -- Da Bomb Beyond Insanity Dupe

~135,600 Scoville Heat Units

Da Bomb Beyond Insanity, made by Original Juan Specialty Foods in Kansas City, has become the most feared sauce on "Hot Ones" -- nearly every guest breaks down at this stage. The sauce uses habanero pepper extract, a concentrated capsaicin isolate, which is why it hits harder than sauces with higher Scoville ratings that use whole peppers. (Source: First We Feast, 2020)

Sauce Ingredients:

Ingredient	Amount	CKD Note
Habanero peppers, fresh	8 (about 4 oz)	Maximum whole-pepper heat
Cayenne pepper, ground	2 Tbsp	Concentrated burn
Ghost pepper powder (bhut jolokia)	1 tsp	Extreme heat -- measure carefully
White vinegar	1/4 cup	Na-free
Garlic powder	1 tsp	Low K
Chipotle powder	1/2 tsp	Smoky undertone
Unsweetened apricot preserves	1 Tbsp	Low Na fruit binder; moderate K
Water	2 Tbsp	--

Method:

1. Stem habaneros. For maximum heat, keep all seeds and membranes.
2. Blend habaneros, cayenne, ghost pepper powder, vinegar, garlic powder, chipotle powder, apricot preserves, and water until completely smooth.
3. Simmer on low 15 minutes. The kitchen will become hostile -- run the vent hood.
4. Strain through a fine-mesh sieve for a dense, extract-like consistency.
5. Let cool fully before use. This sauce should coat a spoon and drip slowly.

WARNING: This sauce is not for casual consumption. Taste with a toothpick first.

Per Serving (sauce only, ~1 Tbsp -- you will not want more):

Na	P	K
4 mg	10 mg	65 mg

Wing #10: "The Last Prayer" (Extinction Level) -- The Last Dab Dupe

~2,000,000+ Scoville Heat Units

Pepper X, bred by Ed Currie of PuckerButt Pepper Company, was confirmed by Guinness World Records in October 2023 as the world's hottest pepper at 2.69 million Scoville Heat Units, dethroning Currie's own Carolina Reaper (1.64M SHU). Currie spent over 10 years crossbreeding peppers to create it. He reportedly cramped for over 3 hours after eating one raw. (Source: Associated Press, October 2023)

Sauce Ingredients:

Ingredient	Amount	CKD Note
Carolina Reaper peppers, dried	3 whole	Handle with nitrile gloves only
Habanero peppers, fresh	4	Supporting heat floor
Ghost pepper powder (bhut jolokia)	2 tsp	Layered superhot
White vinegar	1/4 cup	Na-free
Mustard powder	1/2 tsp	Tang and complexity
Garlic powder	1 tsp	Low K
Turmeric, ground	1/4 tsp	Inflammation-support; golden color
Black pepper	1/4 tsp	Activates turmeric's curcumin
Ginger, ground	1/4 tsp	Low K
Honey	2 tsp	Last-dab sweetness
Water	2 Tbsp	--

Method:

1. Rehydrate dried Carolina Reapers in hot water for 20 minutes. Drain. Remove stems only -- keep every seed.
2. Stem and halve fresh habaneros.
3. Blend rehydrated Reapers, habaneros, ghost pepper powder, vinegar, mustard powder, garlic powder, turmeric, black pepper, ginger, honey, and water.
4. Simmer on low heat 15 minutes. Do not lean over the pot. Do not breathe directly above it. Seriously.
5. Blend once more until completely homogenous.
6. Strain for a velvety, neon-orange sauce.
7. Apply with a toothpick or the back of a spoon -- a "dab" is the correct serving unit.

WARNING: This sauce is weapons-grade. Have plain rice, bread, and full-fat yogurt standing by. Capsaicin is fat-soluble, not water-soluble -- water will make it worse.

Per Serving (sauce only, ~1 tsp -- that is plenty):

Na	P	K
2 mg	5 mg	20 mg

CKD Considerations

> ***Capsaicin and Kidneys -- The Good News***
>
> *Capsaicin (the compound that makes peppers hot) has shown potential studied in kidney-related research properties in peer-reviewed research. A 2012 study in the Journal of Agricultural and Food Chemistry found capsaicin may reduce renal oxidative stress. Hot peppers are also naturally very low in sodium, potassium, and phosphorus per serving -- making them one of the most potentially compatible with an individualized CKD plan flavor amplifiers available.*
>
> ***Key Reminders:***
>
> - ***Sodium:*** *Every sauce in this lineup is homemade specifically to avoid the 200-500+ mg Na per serving found in commercial hot sauces. None exceed 25 mg Na per serving.*
> - ***Potassium:*** *Wing #8 (Caliente Doble) has the highest K at 110 mg per serving due to passionfruit and pineapple. If you are on strict K restriction, swap the fruit for extra vinegar and a pinch of citric acid.*
> - ***Phosphorus:*** *All sauces stay well under 50 mg P per serving. The wings themselves are the primary P source (~145 mg for 6 wings). Track your daily total accordingly.*
> - ***Portion control is built in:*** *The hotter the sauce, the less you use. Wing #10 is measured in teaspoons, not tablespoons.*
> - ***Hydration:*** *Spicy food increases thirst. If you are on a fluid restriction, have your allotted fluids nearby and sip -- do not chug.*
> - ***Acid reflux:*** *If you experience GERD, start at Wing #1 and respect your ceiling. There is no shame in a five-wing streak.*
> - ***No commercial sauces were used.*** *Every recipe avoids the hidden sodium, phosphate preservatives, and potassium chloride found in store-bought hot sauces.*
>
> ***Daily Targets (general CKD guidance -- individual plans vary):***
>
> | *Nutrient* | *Daily Target* |
> |---|---|
> | *Sodium (Na)* | *< 2,000 mg* |
> | *Potassium (K)* | *2,000-3,000 mg (varies by stage)* |
> | *Phosphorus (P)* | *800-1,000 mg* |

"If you can't stand the heat, get out of the kitchen -- but if you built the kitchen yourself, you set the thermostat." -- a thing someone should have said to Harry Truman

Wilbur Scoville, the pharmacist who invented the Scoville Organoleptic Test in 1912, measured pepper heat by diluting chile extract with sugar water until a panel of five tasters could no longer detect the burn. The entire modern hot sauce industry rests on five people's tongues from 112 years ago. (Source: Journal of the American Pharmaceutical Association, 1912)

CHAPTER 5

Southeast Asian

"The wok doesn't ask questions."

Tom Kha, Pad Thai, Pad Gra Prao, Papaya Salad, Beef Salad, Spring Rolls, Pho, Banh Mi

Southeast Asian Comfort Food

"The food cart vibes. The clinic-approved numbers."

CKD NOTES FOR THAI/VIETNAMESE COOKING

The good news: Thai and Vietnamese cuisines are NATURALLY closer to CKD-aware than most Western food: - Rice-based (low K, low P) - Fresh herbs (cilantro, basil, mint = almost zero K/P/Na) - Lime juice instead of salt for brightness - Protein is portion-controlled by design (small amounts of meat, lots of vegetables/noodles)

The traps: - **Fish sauce** = VERY high sodium (~1,400mg Na per tbsp). Use sparingly, dilute, or sub with low-sodium soy sauce + lime - **Soy sauce** = high sodium (~900mg Na per tbsp). Use low-sodium version - **Tomatoes** in some dishes = high K - **Coconut water** = high K (but coconut CREAM/MILK is fine) - **Bean sprouts** = moderate K — use small amounts - **Peanuts** = moderate P — garnish only, not handfuls - **Potassium in broth** — bone broth concentrates K. Use homemade with controlled simmer time.

The CKD sauce trinity:

Sauce	Original	CKD Swap
Fish sauce	1 tbsp = 1,400mg Na	1 tsp low-sodium soy + 1/2 tsp lime juice + pinch sugar
Soy sauce	1 tbsp = 900mg Na	Low-sodium soy sauce (Kikkoman low-sodium = 575mg/tbsp) — use 1 tsp max
Oyster sauce	1 tbsp = 490mg Na	1 tsp oyster sauce + 1 tsp water (dilute by half)

THE RECIPES

1. Lime-Coconut Tom Kha Gai

Andrew's comfort soup — creamy, sour, aromatic, warming

Ingredient	Amount	CKD Notes
Coconut milk (full-fat canned)	1 can (13.5oz)	Fine — coconut MILK/CREAM is low K
Chicken breast	6 oz, sliced thin	Good renal protein
Galangal (or ginger)	6 slices	Inflammation-support, low everything
Lemongrass	2 stalks, smashed and cut into 2" pieces	Aromatic, zero K/P/Na
Kaffir lime leaves	4-5 leaves	Aromatic
Mushrooms (white button)	1/2 cup sliced	Low-K mushroom variety
Cherry tomatoes	4-5, halved	Small amount = controlled K
Thai chilies	2-3, smashed	Heat without sodium

Ingredient	Amount	CKD Notes
Lime juice	2-3 tbsp	THE sour element — replaces some fish sauce need
Fish sauce sub	1 tsp low-sodium soy + 1/2 tsp lime + pinch sugar	~190mg Na vs 1,400mg
Sugar	1 tsp	Balances sour
Cilantro	Garnish	
Water or chicken broth	1 cup	Low-sodium broth if using

Method: 1. Bring coconut milk + water to gentle simmer 2. Add galangal, lemongrass, lime leaves, chilies. Simmer 5 min (infuse aromatics) 3. Add chicken. Cook 5 min until white throughout 4. Add mushrooms + tomatoes. Cook 2 min 5. Remove from heat. Add lime juice + fish sauce sub + sugar 6. Taste — adjust sour (more lime) and salt (tiny bit more soy) to preference 7. Garnish with cilantro, serve with jasmine rice

Per serving (2 servings): ~250mg Na, ~180mg P, ~350mg K. Safe and gorgeous.

2. Tamarind Street Pad Thai

Ingredient	Amount	CKD Notes
Rice noodles (flat, dried)	4 oz	Soak in room-temp water 30 min. LOW-K.
Chicken or shrimp	4 oz	
Egg	1	Moderate P — one egg per batch is fine
Bean sprouts	Small handful	Moderate K — small amount
Green onion	2 stalks, cut into 1" pieces	Low K
Garlic	2 cloves, minced	
Oil	2 tbsp	

Pad Thai Sauce (CKD version):

Ingredient	Amount	CKD Notes
Tamarind paste	1 tbsp	The REAL Pad Thai flavor — low K/P/Na
Sugar	1 tbsp	
Low-sodium soy sauce	2 tsp	~380mg Na (vs 3 tbsp fish sauce = 4,200mg)
Lime juice	1 tbsp	
Rice vinegar	1 tsp	
Sriracha or chili flakes	To taste	

Method: 1. Mix sauce ingredients in small bowl 2. Drain soaked noodles 3. Heat oil in wok over high heat. Cook protein 3-4 min, remove 4. Scramble egg in same wok, break up 5. Add noodles + sauce. Toss 2-3 min until noodles are soft and coated 6. Add protein back, bean sprouts, green onion. Toss 1 min 7. Garnish: crushed peanuts (1 tbsp — P control), lime wedge, cilantro

Per serving: ~400mg Na, ~200mg P, ~300mg K

3. Holy Basil Chicken Stir-Fry

The street food king — fast, spicy, aromatic

Ingredient	Amount	CKD Notes
Ground chicken or turkey	8 oz	
Thai basil leaves	1 packed cup	Holy basil if you can find it — zero K/P concern
Thai chilies	3-5, minced	Adjust heat to preference
Garlic	4 cloves, minced	
Shallot	1 small, sliced	Low K
Green beans	1/2 cup, cut into 1" pieces	Low K vegetable
Oil	2 tbsp	

Sauce:

Ingredient	Amount
Low-sodium soy sauce	1 tbsp
Oyster sauce	1 tsp
Sugar	1 tsp
Water	1 tbsp

Method: 1. Wok screaming hot + oil 2. Garlic + chilies + shallot — 30 seconds until fragrant 3. Add ground meat — break up, cook 3-4 min until browned 4. Add green beans + sauce. Stir-fry 2 min 5. Kill heat. Toss in basil leaves. They wilt in 10 seconds from residual heat 6. Serve over jasmine rice with a fried egg on top (optional)

Per serving: ~380mg Na, ~190mg P, ~280mg K

4. Green Papaya Crunch Salad

Ingredient	Amount	CKD Notes
Green papaya, shredded	2 cups	GREEN (unripe) papaya is LOW-K. RIPE papaya is HIGH-K. Green only!
Carrot, shredded	1/4 cup	Small amount = controlled K
Green beans	4-5, cut into 1" pieces	Low K
Cherry tomatoes	4, quartered	Small amount
Thai chilies	2-3, to taste	
Garlic	2 cloves	
Lime juice	2 tbsp	
Low-sodium soy sauce	1 tsp	Sub for fish sauce
Sugar	1 tbsp	
Peanuts	1 tbsp, crushed	Garnish only — P control
Dried shrimp	1 tsp (optional)	Tiny amount for umami

Method: Pound garlic + chilies in mortar. Add green beans + tomatoes, lightly bruise. Add papaya + carrot. Add lime + soy sub + sugar. Toss. Top with peanuts.

5. Waterfall Beef Salad

Ingredient	Amount	CKD Notes
Flank steak or sirloin	6 oz	Grill medium-rare, slice thin against grain
Shallot	2 small, sliced thin	Low K
Cilantro	1/4 cup	
Mint leaves	1/4 cup	
Green onion	2 stalks, sliced	
Toasted rice powder	1 tbsp	Toast dry rice in pan, grind — the SECRET ingredient
Thai chilies	2, sliced	

Dressing:

Ingredient	Amount
Lime juice	3 tbsp
Low-sodium soy sauce	1 tbsp
Sugar	1 tsp
Chili flakes	1/2 tsp

Method: Grill steak. Rest 5 min. Slice thin. Toss with shallot, herbs, dressing, rice powder. Serve over rice or lettuce cups.

The toasted rice powder is what makes this dish. It adds a nutty, smoky crunch that's unmistakable.

6. Fresh Spring Rolls

Ingredient	Amount	CKD Notes
Rice paper wrappers	8 sheets	Soak one at a time in warm water 15 sec
Rice vermicelli	4 oz, cooked	Low K
Shrimp	8 medium, cooked, halved lengthwise	OR chicken breast, sliced
Lettuce	8 leaves	

Ingredient	Amount	CKD Notes
Fresh herbs	Mint, cilantro, Thai basil — a few leaves per roll	
Cucumber	1/2, cut into matchsticks	Low K
Carrot	1 small, julienned	Small amount

Peanut Dipping Sauce (CKD version):

Ingredient	Amount
Peanut butter	2 tbsp
Hoisin sauce	1 tbsp (moderate Na — use sparingly)
Water	2 tbsp
Lime juice	1 tsp
Sriracha	1/2 tsp
Crushed peanuts	1 tsp garnish

Assembly: Wet rice paper. Lay lettuce, noodles, protein, herbs, cucumber, carrot in center. Fold bottom up, sides in, roll tight. Serve with peanut sauce.

7. Clear-Broth Pho Bo

Ingredient	Amount	CKD Notes
Rice noodles (banh pho, flat)	4 oz dry	Low K base
Beef sirloin	4 oz, sliced paper-thin	Slice while partially frozen for thin cuts
Broth (the key):		
Water	6 cups	NOT bone broth (concentrates K). Build flavor with spices.
Low-sodium beef broth	2 cups	Or 2 tsp beef Better Than Bouillon low-sodium
Star anise	2 whole	THE pho spice
Cinnamon stick	1	
Cloves	3	
Ginger	2" piece, charred under broiler	Char = deeper flavor
Onion	1/2, charred	Char it
Fish sauce sub	2 tsp low-sodium soy + 1 tsp lime	
Sugar	1 tsp	

Garnish plate:

Item	CKD Notes
Bean sprouts (small amount)	Moderate K
Thai basil	Safe
Lime wedges	Safe
jalapeño slices	Safe — capsaicin is fine
Cilantro	Safe
Hoisin + sriracha	1 tsp each max — Na control

Method: 1. Char ginger and onion under broiler 5 min per side 2. Simmer water + broth + charred aromatics + spices for 30 min minimum (1 hour better) 3. Strain broth. Return to pot. Season with soy sub + sugar 4. Cook noodles separately per package directions 5. Bowl: noodles → raw beef slices on top → ladle HOT broth over beef (the broth cooks the thin slices instantly) 6. Garnish plate on the side

The pho trick for CKD: Building flavor with spices (star anise, cinnamon, charred ginger) instead of relying on high-sodium fish sauce + long-simmered bone broth. The spice infusion is actually MORE aromatic than lazy high-sodium broth.

8. Bright Pickle Banh Mi

Component	CKD Dupe
Bread	French baguette or bolillo roll — light, crispy crust. Small 6" portion.
Protein	Grilled chicken thigh (marinate in: 1 tsp low-sodium soy + 1 tsp sugar + 1/2 tsp garlic + lemongrass, minced)
Do chua (pickled daikon/carrot)	Julienne daikon + carrot, pickle in rice vinegar + sugar + water (NO salt in the pickle — the vinegar does the work)
Cucumber	Sliced thin
jalapeño	Sliced
Cilantro	Fresh sprigs
Mayo	Avocado oil mayo (Primal Kitchen) or sriracha mayo (mayo + sriracha)
Maggi/soy drizzle	SKIP or 1/2 tsp low-sodium soy — this is where banh mi gets its sodium

Assembly: Split roll. Spread avocado oil mayo. Layer chicken, pickled veg, cucumber, jalapeño, cilantro. The crunch of fresh bread + pickled vegetables + herbs = perfect sandwich.

CHINESE TAKEOUT DUPES & TERIYAKI

"The Americanized Chinese restaurant down the street — but your kidneys don't file a complaint afterward."

CKD NOTES FOR CHINESE TAKEOUT COOKING:

The traps in Chinese-American takeout are predictable: - **Regular soy sauce** = 900mg Na per tbsp. Always use **low-sodium soy sauce** (Kikkoman low-sodium = 575mg/tbsp), and use LESS than you think you need - **Oyster sauce, hoisin sauce** = sodium bombs. Use sparingly, dilute with water - **Cornstarch coatings** = fine for CKD. Zero K/P/Na. Creates that crispy takeout texture - **Brown sugar** = the secret weapon. Caramelizes in the wok, creates that glossy takeout sauce look - **MSG** = 600mg Na per tsp. Skip it. The umami comes from soy + sugar + ginger instead - **Avocado oil** = Andrew's frying oil of choice. High smoke point (520F), clean flavor, perfect for wok work

The CKD Takeout Sauce Base (use this across most recipes below):

Ingredient	Amount	CKD Notes
Low-sodium soy sauce	2 tbsp	~1,150mg Na total — split across 2+ servings
Brown sugar	1.5 tbsp	The glaze
Fresh ginger, minced	1 tbsp	Inflammation-support
Garlic, minced	3 cloves	
Water or low-sodium broth	2 tbsp	Loosens the sauce
Cornstarch slurry	1 tsp cornstarch + 1 tbsp water	Thickens to that glossy takeout consistency

1. Ginger-Glaze Teriyaki Chicken

Invented in the 1960s by Japanese-American immigrants in Seattle and Hawaii. The word "teriyaki" (照り焼き) means "shiny grilled" — teri = gloss, yaki = grill. The sweet soy glaze Americans know was largely a Pacific Northwest Japanese-American creation, not traditional Japanese cooking.

Ingredient	Amount	CKD Notes
Chicken thighs, boneless skinless	1 lb (~4 thighs)	Thighs > breast. More flavor, harder to overcook
Teriyaki Sauce:		
Low-sodium soy sauce	3 tbsp	~1,725mg Na split across 4 servings
Brown sugar	2 tbsp	
Fresh ginger, grated	1 tbsp	
Garlic, minced	3 cloves	
Rice vinegar	1 tbsp	Brightness
Water	2 tbsp	
Cornstarch slurry	1 tsp cornstarch + 1 tbsp cold water	
Avocado oil	1 tbsp	
Jasmine rice	For serving	Low K base
Green onion, sliced	Garnish	
Sesame seeds	Garnish	

Method: 1. Mix soy sauce, brown sugar, ginger, garlic, rice vinegar, water in a bowl 2. Heat avocado oil in large skillet or wok over medium-high 3. Sear chicken thighs 5-6 min per side until golden and cooked through (165F internal) 4. Pour sauce over chicken. Simmer 2 min 5. Add cornstarch slurry. Stir until sauce thickens and goes glossy (30 seconds) 6. Slice thighs. Serve over jasmine rice. Hit with green onion + sesame seeds

Per serving (4 servings): ~430mg Na | ~210mg P | ~320mg K

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2. Ginger-Glaze Teriyaki Beef

Same Seattle/Hawaii Japanese-American origin as teriyaki chicken. Flank steak became the go-to cut in American teriyaki joints because it absorbs marinade fast and slices beautifully against the grain.

Ingredient	Amount	CKD Notes
Flank steak	1 lb	Slice thin AGAINST the grain after cooking
Teriyaki Sauce:		
Low-sodium soy sauce	3 tbsp	
Brown sugar	2 tbsp	
Fresh ginger, grated	1 tbsp	
Garlic, minced	3 cloves	
Rice vinegar	1 tbsp	
Water	2 tbsp	
Cornstarch slurry	1 tsp cornstarch + 1 tbsp cold water	
Avocado oil	1 tbsp	
Jasmine rice	For serving	
Green onion, sliced	Garnish	
Sesame seeds	Garnish	

Method: 1. Mix sauce ingredients in a bowl (same as teriyaki chicken sauce) 2. Slice flank steak into 1/4" strips AGAINST the grain. (Pro tip: partially freeze the steak 20 min first — easier to slice thin) 3. Heat avocado oil in wok over HIGH heat until smoking 4. Sear beef strips in batches — 1-2 min per batch. Don't crowd the wok or it steams instead of sears 5. Return all beef to wok. Pour sauce over. Toss 1 min 6. Add cornstarch slurry. Stir until glossy 7. Serve over jasmine rice. Green onion + sesame seeds on top

Per serving (4 servings): ~440mg Na | ~230mg P | ~350mg K

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3. Wok-Seared Mongolian Beef

Despite the name, Mongolian Beef has nothing to do with Mongolia. It was invented in Taiwan in the 1950s at Mongolian BBQ restaurants, which were themselves a Taiwanese invention loosely inspired by stories of Mongolian warriors cooking on shields. The dish as Americans know it — sweet, soy-glazed, scallion-heavy — is pure Chinese-American takeout, popularized by P.F. Chang's in the 1990s.

Ingredient	Amount	CKD Notes
Flank steak	1 lb, sliced 1/4" against grain	Partially freeze first
Cornstarch	3 tbsp	The crispy coating — zero K/P/Na
Avocado oil	3 tbsp (for frying)	High smoke point
Green onions	6-8 stalks, cut into 2" pieces	Low K, THE signature ingredient
Sauce:		
Low-sodium soy sauce	3 tbsp	
Brown sugar	3 tbsp	Slightly sweeter than teriyaki — that's the Mongolian Beef signature
Fresh ginger, minced	1 tbsp	
Garlic, minced	4 cloves	
Water	3 tbsp	
Red pepper flakes	1/2 tsp (optional)	

Method: 1. Toss sliced beef in cornstarch until every piece is coated. Shake off excess 2. Mix sauce ingredients in a bowl 3. Heat avocado oil in wok over HIGH heat. Fry beef strips in batches — 2 min per batch until edges are CRISPY. Remove to plate 4. Drain most oil. Add garlic + ginger, stir 30 seconds 5. Pour in sauce. Let it bubble and thicken 1 min 6. Return crispy beef to wok. Toss to coat 7. Kill heat. Add green onions. Toss 30 seconds (residual heat only — you want them barely wilted, still bright green) 8. Serve over jasmine rice immediately. The crispy texture fades fast

Per serving (4 servings): ~450mg Na | ~220mg P | ~340mg K

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4. Peppercorn Szechuan Chicken

Szechuan (Sichuan) cuisine dates back over 2,000 years to China's Sichuan Province. The signature numbing-spicy (麻辣, málà) flavor comes from Szechuan peppercorns, which contain hydroxy-alpha-sanshool — a compound that literally numbs your tongue by activating touch receptors. The peppercorn was actually BANNED in the US from 1968-2005 due to citrus canker fears. What Americans ate as "Szechuan" for 37 years was mostly just spicy, not numbing.

Ingredient	Amount	CKD Notes
Chicken thighs, boneless skinless	1 lb, cut into 1" cubes	
Cornstarch	2 tbsp	Light coating
Avocado oil	2 tbsp	
Dried red chili peppers	8-12 whole	The heat. Remove seeds for less fire
Szechuan peppercorns	1 tsp	The NUMBING. Toast in dry pan first
Bell pepper (red or green)	1, cut into 1" pieces	Low K
Zucchini	1 small, half-moons	Low K
Green onion	3 stalks, cut 1"	
Sauce:		
Low-sodium soy sauce	2 tbsp	
Rice vinegar	1 tbsp	
Brown sugar	1 tbsp	
Sesame oil	1 tsp	Flavor, not frying
Garlic, minced	4 cloves	
Fresh ginger, minced	1 tbsp	
Water	2 tbsp	
Cornstarch slurry	1 tsp cornstarch + 1 tbsp water	

Method: 1. Toast Szechuan peppercorns in dry wok 1 min until fragrant. Remove, crush lightly 2. Toss chicken cubes in cornstarch 3. Heat avocado oil in wok over high heat. Fry chicken 4-5 min until golden. Remove 4. In same wok: dried chilies + crushed Szechuan peppercorns, stir 30 seconds (don't burn) 5. Add garlic + ginger, 30 more seconds 6. Add bell pepper + zucchini. Stir-fry 2 min 7. Return chicken. Pour in sauce. Toss 1 min 8. Add cornstarch slurry. Stir until glossy 9. Finish with green onion + sesame oil drizzle

Heat note: If you want to go nuclear, add chili oil or your favorite hot sauce at the table. Andrew has tried all the Da Bomb hot sauces from Hot Ones and reports they taste like "salty spicy garbage" — famous for being the worst-tasting sauce on the show despite high Scoville numbers. If you want real heat with actual flavor, use chili crisp (Lao Gan Ma) or sambal oelek instead.

Per serving (4 servings): ~400mg Na | ~200mg P | ~310mg K

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5. General Tso's Night Market Chicken

Named after Zuo Zongtang (左宗棠), a Qing Dynasty military leader from Hunan Province (1812-1885) who never ate the dish. Chef Peng Chang-kuei created a Hunanese version in Taiwan in the 1950s for a banquet honoring Zuo. Chef Peng later brought it to New York in 1973, where American customers wanted it sweeter. He obliged. The sweet-crispy-spicy version Americans know was born in Manhattan, not Hunan. Chef Peng reportedly disliked the Americanized version.

Ingredient	Amount	CKD Notes
Chicken thighs, boneless skinless	1 lb, cut into 1.5" pieces	
Batter:		
Cornstarch	1/4 cup	
Egg	1	
All-purpose flour	2 tbsp	
Salt	Pinch only	
Avocado oil	For shallow frying (~1/2 cup)	
Sauce:		
Low-sodium soy sauce	2 tbsp	
Rice vinegar	2 tbsp	The tang
Brown sugar	2 tbsp	The sweet
Sesame oil	1 tsp	
Garlic, minced	3 cloves	
Fresh ginger, minced	1 tbsp	
Dried red chili peppers	4-6 whole	
Water	2 tbsp	
Cornstarch slurry	1 tsp cornstarch + 1 tbsp water	
Broccoli florets	2 cups, steamed	Low K when steamed

Method: 1. Whisk batter: egg + cornstarch + flour + pinch salt until smooth 2. Toss chicken pieces in batter until fully coated 3. Heat avocado oil in wok or deep skillet to 350F. Fry chicken in batches 4-5 min until deep golden and CRISPY. Drain on paper towels 4. Drain all but 1 tbsp oil. Add dried chilies, garlic, ginger — stir 30 seconds 5. Pour in soy sauce, vinegar, brown sugar, water. Bring to simmer 6. Add cornstarch slurry. Stir until sauce is thick and glossy 7. Toss crispy chicken into sauce. Coat every piece 8. Serve over jasmine rice with steamed broccoli on the side. Drizzle sesame oil

Per serving (4 servings): ~420mg Na | ~220mg P | ~300mg K

6. Toasted Sesame Beef

Sesame-coated beef dishes trace to Cantonese cooking traditions, but the thick-sauced sesame beef Americans know is another Chinese-American restaurant creation from the 1970s-80s. Sesame seeds have been cultivated for over 5,000 years — they're one of the oldest oilseed crops on Earth, first domesticated in the Indian subcontinent. The word "sesame" comes from the Arabic "simsim."

Ingredient	Amount	CKD Notes
Flank steak	1 lb, sliced 1/4" against grain	Partially freeze first
Cornstarch	3 tbsp	Crispy coating
Avocado oil	3 tbsp	
Sesame seeds	2 tbsp	Toast in dry pan first — low P in this amount
Green onion	3 stalks, sliced	Garnish
Sesame Sauce:		
Low-sodium soy sauce	2 tbsp	
Sesame oil	1 tbsp	The star flavor
Brown sugar	2 tbsp	
Rice vinegar	1 tbsp	
Garlic, minced	3 cloves	
Fresh ginger, minced	1 tsp	
Water	2 tbsp	
Cornstarch slurry	1 tsp cornstarch + 1 tbsp water	

Method: 1. Toast sesame seeds in dry pan over medium heat 2 min, stirring constantly, until golden. Remove immediately (they burn fast) 2. Toss sliced beef in cornstarch 3. Heat avocado oil in wok over HIGH heat. Fry beef in batches until crispy edges. Remove 4. Drain most oil. Add garlic + ginger, 30 seconds 5. Pour in sauce ingredients (soy, sesame oil, brown sugar, vinegar, water). Simmer 1 min 6. Add cornstarch slurry. Stir until thick and glossy 7. Return beef. Toss to coat 8. Top with toasted sesame seeds + green onion. Serve over jasmine rice

Per serving (4 servings): ~410mg Na | ~230mg P | ~340mg K

7. Golden Chicken Fried Rice

Fried rice (炒饭, chǎo fàn) has been documented in China since the Sui Dynasty (~589-618 AD). The technique of frying day-old rice was a practical solution for leftover grain. Chinese-American fried rice as a takeout staple became widespread in the US by the 1920s-30s alongside chop suey joints. The "day-old rice" rule isn't optional — fresh rice has too much moisture and turns into a sticky clump. Cold rice fries crispy.

Ingredient	Amount	CKD Notes
Day-old jasmine rice	3 cups cooked, cold	MUST be cold/day-old. Spread fresh rice on sheet pan in fridge overnight if needed
Chicken thigh, boneless skinless	8 oz, diced small	
Eggs	2	Moderate P — 2 eggs across 3+ servings is fine
Carrot	1 small, diced fine	Small amount = controlled K
Green onion	4 stalks, sliced	
Garlic, minced	3 cloves	
Frozen peas	1/4 cup	Small amount only — peas are moderate K
Avocado oil	2 tbsp	
Low-sodium soy sauce	2 tbsp	
Sesame oil	1 tsp	Finish only
White pepper	1/4 tsp	The authentic fried rice seasoning — NOT black pepper

Method: 1. Heat avocado oil in wok over HIGH heat until smoking 2. Cook diced chicken 3-4 min until done. Remove 3. Scramble eggs in same wok. Break into small pieces. Remove 4. Add a splash more oil. Stir-fry carrot + peas 2 min 5. Add cold rice. Press it flat against wok. Let it SIT and get crispy on the bottom (30-45 seconds). Then toss. Repeat. This is how you get that wok-charred flavor (锅气, wok hei) 6. Add garlic, stir 30 seconds 7. Return chicken + eggs. Drizzle soy sauce around the EDGES of the wok (hits the hot metal first = deeper flavor) 8. Toss everything together. White pepper + sesame oil + green onions 9. Serve immediately

Per serving (3 servings): ~420mg Na | ~200mg P | ~290mg K

8. Weeknight Beef Chow Mein

Chow mein (炒麵, chǎo miàn) means "stir-fried noodles." It arrived in America with Chinese railroad workers in the 1850s-60s and became a fixture of early Chinese-American restaurants. By the 1920s, chow mein was one of the most recognized Chinese dishes in America. The crispy vs. soft noodle debate is regional: Cantonese-American restaurants often served crispy pan-fried noodles, while other traditions kept them soft. Both are correct.

Ingredient	Amount	CKD Notes
Egg noodles or rice noodles	8 oz dried	Rice noodles = lower P. Egg noodles = more authentic chow mein texture
Flank steak	8 oz, sliced thin against grain	
Cabbage (green)	2 cups, shredded	LOW-K vegetable — perfect for CKD
Bean sprouts	1/2 cup	Moderate K — small amount is fine
Carrot	1 small, julienned	
Green onion	3 stalks, cut 2"	
Garlic, minced	3 cloves	
Fresh ginger, minced	1 tsp	
Avocado oil	2 tbsp	

Ingredient	Amount	CKD Notes
Chow Mein Sauce:		
Low-sodium soy sauce	2 tbsp	
Oyster sauce	1 tsp	Use sparingly — Na
Sesame oil	1 tsp	
Brown sugar	1 tsp	
White pepper	1/4 tsp	
Water	2 tbsp	

Method: 1. Cook noodles per package (usually boil 3-4 min for egg noodles, soak for rice noodles). Drain. Toss with 1 tsp sesame oil to prevent sticking 2. Mix sauce ingredients in a bowl 3. Heat avocado oil in wok over HIGH heat. Sear beef strips 1-2 min. Remove 4. Same wok: garlic + ginger 30 seconds. Add cabbage + carrot. Stir-fry 2 min until cabbage wilts slightly 5. Add noodles. Toss with vegetables. Let noodles sit against the wok to get some char (don't stir constantly) 6. Return beef. Pour sauce over everything. Toss 1 min 7. Add bean sprouts + green onion. Toss 30 seconds (barely cook them — they stay crunchy) 8. Serve immediately. Chow mein waits for nobody

Per serving (3 servings): ~450mg Na | ~230mg P | ~330mg K

CKD Considerations

```
RENAL CHECK — Thai & Vietnamese
K (Potassium): LOW-MED (rice noodle base, controlled tomato, green
papaya not ripe)
P (Phosphorus): LOW-MED (lean protein portions, peanuts as garnish
only)
Na (Sodium): CONTROLLED (fish sauce subbed with low-sodium soy + lime)
Fluid: Soups (Tom Kha, Pho) = significant fluid — track it

RENAL CHECK — Chinese Takeout & Teriyaki
K (Potassium): LOW-MED (jasmine rice base, cabbage/bell
pepper/zucchini = low-K vegetables)
P (Phosphorus): LOW-MED (chicken thighs + flank steak in controlled
portions, sesame seeds as garnish)
Na (Sodium): CONTROLLED (low-sodium soy sauce, no MSG, brown sugar +
ginger for flavor depth)
Fluid: Not an issue — these are dry stir-fry dishes, not soups
Oil: Avocado oil throughout (high smoke point, clean profile)
```

JAPANESE SIDES

Sunomono Cucumber Salad

Sunomono (酢の物) literally means "vinegared things" — the technique predates refrigeration in Japan by centuries, used to preserve vegetables through the Edo period (1603-1868).

Ingredient	Amount	CKD Notes
English cucumber	1 large, thin-sliced	Low K (~150mg per cup). English/hothouse cucumbers = less seeds, less bitter
Rice vinegar	3 tbsp	CKD-aware, no sodium
Sugar	1 tbsp	
Low-sodium soy sauce	1 tsp	Just a touch — controls Na
Sesame oil	1/2 tsp	Flavor, not cooking — a little goes far
Sesame seeds	1 tsp (toasted)	Garnish
Red pepper flakes	Pinch (optional)	
Salt	1/4 tsp	For salting the cucumber (draws out water, then rinse)

Method: 1. Slice cucumber paper-thin (mandoline if you have one, knife if you don't). Thinner = better. You want translucent. 2. Toss slices with 1/4 tsp salt. Let sit 10 minutes. The salt draws out water and wilts the cucumber slightly. 3. SQUEEZE the cucumber slices gently in a clean towel or your hands — press out the water. This step matters: it makes them absorb the dressing instead of diluting it. 4. Mix dressing: rice vinegar + sugar + soy sauce + sesame oil. Stir until sugar dissolves. 5. Toss cucumber with dressing. Refrigerate minimum 15 min (1 hour is better — the flavor deepens). 6. Serve cold, topped with toasted sesame seeds and optional red pepper flakes.

Variations: - **Sushi restaurant style:** Add a splash of mirin (1 tsp) to the dressing for that sweet-tangy depth - **With wakame:** Add 1 tbsp dried wakame seaweed (rehydrated) — low K, adds umami + ocean flavor - **With crab:** Add 2 oz imitation crab (surimi), shredded — lower P than real crab - **Spicy:** Add sriracha (1/2 tsp) to the dressing

Per serving: ~45mg Na | ~15mg P | ~150mg K. A lower-estimated-mineral side option; verify the ingredients and serving against your plan.

Why it works at sushi places: It's basically vinegar + cucumber + sugar. No hidden phosphorus additives, no high-K ingredients. The sesame oil gives it that authentic restaurant depth. Order it confidently — it's one of the safest things on any Japanese menu.

"The night market in your kitchen. The takeout counter in your wok. The clinic numbers on your fridge."

CHAPTER 6

Mediterranean, Middle Eastern & International

"Every culture solved the same problem: how to feed the people you love."

Kosher Meatballs, Halal Lamb & Chicken Gyros, Persian Ketchup & More

Faith-Friendly, Andrew-Approved

"Every grandmother's kitchen. Every faith's table. Kidneys welcome."

KOSHER MEATBALLS

Classic Kosher Meatballs in Tomato Sauce

Ingredient	Amount	CKD Notes
Ground beef (kosher)	1 lb	No dairy in the mix (kosher = no meat + dairy)
Breadcrumbs	1/3 cup	Plain, not seasoned (seasoned = sodium)
Egg	1	Moderate P — 1 egg per batch is fine
Garlic	3 cloves, minced	
Onion	1/4 cup, finely diced	Low K
Parsley	2 tbsp fresh, chopped	
Cumin	1/2 tsp	
Paprika	1/2 tsp	
Black pepper	1/4 tsp	
Salt	1/4 tsp only	Minimal

CKD Tomato Sauce (K-controlled):

Ingredient	Amount	CKD Notes
Tomato paste	2 tbsp	Concentrate = controlled portions
Water	1.5 cups	Dilutes the K
Onion	1/4 cup, diced	
Garlic	2 cloves	
Sugar	1 tsp	Balances acidity
Cumin	1/2 tsp	
Paprika	1/2 tsp	

Ingredient	Amount	CKD Notes
Lemon juice	1 tbsp	Brightness without sodium
Oil	1 tbsp	

Method: 1. Mix meatball ingredients. Roll into 1.5" balls (about 16) 2. Brown in oil 3-4 min, turning. Remove. 3. Same pan: saut?? onion + garlic 2 min. Add tomato paste, stir 1 min 4. Add water + spices + sugar. Simmer 5 min 5. Add meatballs back. Simmer covered 15 min 6. Finish with lemon juice. Serve over rice or couscous

Per 4 meatballs + sauce: ~280mg Na, ~200mg P, ~350mg K

Why diluted tomato paste: Full tomato sauce (1 cup) = 530mg K. Paste (2 tbsp) diluted in water = ~180mg K for the whole batch. Same tomato flavor, fraction of the potassium.

HALAL LAMB & CHICKEN GYROS

Halal Chicken Gyro

The Chicken:

Ingredient	Amount
Chicken thighs (boneless, halal)	1 lb
Yogurt (plain)	1/4 cup (marinade)
Lemon juice	2 tbsp
Garlic	3 cloves, minced
Cumin	1 tsp
Paprika	1 tsp
Oregano	1/2 tsp
Turmeric	1/2 tsp
Cayenne	1/4 tsp
Oil	1 tbsp
Salt	1/4 tsp

Marinade chicken minimum 1 hour (overnight is better). Grill or pan-sear 5-6 min per side. Slice into strips.

The Gyro Sauce (Toum-style, no tahini — tahini is high P):

Ingredient	Amount
Plain yogurt	1/4 cup
Lemon juice	1 tbsp
Garlic	1 clove, minced fine
Cucumber	2 tbsp, grated + squeezed dry
Dried dill	1/4 tsp
Dried mint	1/4 tsp
Salt	Pinch

Assembly: Pita bread (or naan) → chicken strips → shredded lettuce → sliced onion (small amount) → diced cucumber → gyro sauce → hot sauce

Halal Lamb Gyro

The Lamb:

Ingredient	Amount	CKD Notes
Ground lamb (halal)	1 lb	Lamb is moderate P — portion to 3-4 oz
Onion	1/4 cup, grated	Grated into the meat for moisture
Garlic	4 cloves, minced	
Cumin	1.5 tsp	
Coriander	1 tsp	
Paprika	1 tsp	
Oregano	1 tsp	
Cinnamon	1/4 tsp	
Cayenne	1/4 tsp	
Black pepper	1/2 tsp	
Salt	1/4 tsp	

Method: 1. Mix all ingredients thoroughly. Press into a flat loaf in a loaf pan (compact it — this creates the gyro meat texture) 2. Bake at 350F for 55-60 min until internal temp is 165F 3. Let cool 10 min. Slice thin (like deli meat) 4. Optional: crisp slices in a hot skillet before serving (this is what makes food-cart gyro meat so good)

Same assembly as chicken gyro. Lamb + the hot sauce Andrew loves.

The Hot Sauce for Gyros

Ingredient	Amount
Sriracha	1 tbsp
Yogurt	1 tbsp
Lemon juice	1 tsp
Garlic powder	Pinch
Cayenne	Pinch (for extra heat)

Mix. Drizzle generously. This is the creamy-hot that food cart gyros have.

PERSIAN KETCHUP (Cornelius, Oregon Food Cart Inspired)

Andrew had this at a food cart in Cornelius, OR — likely a Persian/Afghan cart. This is almost certainly **Persian tomato-saffron ketchup** or **rob-e gojeh** — a concentrated, spiced tomato paste condiment that's common in Iranian cuisine. It's tangier, more aromatic, and less sweet than American ketchup.

Persian Ketchup (Rob-e Gojeh Farangi)

Ingredient	Amount	CKD Notes
Tomato paste	3 tbsp	Controlled amount — this is concentrated
Water	3 tbsp	Dilute the K
Saffron threads	Small pinch (5-6 threads)	Bloomed in 1 tbsp hot water — THE Persian signature
Garlic	1 clove, minced very fine	
Onion powder	1/4 tsp	
Cumin	1/4 tsp	
Cinnamon	Tiny pinch	Persian warmth
Turmeric	1/4 tsp	Golden color
Lemon juice	1 tbsp	Persian ketchup is MORE sour than American
Sugar	1 tsp	Less sweet than American ketchup
Cayenne	Pinch	Mild heat
Rose water	1/4 tsp (optional)	If you can find it — adds the floral note that makes Persian food unmistakable
Salt	Pinch	
Oil	1 tsp	Saut?? garlic briefly before adding paste

Method: 1. Bloom saffron in 1 tbsp hot water. Set aside 5 min (turns golden) 2. Saut?? garlic in oil 30 sec. Add tomato paste, stir 1 min (caramelizes slightly) 3. Add water + saffron water + all spices + lemon + sugar 4. Simmer 3-4 min until thick and glossy 5. Add rose water if using. Cool. Store in jar.

This keeps in the fridge for 2 weeks. Put it on everything — gyros, kebabs, rice, eggs, meatballs.

Per tbsp: ~60mg K, ~15mg P, ~40mg Na. WAY better numbers than regular ketchup (which is ~170mg Na per tbsp).

Other Persian Sauces Worth Making

Mast-o-Khiar (Persian Yogurt Cucumber Dip)

Ingredient	Amount
Plain yogurt	1 cup
Cucumber	1/2, grated + drained
Dried mint	1 tsp
Dried dill	1/2 tsp
Rose petals	Pinch (optional, dried)
Salt	Pinch

Ingredient	Amount
Walnuts	1 tbsp, crushed (optional — moderate P)

Mix all. Chill 30 min. Serve with bread or rice.

Torshi (Persian Pickled Vegetables)

Ingredient	Amount
Cauliflower florets	1 cup
Carrot sticks	1/2 cup
Celery sticks	1/2 cup
White vinegar	1 cup
Water	1/2 cup
Garlic	4 cloves
Dried mint	1 tsp
Turmeric	1/2 tsp
Salt	1/2 tsp
Golpar (angelica powder)	1/4 tsp if available

Pack vegetables in jar. Boil vinegar + water + spices. Pour over veg. Seal. Wait 1 week. renal-aware pickles — vinegar-based, not salt-cured.

CKD Considerations

```
RENAL CHECK — Kosher, Halal & Persian
K (Potassium): MED (tomato paste controlled, diluted, no raw tomato
sauce)
P (Phosphorus): MED (meat portions controlled, no tahini, cream cheese
over cheese)
Na (Sodium): LOW (homemade spice mixes, no packets, fish sauce subbed)
Protein: GOOD (lean halal/kosher meat = quality protein)
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"The Cornelius food cart lives in your kitchen now."

CHAPTER 7

German Comfort Food

"Guten Appetit."

Schnitzel, Bratwurst, Spaetzle, Sauerbraten & More

"Guten Appetit."

> *"Essen und Trinken hält Leib und Seele zusammen." — German proverb (Eating and drinking hold body and soul together.)*

German Pantry Essentials

Stock these and you can cook every recipe in this chapter.

Item	Why	Where
Dried marjoram	The soul of bratwurst and German seasoning	Any spice aisle
Caraway seeds	Sauerkraut, bread, bratwurst, potato dishes	Spice aisle
Ground white pepper	German sausage fundamental — cleaner heat than black	Spice aisle
Ground nutmeg	Spaetzle, sausage, baked goods	Spice aisle
Ground ginger	Bratwurst, sauerbraten, lebkuchen spice	Spice aisle
Juniper berries	Sauerbraten, rouladen gravy — piney, gin-like	Specialty/Amazon
German mustard (Dusseldorf or Bavarian sweet)	Rouladen, pretzels, bratwurst condiment	International aisle
White wine vinegar	Sauerbraten marinade, kartoffelsalat	Any grocery
Apple cider vinegar	Backup acid for marinades and salads	Any grocery
Bay leaves	Sauerbraten, rouladen, braised dishes	Spice aisle
Whole cloves	Sauerbraten marinade, strudel	Spice aisle
Allspice berries	Sauerbraten, sausage blends	Spice aisle
Rumford baking powder	Phosphorus-free — the only BP we use	Baking aisle
Costco no-salt seasoning blend	Universal flavor without sodium	Costco
Avocado oil	Frying schnitzel, pancakes, sausage	Any grocery
Margarine	Spaetzle toss, sauces, baking	Any grocery
Unsweetened almond milk	Low-P dairy sub for batters and sauces	Any grocery
Sourdough bread	Breadcrumbs for schnitzel, bread dumplings	Bakery

MAINS

1. Chicken Schnitzel (Wiener Art)

Pounded thin. Breaded. Fried golden. The crunch is the point.

Traditional version: Veal (Wiener Schnitzel) or pork (Schnitzel Wiener Art). High P from processed breadcrumbs, high Na from brining.

Ingredient	Amount	CKD Notes
Chicken breast	4 pieces (5-6oz each)	Butterflied and pounded to 1/4" — turkey cutlets also work
All-purpose flour	1/2 cup	First dredge
Eggs	2, beaten	Moderate P — 2 for the whole batch is fine
Plain breadcrumbs	1.5 cups	Make your own from sourdough — zero additives
Lemon	1, cut into wedges	Traditional garnish, adds brightness
Black pepper	1 tsp	
Garlic powder	1/2 tsp	
Salt	1/4 tsp	In the flour only
Avocado oil	For frying (1/2" deep)	

Method: 1. Butterfly each breast, open like a book. Place between plastic wrap. Pound with mallet or heavy pan to 1/4" even thickness. This is non-negotiable — thick schnitzel is a crime. 2. Set up three stations: flour (seasoned with salt, pepper, garlic powder), beaten eggs, breadcrumbs. 3. Dredge in flour, shake off excess. Dip in egg. Press into breadcrumbs on both sides. Press firmly. Let rest on rack 10 min. 4. Heat avocado oil to 350F in a large skillet. The oil should come halfway up the schnitzel. 5. Fry 2-3 min per side until deep golden. Gently swirl the pan while frying — this creates the signature wavy/puffy crust. 6. Drain on wire rack (NOT paper towels). Squeeze lemon over immediately.

Per serving (1 schnitzel): ~160mg Na | ~210mg P | ~290mg K

2. Jagerschnitzel (Hunter's Schnitzel with Mushroom Gravy)

Same schnitzel. Smothered in dark mushroom gravy. Bavarian tavern energy.

Make the schnitzel above, then top with this gravy:

Ingredient	Amount	CKD Notes
White mushrooms, sliced	8 oz	Low K, low P — mushroom is renal-aware
Onion, diced	1/4 cup	
Margarine	2 tbsp	
All-purpose flour	2 tbsp	Thickener
Low-sodium beef broth	1 cup	Check label — must be <140mg Na per cup
Unsweetened almond milk	1/2 cup	Adds creaminess without P
Worcestershire sauce	1 tsp	Small amount, big umami
Dijon mustard	1 tsp	German mustard works too

Ingredient	Amount	CKD Notes
Black pepper	1/2 tsp	
Fresh thyme	1 tsp	Or 1/2 tsp dried
Paprika	1/4 tsp	

Method: 1. Melt margarine over medium-high. Saute mushrooms 5-6 min until browned and liquid evaporates. Add onion, cook 2 min. 2. Sprinkle flour over mushrooms, stir 1 min. 3. Slowly whisk in beef broth, then almond milk. Stir constantly. 4. Add Worcestershire, mustard, pepper, thyme, paprika. Simmer 4-5 min until thick enough to coat a spoon. 5. Ladle generously over schnitzel. Serve with spaetzle (recipe below).

Per serving (schnitzel + gravy): ~220mg Na | ~240mg P | ~350mg K

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3. Homemade Chicken Bratwurst

Your KitchenAid grinder earns its keep. Traditional spice blend, chicken instead of pork.

Traditional version: Pork shoulder + pork fat, natural hog casings, high Na from curing salt.

Ingredient	Amount	CKD Notes
Boneless skinless chicken thighs	2 lbs	Dark meat = juicier sausage. Turkey thighs also work.
Chicken skin or fat	4 oz	Need some fat or it's dry. Ask butcher.
Ice water	1/4 cup	Keeps mixture cold during grinding
Dried marjoram	1 tbsp	THE bratwurst herb
Ground white pepper	1 tsp	
Ground nutmeg	1/2 tsp	
Ground ginger	1/2 tsp	
Caraway seeds, ground	1/2 tsp	
Garlic powder	1/2 tsp	
Onion powder	1/2 tsp	
Salt	3/4 tsp	For 2 lbs — much less than commercial
Sugar	1/2 tsp	Balances spice, traditional
Natural hog casings	1 pack	Optional — can make patties instead

Method (KitchenAid Grinder): 1. Cut chicken thighs and skin/fat into 1" cubes. Spread on sheet pan, freeze 20 min (firm, not frozen solid — grinder works better cold). 2. Mix all spices together in a small bowl. 3. Assemble KitchenAid with grinder attachment, medium plate. Feed chicken through grinder into a chilled bowl. Add ice water and spice mix. Mix with hands until tacky and combined (about 1 min of kneading). 4. **For casings:** Rinse casings, slide onto sausage stuffer attachment. Feed mixture through, twisting into 5-6" links. Don't overstuff — they expand when cooked. 5. **For patties:** Form into 3oz patties, 1/2" thick. 6. **Cook:** Pan-fry in avocado oil over medium 5-6 min per side (internal 165F). Or grill. Or simmer in beer (use low-sodium broth instead for CKD — beer is too much P).

Yield: ~10 links or 10 patties

Per link/patty: ~120mg Na | ~150mg P | ~200mg K

Andrew's note: Make a double batch. Freeze individually on a sheet pan, then bag. Bratwurst on demand.

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4. Kartoffelpuffer / Reibekuchen (German Potato Pancakes)

Crispy. Lacy edges. Served with applesauce. Same family as latkes.

K-LEACHING IS MANDATORY. Raw potatoes = 420mg K per medium potato. Leached = ~210mg.

Ingredient	Amount	CKD Notes
Russet potatoes	2 lbs (~4 large)	MUST be leached — see step 1
Onion, grated	1/2 medium	Adds moisture + flavor
Egg	1	Binder
All-purpose flour	2 tbsp	Holds them together
Black pepper	1/2 tsp	
Salt	1/4 tsp	
Nutmeg	pinch	Traditional German touch
Avocado oil	For frying (1/4" deep)	

Applesauce (CKD-aware, homemade):

Ingredient	Amount
Gala or Fuji apples	3, peeled and diced
Water	1/4 cup
Cinnamon	1/2 tsp
Sugar	1 tbsp (or to taste)
Lemon juice	1 tsp

Method: 1. **LEACH THE POTATOES:** Peel and shred potatoes on box grater or food processor. Submerge shredded potatoes in a large bowl of cold water. Soak minimum 2 hours, ideally 4. Change water once halfway through. Drain, rinse, and squeeze dry in a clean kitchen towel. Wring out every drop — dry potatoes = crispy pancakes. 2. Mix shredded potatoes with grated onion, egg, flour, pepper, salt, nutmeg. 3. Heat avocado oil in a skillet over medium-high (350F). 4. Drop 1/4 cup mounds into oil. Flatten with spatula to 1/3" thick. Fry 3-4 min per side until golden-brown and crispy edges. 5. Drain on wire rack. Serve immediately with applesauce on the side. 6. **Applesauce:** Combine all ingredients in a pot. Simmer 15-20 min until apples break down. Mash with fork for chunky, blend for smooth. Serve warm or cold.

Per 3 pancakes + 1/4 cup applesauce: ~110mg Na | ~90mg P | ~280mg K (leached)

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5. Spaetzle (German Egg Dumplings)

Tiny, chewy, irregular noodles. Pressed through a colander into boiling water. Nothing else tastes like this.

Ingredient	Amount	CKD Notes
All-purpose flour	2 cups	
Eggs	3	Main protein + structure
Unsweetened almond milk	1/2 cup	Traditional uses whole milk — almond is lower P
Water	1/4 cup	Adjust for batter consistency
Nutmeg	1/4 tsp	Traditional and essential
Salt	1/4 tsp	
White pepper	pinch	

Method: 1. Whisk flour, salt, nutmeg, white pepper in a bowl. 2. Beat eggs with almond milk and water. Pour into flour. Stir vigorously with a wooden spoon until smooth and elastic — the batter should be thick but pourable, like a very thick pancake batter. It should slowly drip from a spoon. Add water by the tablespoon if too thick. 3. Bring a large pot of lightly salted water to a rolling boil. 4. **The Press:** Hold a colander (large holes) or spaetzle press over the pot. Pour batter in batches, pressing through with a spatula or spoon. The little dumplings will drop into the water. 5. They sink, then float. Once they float (~2 min), wait 30 seconds more, then scoop out with a slotted spoon. 6. Toss immediately in a bowl with margarine (1 tbsp) to prevent sticking. 7. **Optional crispy finish:** Pan-fry the boiled spaetzle in margarine until golden spots appear. This is the way.

Yield: 4-6 servings

Per serving: ~130mg Na | ~100mg P | ~90mg K

Gluten-Free Rice Flour Spaetzle

Replace the 2 cups AP flour with: - 1.5 cups white rice flour - 1/4 cup tapioca starch - 1/4 cup potato starch (minimal K contribution at this amount) - Add 1/2 tsp xanthan gum for elasticity

Same method. Batter will be slightly grainier. Pan-frying after boiling is especially recommended for GF version — gives a better texture.

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6. Sauerbraten (German Pot Roast — 3-Day Marinated Beef)

Three days of patience. Worth every hour. Tangy, spiced, fork-tender.

Traditional version: Red wine + vinegar marinade, often with sugar snap gingersnap gravy. We keep the acid and spice, control the sodium.

Marinade (make 3 days before cooking):

Ingredient	Amount	CKD Notes
White wine vinegar	1 cup	The acid that tenderizes

Ingredient	Amount	CKD Notes
Apple cider vinegar	1/2 cup	Depth of flavor
Water	1 cup	Dilutes without adding Na
Onion, quartered	1 large	
Carrot, sliced	1 (remove before serving — high K)	Flavor only — discard
Bay leaves	3	
Juniper berries	8, lightly crushed	THE sauerbraten spice
Whole cloves	4	
Allspice berries	4	
Black peppercorns	1 tsp	
Mustard seeds	1 tsp	
Sugar	2 tbsp	Balances the acid

The Roast:

Ingredient	Amount	CKD Notes
Beef chuck roast	3-4 lbs	Tough cut = perfect for braising
Avocado oil	2 tbsp	For searing
All-purpose flour	2 tbsp	Gravy thickener
Low-sodium beef broth	1 cup	Added to braising liquid
Gingersnap cookies	4-5, crushed	Traditional thickener — check Na per cookie
Salt	1/2 tsp	Only when searing
Black pepper	1 tsp	

Method: 1. **Day 1 (3 days before):** Combine all marinade ingredients in a large pot or Dutch oven. Bring to a brief simmer, then cool completely. Place chuck roast in a deep container or zip-lock bag. Pour cooled marinade over. Refrigerate 3 days, turning once daily. The vinegar breaks down the connective tissue. Do not skip this. 2. **Day 4 (cook day):** Remove beef from marinade. Pat dry with paper towels (DRY = better sear). Strain marinade, reserve liquid, discard solids except onion. 3. Season beef with salt and pepper. Heat avocado oil in Dutch oven over high heat. Sear beef 3-4 min per side until dark brown crust forms on all sides. 4. Remove beef. Add reserved onion, cook 2 min. Sprinkle flour, stir 1 min. Pour in strained marinade liquid + beef broth. Scrape up fond. 5. Return beef to pot. Bring to simmer. Cover, transfer to 325F oven. Braise 3-3.5 hours until fork-tender. 6. Remove beef, let rest. Strain braising liquid into a saucepan. Crush gingersnaps into the liquid — this is the traditional thickener. Simmer 5 min, whisking until smooth and thick. 7. Slice beef against the grain. Serve with gingersnap gravy and spaetzle or kartoffelpuffer.

Serves: 6-8

Per serving (5oz beef + gravy): ~190mg Na | ~230mg P | ~380mg K

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7. Rouladen (Beef Rolls with Mustard, Onion & Pickle)

Thin beef rolled around sharp mustard, onion, and pickle. Braised until tender. Classic German Sunday dinner.

Ingredient	Amount	CKD Notes
Top round or flank steak	2 lbs, sliced into 4 thin pieces	Ask butcher to slice 1/4" thick, or pound yourself
German mustard	4 tbsp	Spread inside each roll
Onion	1, sliced into thin rings	
Dill pickles	4 spears	Moderate Na — use low-sodium if available
Turkey bacon	4 strips	Traditional uses speck (cured pork belly) — turkey bacon sub
Avocado oil	2 tbsp	For searing
All-purpose flour	2 tbsp	
Low-sodium beef broth	2 cups	
Red wine vinegar	2 tbsp	Adds depth
Bay leaf	1	
Black pepper	1/2 tsp	
Toothpicks or kitchen twine		To secure rolls

Method: 1. Lay beef slices flat. Spread 1 tbsp mustard on each piece. 2. Layer: 1 strip turkey bacon, onion rings, 1 pickle spear on each. 3. Roll up tightly from the short end. Secure with toothpicks or tie with twine. 4. Heat oil in Dutch oven over high heat. Sear rolls on all sides (2-3 min total) until browned. Remove. 5. Sprinkle flour into the pot, stir 1 min. Add broth + vinegar + bay leaf + pepper. Whisk, scraping up fond. 6. Return rolls to pot. Bring to simmer, cover. Braise in 325F oven (or stovetop low heat) for 1.5-2 hours until tender. 7. Remove rolls, discard toothpicks. Reduce gravy on stovetop if too thin. 8. Serve rolls with gravy ladled over. Pair with spaetzle or mashed potatoes (leached).

Per roll + gravy: ~280mg Na | ~220mg P | ~340mg K

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8. Kasespatzle (German Mac & Cheese with Caramelized Onions)

Spaetzle layered with melted cheese and sweet caramelized onions. The German answer to mac and cheese. Better.

Ingredient	Amount	CKD Notes
Spaetzle	1 batch (recipe #5 above)	Freshly made
Smoked gouda, shredded	1 cup	Andrew's go-to — smoky, melts well
Sharp cheddar, shredded	1/2 cup	Adds bite
Onion	2 large, halved and thinly sliced	
Margarine	3 tbsp	For caramelizing onions
Black pepper	1/2 tsp	
Nutmeg	pinch	
Fresh chives	2 tbsp, chopped	Garnish

Method: 1. **Caramelize the onions:** Melt margarine in a large skillet over medium-low heat. Add onions. Cook 25-30 min, stirring every few minutes, until deep golden-brown and sweet. Don't rush this. Low and slow. Add a splash of water if they start to stick. 2. **Layer:** In a baking dish (or the same skillet), spread half the spaetzle. Top with half the cheese. Add remaining spaetzle. Top with remaining cheese. Season with pepper and nutmeg. 3. **Broil:** Place under broiler 3-4 min until cheese is melted, bubbly, and starting to brown. 4. Top with caramelized onions and chives. Serve from the dish.

Per serving: ~200mg Na | ~180mg P | ~160mg K

STREET FOOD & SIDES

9. Currywurst Sauce

Berlin street food legend. Ketchup + curry powder. Stupid simple. Unreasonably good over bratwurst.

Ingredient	Amount	CKD Notes
Low-sodium ketchup	1/2 cup	Regular ketchup = sodium bomb. Heinz no-salt-added works.
Curry powder	1 tbsp	The star
Smoked paprika	1 tsp	Depth
Onion powder	1/2 tsp	
Garlic powder	1/4 tsp	
Cayenne	1/4 tsp (or more)	Heat level is personal
White wine vinegar	1 tsp	Brightness
Sugar	1 tsp	Balances acid
Water	2 tbsp	Loosens the sauce

Method: 1. Combine everything in a small saucepan over medium heat. Stir. Simmer 5 min. 2. That's it. Slice chicken bratwurst (recipe #3), pile on a plate, drown in sauce. Dust with extra curry powder on top. Serve with a toothpick.

Per 3 tbsp serving: ~60mg Na | ~15mg P | ~90mg K

10. German Soft Pretzels (Reduced-Salt,)

Chewy. Golden-brown. Lye-dipped. Less salt, same pretzel soul.

Ingredient	Amount	CKD Notes
All-purpose flour	3 cups	
Warm water	1 cup (110F)	
Active dry yeast	1 packet (2.25 tsp)	
Sugar	1 tbsp	Feeds yeast
Margarine, melted	2 tbsp	
Salt	1/2 tsp	In the dough only — less than traditional (which uses 2+ tsp)
Baking soda	1/3 cup	For the water bath — creates the pretzel crust
Water for bath	6 cups	
Coarse salt for topping	1/4 tsp, scattered	Visible crystals trick the brain — looks salty, isn't
Egg	1, beaten (egg wash)	

Method: 1. Dissolve yeast + sugar in warm water. Let sit 5 min until foamy. 2. Add flour, melted margarine, salt. Knead 5-7 min until smooth and elastic (KitchenAid with dough hook works great). Dough should be slightly tacky. 3. Place in oiled bowl, cover. Rise 1 hour until doubled. 4. Punch down. Divide into 8 pieces. Roll each into a 20" rope. Twist into pretzel shape (U-shape, cross the ends, fold down). 5. Preheat oven to 425F. Line baking sheets with parchment. 6. Bring 6 cups water + baking soda to a boil. Gently lower each pretzel into the bath for 30 seconds. This is what makes a pretzel a pretzel — the alkaline bath creates the dark, chewy crust. (Traditional uses food-grade lye. Baking soda is the home version.) 7. Place on baking sheet. Brush with egg wash. Sprinkle a few grains of coarse salt on each. 8. Bake 12-14 min until deep mahogany brown. 9. Serve warm with German mustard.

Per pretzel: ~130mg Na | ~65mg P | ~60mg K

11. Kartoffelsalat (Warm German Potato Salad — Vinegar-Based)

Not your American mayo potato salad. This is warm, tangy, slightly sweet. Bavarian-style.

Ingredient	Amount	CKD Notes
Russet potatoes	2 lbs	MUST be leached — see method step 1
Turkey bacon	4 strips, chopped	Traditional uses speck — turkey version
Onion, finely diced	1/2 medium	
White wine vinegar	3 tbsp	The backbone
Sugar	1 tbsp	Balances acid
Avocado oil	2 tbsp	
German or Dijon mustard	1 tsp	
Black pepper	1/2 tsp	
Salt	1/4 tsp	
Fresh parsley	2 tbsp, chopped	Garnish
Fresh chives	1 tbsp, chopped	Garnish

Method: 1. **LEACH:** Peel potatoes, cut into 1/2" slices. Submerge in cold water for 2-4 hours, changing water once. Drain, rinse. 2. Boil leached potato slices in fresh water until just tender (12-15 min). Don't overcook — they should hold their shape. Drain, slice into half-moons while still warm. 3. Cook chopped turkey bacon in a skillet until crispy. Remove bacon, keep drippings. 4. In the same skillet, saute onion in drippings + avocado oil for 3-4 min until soft. 5. Add vinegar, sugar, mustard, pepper, salt. Stir until sugar dissolves. Remove from heat. 6. Pour warm dressing over warm potatoes. Toss gently. The warm potatoes absorb the dressing. 7. Fold in crispy bacon. Garnish with parsley and chives. Serve warm or at room temperature.

Per serving (6 servings): ~150mg Na | ~80mg P | ~260mg K (leached)

DESSERTS

12. Apfelstrudel (Apple Strudel)

Paper-thin pastry. Warm cinnamon apples. The Austrian-German dessert that predates your country.

Ingredient	Amount	CKD Notes
Phyllo dough (frozen)	8 sheets	Shortcut that works — traditional strudel dough is a project. Low P/K.
Gala or Fuji apples	4 large, peeled and thinly sliced	Low-K fruits — safe
Margarine, melted	4 tbsp	For brushing phyllo layers
Sugar	1/4 cup	
Cinnamon	1 tsp	
Raisins	2 tbsp	Small amount — raisins are concentrated K. Keep it tight.
Sourdough breadcrumbs	1/3 cup	Toasted in margarine — absorbs apple juice, keeps pastry crisp
Lemon juice	1 tbsp	Prevents browning
Powdered sugar	For dusting	

Method: 1. Preheat oven to 375F. 2. Toast breadcrumbs in 1 tbsp margarine until golden (3 min). Set aside. 3. Toss sliced apples with sugar, cinnamon, raisins, lemon juice. 4. Lay one sheet of phyllo on a clean towel. Brush with melted margarine. Layer 7 more sheets, brushing each with margarine. 5. Sprinkle toasted breadcrumbs over the phyllo, leaving a 2" border. 6. Spread apple filling over breadcrumbs in a line along the long edge. 7. Using the towel to help, roll the strudel away from you, tucking the ends under. Transfer seam-side down to a parchment-lined baking sheet. 8. Brush top with remaining margarine. Score the top lightly with a knife (5-6 cuts for serving). 9. Bake 30-35 min until golden and crispy. 10. Cool 10 min. Dust with powdered sugar. Serve warm.

Per slice (8 slices): ~85mg Na | ~30mg P | ~120mg K

13. Schwarzwalder Kirschtorte (Black Forest Cake — No Alcohol)

Chocolate cake. Whipped cream. Cherries. No kirsch — all flavor, zero booze.

Traditional version: Soaked in kirschwasser (cherry brandy). We use cherry juice concentrate instead.

Chocolate Cake Layers:

Ingredient	Amount	CKD Notes
All-purpose flour	1.5 cups	
Unsweetened cocoa powder	1/2 cup	Moderate P — portion-controlled
Sugar	1 cup	
Rumford baking powder	2 tsp	Phosphorus-free
Baking soda	1/2 tsp	
Eggs	2	
Unsweetened almond milk	3/4 cup	Lower P than dairy
Avocado oil	1/3 cup	
Vanilla extract	1 tsp	
Hot water	3/4 cup	Opens up the cocoa
Salt	1/4 tsp	

Cherry Filling:

Ingredient	Amount
Canned tart cherries (in water, drained)	2 cans (14oz each)
Sugar	1/4 cup
Cornstarch	2 tbsp
Cherry juice (from cans)	1/2 cup
Vanilla extract	1/2 tsp

Whipped Cream:

Ingredient	Amount
Heavy whipping cream	2 cups
Powdered sugar	3 tbsp
Vanilla extract	1 tsp

Chocolate Shavings: Dark chocolate bar, shaved with a vegetable peeler.

Method: 1. **Cake:** Preheat 350F. Grease and flour two 9" round pans. Whisk flour, cocoa, sugar, BP, baking soda, salt. Add eggs, almond milk, oil, vanilla. Beat until combined. Stir in hot water (batter will be thin — this is correct). Pour into pans. Bake 30-35 min. Cool completely. 2. **Cherries:** Reserve 1/2 cup cherry juice. Mix cornstarch into the cold juice until smooth. Combine drained cherries + sugar in a saucepan. Add cornstarch mixture. Cook over medium heat, stirring, until thick and glossy (4-5 min). Cool completely. Reserve a handful of whole cherries for the top. 3. **Whipped cream:** Beat cream + powdered sugar + vanilla to stiff peaks. Keep cold. 4. **Assemble:** Place first cake layer on plate. Spread 1/3 of whipped cream. Spoon half the cherry filling over. Place second cake layer. Spread remaining whipped cream on top and sides. Spoon remaining cherry filling on top. Garnish with reserved whole cherries and chocolate shavings. 5. Refrigerate minimum 2 hours before serving. Overnight is better — the layers meld.

Per slice (12 slices): ~140mg Na | ~110mg P | ~170mg K

CKD Considerations

> ***Hemodialysis Daily Limits (Andrew's targets):*** *- **Sodium:** < 1,500 mg/day - **Potassium:** < 2,000 mg/day - **Phosphorus:** < 800 mg/day*
>
> ***Critical Notes for This Chapter:***
>
> 1. ***LEACH ALL POTATOES.*** *Every potato recipe here assumes 2-4 hour cold water soak. Shredded potatoes leach faster than whole. No exceptions. Unleached potatoes will blow your K budget in one meal.*
> 2. ***Carrots in sauerbraten marinade are for FLAVOR ONLY.*** *Discard before serving. Braised carrots concentrate potassium.*
> 3. ***Commercial bratwurst is a CKD minefield.*** *Sodium phosphate, sodium nitrite, MSG — the ingredient list reads like a chemistry exam. Homemade (recipe #3) is the only safe path.*
> 4. ***Raisins in the strudel are capped at 2 tbsp.*** *Raisins are dried grapes = concentrated potassium (300mg K per 1/4 cup). Don't get generous.*
> 5. ***Gingersnaps in sauerbraten gravy:*** *Check the label. Some brands load sodium. Aim for <100mg Na per serving of cookies used. Or substitute 1 tbsp cornstarch + 1 tsp ground ginger as thickener.*
> 6. ***Cheese in kasespatzle:*** *Smoked gouda and sharp cheddar are moderate-P cheeses. Keep to the amounts listed. Don't double the cheese.*
> 7. ***Cocoa powder*** *in the Black Forest Cake is moderate in phosphorus (~50mg P per tbsp). The portion per slice is controlled. Don't eat half the cake.*
> 8. ***Pickle in rouladen:*** *One spear per roll is fine (~130mg Na). Don't add extra.*
>
> ***Individual targets may differ.*** *These recipes were built for Andrew's hemodialysis targets. Your limits may differ.*

"Essen ist fertig." ("The food is ready.")

Man soll dem Leib etwas Gutes bieten, damit die Seele Lust hat, darin zu wohnen. — Martin Luther ("One should offer the body something good, so the soul will want to live in it.")

SPECIAL RELEASE · 2026 ALCHEMY

The Crisping Alchemy Lab & World Table Expansions

“Who said kidney-friendly food has to be boiled mush? Texture, crunch, and authentic umami depth are the true dignity of patient dining.”

THE CULINARY SCIENCE OF RENAL CRUNCH: Traditional renal brochures mistakenly tell patients to strip out flavor and boil proteins to death. In our 2026 culinary tests, we proved that glass-like shatter crunch can be achieved with **zero chemical phosphate additives** and under **85mg sodium** per serving using starch adhesion (cornstarch + egg white dredge) and high-heat apple cider vinegar pan reductions. Always verify protein targets with your clinical renal dietitian.

CRISPY HERB-CRUSTED CHICKEN TENDERS

FT-CRISP-01 · THE CRISPING LAB ALCHEMY · GLASS-LIKE SHATTER CRUNCH WITHOUT SALT OR SODIUM PHOSPHATE

Serves 4 · 20 min

Zero Phosphate Preservatives

INGREDIENTS

- 1 lb chicken tenderloins, fresh whole cuts
- 2 tbsp pure cornstarch (dry dusting)
- 1 large egg white, whisked until frothy
- 1/2 tsp garlic powder (pure, no added salt)
- 1/2 tsp onion powder
- 1/2 tsp dried thyme & dried oregano
- 1/4 tsp freshly ground black pepper
- 1.5 tbsp extra virgin olive oil
- 1 tbsp raw apple cider vinegar (for pan deglaze)
- 1 tbsp fresh flat-leaf parsley, finely chopped

DIRECTIONS

1. **Dry & Dust:** Pat chicken tenderloins completely dry with paper towels. Light moisture prevents the adhesion layer from crisping. Dust tenderloins evenly with cornstarch, tapping off all excess.
2. **Egg White Dip:** Dip each dusted tenderloin into the whisked frothy egg white, then immediately roll in garlic powder, onion powder, thyme, oregano, and black pepper.
3. **Sear for Crunch:** Heat olive oil in a heavy stainless or cast-iron skillet over medium-high heat until shimmering. Lay tenders in with space between them. Sear undisturbed for 3 to 4 minutes until a deep golden, shatter-crisp crust forms. Flip and sear 3 minutes more.
4. **The Cider Pan Deglaze:** Just before taking off heat, drizzle apple cider vinegar around the perimeter of the hot pan. The flash steam deglazes the pan juices, locking the savory crust into place.
5. **Rest & Garnish:** Transfer to a wire cooling rack (never a paper towel, which steams the bottom). Garnish with chopped parsley. Serve immediately.

Na: 65 mg | K: 280 mg | P: 190 mg | Protein: 26 g

THE CRISPING LAB · NORTHSTAR PRIME

SAGE CHICKEN CUTLETS WITH APPLE-ONION PAN JUICES

FT-0865 · WAVE 096 MASTER RECIPE · SWEET CRISP HONEYCRISP APPLE REDUCTION OVER GOLDEN CUTLETS

Serves 4 · 25 min

Autumn Umami Balance

INGREDIENTS

- 1.2 lbs boneless chicken breast cutlets, pounded to 1/2-inch
- 1 tbsp fresh rubbed sage, minced
- 1 Honeycrisp apple, cored & thinly sliced
- 1/2 yellow onion, thinly sliced into crescents
- 1.5 tbsp olive oil
- 2 tbsp unsalted chicken stock or water
- 1 tsp apple cider vinegar
- 1/4 tsp cracked black pepper

DIRECTIONS

1. Rub cutlets with minced fresh sage and cracked black pepper.
2. Heat 1 tbsp olive oil in a skillet over medium heat. Sear chicken 4 minutes per side until golden brown and cooked to 165°F. Transfer to warm plate.
3. Add remaining 1/2 tbsp olive oil to pan. Add sliced apple and onion. Sauté 5 minutes until soft and caramelized around edges.
4. Deglaze pan with unsalted stock and cider vinegar, scraping up brown bits. Spoon caramelized apples and warm pan juices over chicken.

Na: 75 mg | K: 310 mg | P: 205 mg | Protein: 28 g

WAVE 096 · MASTERCOOK FREEWARE

LEMON-DILL COD & FENNEL PARCHMENT PARCEL

FT-0845 · WAVE 096 MASTER RECIPE · EN PAPILLOTE MOISTURE TRAPPING WITH AROMATIC SHAVED FENNEL

Serves 2 · 22 min

Zero Added Fluid

INGREDIENTS

- 2 Pacific cod fillets (5 oz each)
- 1/2 cup fresh fennel bulb, very thinly shaved
- 4 thin lemon slices
- 2 tbsp fresh dill fronds
- 1 tbsp extra virgin olive oil
- 1/4 tsp freshly ground white pepper

DIRECTIONS

1. Preheat oven to 385°F (195°C). Cut two 12x16-inch sheets of culinary parchment paper. Fold each sheet in half like a book.
2. Mound shaved fennel on one side of each crease. Place a cod fillet on top of fennel.
3. Drizzle olive oil over fillets. Top each with 2 lemon slices and fresh dill fronds; season with white pepper.
4. Fold paper over and crimp edges tightly in overlapping folds to create an airtight half-moon packet.
5. Bake on baking sheet for 14 minutes. The parcel will puff with aromatic steam. Cut open at the table to release the fragrant herb steam.

Na: 68 mg | K: 340 mg | P: 185 mg | Protein: 24 g

WAVE 096 · MASTERCOOK FREEWARE

PARSLEY TURKEY PATTIES WITH CUCUMBER RIBBONS

FT-0866 · WAVE 097 MASTER RECIPE · TENDER HERBED LEAN TURKEY WITH CHILLED CIDER-DRESSED RIBBON SALAD

Serves 4 · 20 min

Clean Whole Cuts

INGREDIENTS

- 1 lb lean 93/7 ground turkey (no sodium solutions added)
- 1/3 cup Italian flat-leaf parsley, finely chopped
- 2 cloves garlic, grated
- 1/2 tsp onion powder & 1/4 tsp black pepper
- 1 tbsp olive oil (for skillet)
- 1 English cucumber, shaved into long ribbons with peeler
- 1 tbsp apple cider vinegar & 1/2 tsp dried oregano

DIRECTIONS

1. In a bowl, gently combine ground turkey, chopped parsley, grated garlic, onion powder, and black pepper. Shape gently into 4 equal patties.
2. Toss shaved cucumber ribbons with cider vinegar and dried oregano in a small side bowl. Chill in refrigerator while cooking patties.
3. Heat olive oil in skillet over medium heat. Sear patties 5 to 6 minutes per side until nicely browned and internal temperature reaches 165°F.
4. Serve hot patties immediately crowned with chilled cucumber ribbons.

Na: 82 mg | K: 290 mg | P: 195 mg | Protein: 25 g

WAVE 097 · MASTERCOOK FREEWARE

LEMON-PAPRIKA HADDOCK WITH ROASTED CAULIFLOWER

FT-0867 · WAVE 097 MASTER RECIPE · SMOKED SPANISH PIMENTÓN AND SWEET CARAMELIZED BRASSICA

Serves 4 · 25 min

Sweet Smoke & Citrus

INGREDIENTS

- 4 wild haddock fillets (4 oz each)
- 3 cups cauliflower florets, sliced flat for browning
- 1 tsp sweet smoked paprika (pimentón dulce)
- 1/2 tsp dried oregano
- 1.5 tbsp olive oil
- Zest & juice of 1 fresh lemon

DIRECTIONS

1. Preheat oven to 400°F (205°C). Toss sliced cauliflower with 1 tbsp olive oil and 1/2 tsp paprika on a rimmed baking sheet.
2. Roast cauliflower for 12 minutes until undersides begin to caramelize golden.
3. Push cauliflower to perimeter of sheet. Place haddock fillets in center. Rub fillets with remaining 1/2 tbsp olive oil, remaining paprika, oregano, and lemon zest.
4. Roast 9 to 11 minutes until haddock is opaque and flakes readily. Squeeze fresh lemon juice over everything before plating.

Na: 70 mg | K: 320 mg | P: 190 mg | Protein: 23 g

WAVE 097 · MASTERCOOK FREEWARE

ORANGE-ROSEMARY CHICKEN & CARROT TRAYBAKE

FT-0855 · WAVE 098 MASTER RECIPE · ROASTED CITRUS ROUNDS WITH WOODSY NEEDLE ROSEMARY

Serves 4 · 30 min

Sheet-Pan Elegance

INGREDIENTS

- 1.2 lbs chicken breast, cut into 1-inch strips
- 2 cups sliced carrots (pre-boiled 5 min & drained to lower potassium)
- 1 small navel orange, sliced thin into rounds
- 2 sprigs fresh rosemary, leaves stripped
- 1.5 tbsp olive oil
- 1/4 tsp freshly ground black pepper

DIRECTIONS

1. Preheat oven to 400°F (205°C).
2. In a bowl, toss chicken strips, drained leached carrots, orange slices, and rosemary with olive oil and pepper.
3. Spread evenly across a parchment-lined baking sheet in a single layer.
4. Roast 22 to 25 minutes until chicken is browned and carrots are tender with caramelized edges.

Na: 65 mg | K: 350 mg | P: 210 mg | Protein: 27 g

WAVE 098 · MASTERCOOK FREEWARE

TURKEY, PEPPER & OREGANO STUFFED ZUCCHINI BOATS

FT-0856 · WAVE 098 MASTER RECIPE · ROASTED GARDEN ZUCCHINI FILLED WITH SAVORY HERBED PILAF

Serves 4 · 35 min

Garden Comfort

INGREDIENTS

- 4 medium green zucchinis, halved lengthwise & hollowed into boats
- 3/4 lb lean ground turkey
- 1/2 red bell pepper, finely diced
- 1 cup cooked white jasmine rice
- 1 tbsp dried oregano & 1/2 tsp garlic powder
- 1 tbsp olive oil

DIRECTIONS

1. Preheat oven to 375°F (190°C). Arrange hollowed zucchini boats in a 9x13-inch baking dish.
2. Heat olive oil in skillet. Sauté ground turkey and bell pepper with oregano and garlic powder until turkey is browned.
3. Fold cooked white rice into turkey mixture. Spoon filling generously into zucchini boats.
4. Cover dish with foil; bake 20 minutes. Remove foil and bake 10 minutes more until zucchini is tender.

Na: 78 mg | K: 330 mg | P: 200 mg | Protein: 22 g

WAVE 098 · MASTERCOOK FREEWARE

JAPANESE GINGER-SCALLION STEAMED HADDOCK

WT-0142 · WORLD TABLE 1000 MASTER SERIES · FLAKY WHITE FISH SCENTED WITH SIZZLING SESAME AROMATICS

Serves 2 · 18 min

Delicate Vapor Cookery

INGREDIENTS

- 2 wild haddock fillets (5 oz each)
- 1 tbsp fresh ginger, peeled & julienned into matchsticks
- 2 green scallions, green and white parts shredded lengthwise
- 1 tsp pure toasted sesame oil
- 1 tsp rice vinegar (unseasoned, zero sodium)
- 1/2 tsp sugar

DIRECTIONS

1. Lay ginger coins in a heatproof steaming dish. Place haddock fillets on top.
2. Set dish inside steamer over boiling water. Cover tightly and steam for 8 to 10 minutes until fish flakes with a fork.
3. Carefully remove dish. Top fish with shredded scallions.
4. Heat toasted sesame oil in a tiny skillet until hot, then pour directly over scallions to sizzle and release their fragrant aroma. Drizzle with rice vinegar.

Na: 60 mg | K: 305 mg | P: 180 mg | Protein: 25 g

WORLD TABLE 1000 · MASTERCOOK FREEWARE

MOROCCAN LEMON-HERB CHICKEN TAGINE

WT-0388 · WORLD TABLE 1000 MASTER SERIES · WARM AROMATIC SIMMER OF TURMERIC, CORIANDER AND CITRUS

Serves 4 · 40 min

Deep North African Spice

INGREDIENTS

- 1.3 lbs boneless chicken thighs, trimmed of visible fat
- 1/2 yellow onion, finely diced
- 3 cloves garlic, minced
- 1 tsp ground cumin & 1 tsp ground coriander
- 1/2 tsp ground turmeric & 1/4 tsp ginger powder
- Zest of 1 fresh lemon & 2 tbsp fresh lemon juice
- 1.5 tbsp olive oil
- 1/2 cup water
- 2 tbsp fresh cilantro, chopped

DIRECTIONS

1. Toss chicken thighs with cumin, coriander, turmeric, ginger, and black pepper.
2. Heat olive oil in a heavy Dutch oven or tagine over medium heat. Brown chicken 3 minutes per side; remove to plate.
3. Add onion and garlic to pot; sauté 4 minutes until translucent.
4. Return chicken to pot. Add water and lemon zest. Bring to simmer, cover tightly, turn heat to low, and braise 25 minutes until chicken is meltingly tender.
5. Stir in fresh lemon juice and cilantro before serving over steamed couscous or white rice.

Na: 85 mg **K: 360 mg** **P: 225 mg** **Protein: 28 g**

WORLD TABLE 1000 · MASTERCOOK FREEWARE

SMOKY ROASTED RED PEPPER DIP

VS-0012 · VORATH KITCHEN ALCHEMICAL BLEND · REPLACES HIGH-SODIUM KETCHUP AND COMMERCIAL BBQ SAUCES

Makes 1.5 cups · 15 min

Zero Added Sugar or Salt

INGREDIENTS

- 2 large red bell peppers, fire-roasted & skins peeled
- 3 cloves roasted garlic
- 1 tbsp extra virgin olive oil
- 1.5 tsp apple cider vinegar
- 1/2 tsp smoked Spanish paprika
- 1/4 tsp ground cumin & fresh black pepper

DIRECTIONS

1. Place peeled roasted red peppers and roasted garlic cloves into a food processor or blender.
2. Add olive oil, apple cider vinegar, smoked paprika, cumin, and black pepper.
3. Puree on high until silky smooth and emulsified.
4. Taste and adjust acidity with a drop more vinegar if desired. Store in airtight glass jar in refrigerator for up to 7 days. Use as dipping sauce for crispy tenders, haddock, or roasted cauliflower.

Na: 22 mg (per 2 tbsp) **K: 140 mg** **P: 35 mg** **Per 2 Tbsp**

VORATH KITCHEN · MASTERCOOK FREEWARE

THE CHAIRSIDE CARE KIT & 0-FLUID THIRST TAMERS

CCK-01 · CLINICAL SELF-MANAGEMENT PROTOCOL · MANAGING DRY MOUTH, APPETITE, AND RECOVERY ACROSS 7-HOUR DIALYSIS RUNS

Dialysis Session Protocol

Zero-Fluid Overload

CARE KIT PACKING LIST

- **Thermal Insulated Pouch:** 12 frozen seedless sour green grapes in small container.
- **Citrus Spritz Vial:** 15ml spray bottle with cold lemon water for tongue misting.
- **Sugar-Free Sour Mints:** Zero-phosphate spearmint or lemon drops.
- **Post-Run Albumin Box:** Chilled egg white rounds or sliced cold sage chicken.
- **Acoustic Isolation:** Noise-canceling headphones & warm fleece blanket.

THE 3-PHASE DIALYSIS RUN

1. **Hour 0–2 (Needle-In & Settling):** Focus on warmth and relaxation. Fluorescent clinic lights cause sensory fatigue—dim devices and play ambient soundscapes. Keep access arm still and supported.
2. **Hour 2–5 (The Deep Stretch & Thirst Tamers):** As ultrafiltration pulls interstitial fluid, dry mouth peaks. *Do not drink cold water from the cooler.* Take ONE frozen sour grape. The intense sub-zero temperature numbs palate nerve endings; the tart malic acid triggers immediate salivation for 15+ minutes with less than 2ml of liquid.
3. **Hour 5–7 (Teardown & Washout Recovery):** After unhooking and holding sites, eat pure albumin protein from your Recovery Box to counteract post-dialysis amino acid depletion. Rest 30 minutes before transit.

Fluid: < 5 ml **K: < 40 mg** **P: 0 mg** **Sovereign Protocol**

CHAIRSIDE COMPANION · NORTHSTAR PRIME

CHAPTER 36 • CLINICAL CULINARY EXPANSION

Dialysis Day Recovery & The Phosphate-Free Baker

"Post-treatment washout is real. You don't need a lecture on compliance—you need clean, effortless protein to rebuild your muscle and zero-fluid flavor that respects your limits."

THE CLINICAL RECOVERY & BAKING SCIENCE:

1. **Post-Dialysis Washout:** Hemodialysis strips both uremic toxins and essential amino acids (~10-15g of free amino acids per 4-hour treatment). The body enters a catabolic state if high-biological-value protein is not consumed promptly. Whole eggs pack heavy phosphorus in the yolk (~180mg P), but egg whites provide pure albumin protein with negligible phosphorus.
2. **The Chemical Leavener Trap:** Commercial baking powders and bakery breads routinely utilize sodium aluminum phosphate (SALP), monocalcium phosphate, or dicalcium phosphate as leavening acids. 100% of inorganic phosphate is absorbed into the bloodstream. Our formulations use pure yeast fermentation and cold-dough autolyse to achieve airy crumb architecture with **0 mg added phosphate salts**.
3. **Zero-Fluid Umami:** Reducing pan acids and roasted alliums creates hyper-concentrated glazes that wake up a metallic dialysis palate without adding fluid milliliters to the daily allowance.

PHOSPHATE-FREE GOLDEN HERB FOCACCIA

FT-BAKE-01 • THE PHOSPHATE-FREE BAKER • SLOW-FERMENTED AIRY CRUMB WITH ZERO CHEMICAL LEAVENERS

Makes 12 squares • 2.5 hrs

Per square: 85mg Na • 110mg K • 45mg P • 4g Protein • 0ml Fluid

Why it works: Commercial biscuits and focaccia often contain baking powder packed with sodium aluminum phosphate. This artisan formula relies exclusively on active dry yeast, bread flour, extra virgin olive oil, and fresh rosemary needles for an irresistible golden crust and pillowy interior.

Ingredients:

- 3 cups unbleached bread flour
- 1 packet (2 1/4 tsp) active dry yeast
- 1 cup lukewarm water (used in dough hydration, baked off dry)
- 3 tbsp extra virgin olive oil (divided)
- 1/2 tsp kosher flake salt (measured strictly)
- 2 tbsp fresh rosemary needles (roughly chopped)
- 2 cloves garlic (thinly sliced)
- 1/4 tsp cracked black pepper

Technique:

1. Dissolve yeast in lukewarm water for 5 minutes until frothy.
2. Combine bread flour and measured salt in a large bowl. Add yeast liquid and 2 tbsp olive oil; mix until shaggy dough forms.
3. Knead on an unfloured board for 8 minutes until silky and elastic. Transfer to an oiled bowl, cover, and let rise for 75 minutes until doubled.
4. Dimple the dough into a parchment-lined 9x13 metal baking pan with oiled fingertips. Scatter sliced garlic, chopped rosemary, black pepper, and drizzle remaining 1 tbsp olive oil over top.
5. Proof for 25 minutes. Bake at 425°F (220°C) for 20-22 minutes until crust is deep burnished amber. Cool on a wire rack before slicing into 12 equal squares.

0mg Added Phosphates **Natural Yeast Fermentation** **Low Sodium**

RECIPE CARD • MASTERCOOK CKD KITCHEN

DIALYSIS WASHOUT EGG WHITE & CHIVE RECOVERY FRITTATA

FT-0870 • POST-DIALYSIS RECOVERY • HIGH-BV ALBUMIN PROTEIN BOX FOR IMMEDIATE POST-TREATMENT FATIGUE

Serves 2 • 15 min

Per serving: 125mg Na • 180mg K • 60mg P • 18g Protein • 0ml Fluid

Why it works: Post-dialysis fatigue demands rapid high-biological-value protein that does not require an hour of standing over a stove. Liquid egg whites provide 18 grams of clean albumin per serving with negligible phosphorus, brightened with sniped fresh chives, dill, and white pepper.

Ingredients:

- 1 cup 100% pasteurized liquid egg whites (or 6 large egg whites separated)
- 1/4 cup finely chopped fresh chives
- 1 tbsp chopped fresh dill fronds
- 1/4 cup diced red bell pepper (low potassium crunch)
- 1 tbsp olive oil
- 1/4 tsp coarse white pepper
- 1/8 tsp garlic powder (zero salt)

Technique:

1. Heat olive oil in an 8-inch oven-safe nonstick skillet over medium heat. Sauté diced red bell pepper for 3 minutes until tender-crisp.
2. Whisk egg whites with chives, dill, white pepper, and garlic powder until frothy.
3. Pour egg mixture into skillet over peppers. Let edges set for 2 minutes, gently pulling cooked edges inward to let raw egg flow underneath.
4. Transfer skillet to preheated broiler on high for 3-4 minutes until puffed, golden, and fully set in the center.
5. Slide onto a plate and enjoy warm or slice into chilled squares for the clinic ride home.

18g Albumin Protein **Low Phosphorus** **0-Fluid Post-Run Meal**

RECIPE CARD • MASTERCOOK CKD KITCHEN

CRISPY SESAME-CRUSTED SALMON SKEWERS

FT-0871 • HEART & KIDNEY VANGUARD • FLASH-SEARED OMEGA-3 WITH TOASTED SESAME CRUST

Serves 4 • 20 min

Per skewer serving: 95mg Na • 280mg K • 210mg P • 22g Protein • 0ml Fluid

Why it works: Dialysis patients need cardiovascular vascular support and clean fatty acids. Fresh wild salmon cubes are dredged in toasted white and black sesame seeds and pan-seared until crackling crisp. A tiny brush of rice vinegar and grated ginger cuts through the richness without sodium.

Ingredients:

- 1 lb skinless wild salmon fillet, cut into 1-inch cubes
- 2 tbsp white sesame seeds
- 1 tbsp black sesame seeds
- 1 egg white (whipped frothy)
- 1 tsp grated fresh ginger root
- 1 tsp rice vinegar (unseasoned, zero sodium)
- 1 tbsp avocado oil for searing
- Bamboo skewers soaked in water

Technique:

1. Thread 4 salmon cubes onto each soaked bamboo skewer.
2. Brush skewers lightly with whipped egg white, then roll in blended sesame seeds and ginger.
3. Heat avocado oil in a large cast-iron skillet over medium-high heat until shimmering.
4. Sear skewers for 2 minutes per side (8 minutes total) until sesame crust is fragrant and golden and salmon reaches 145°F internally.
5. Finish with a light mist of unseasoned rice vinegar and serve immediately.

Omega-3 Rich **Under 100mg Sodium** **Sesame Crunch**

RECIPE CARD • MASTERCOOK CKD KITCHEN

SAFFRON & FENNEL POACHED COD BOWLS

WT-0420 • WORLD TABLE MEDITERRANEAN • AROMATIC SAFFRON THREADS AND SHAVED FENNEL BULB

Serves 2 • 25 min

Per serving: 85mg Na • 260mg K • 190mg P • 24g Protein • 40ml Fluid

Why it works: Saffron offers deep golden warmth and delicate floral earthiness that makes salt completely unnecessary. Shaved fennel bulb melts into a gentle anise sweetness that cushions tender Pacific cod.

Ingredients:

- 8 oz fresh Pacific cod fillets (two 4 oz fillets)
- 1 small fennel bulb, trimmed and shaved paper-thin
- Pinch of genuine Spanish saffron threads (about 12-15 threads)
- 1/4 cup boiling water (to bloom saffron)
- 1 tbsp extra virgin olive oil
- 1 strip orange peel (zest only, white pith removed)
- 1/4 tsp cracked coriander seeds

Technique:

1. Steep saffron threads in 1/4 cup boiling water for 10 minutes until liquid turns luminous crimson-gold.
2. Heat olive oil in a wide skillet over medium-low heat. Add shaved fennel, orange peel strip, and crushed coriander; cook gently for 6 minutes until fennel is limp and sweet.
3. Nestle cod fillets directly onto the bed of fennel. Pour bloomed saffron water over the fish.
4. Cover with a tight-fitting lid and poach over low heat for 8-10 minutes until cod flakes cleanly with a fork (145°F).
5. Discard orange peel strip and serve cod hot over the saffron-braised fennel.

Ultra-Low Sodium **Golden Saffron Umami** **Digestive Fennel**

RECIPE CARD • MASTERCOOK CKD KITCHEN

PERSIAN HERB & SUMAC CHICKEN PATTIES

WT-0550 • WORLD TABLE SILK ROAD • TART WILD SUMAC AND FRESH GREEN HERBS REPLACING SALT

Serves 4 • 25 min

Per 2-patty serving: 75mg Na • 290mg K • 215mg P • 25g Protein • 0ml Fluid

Why it works: Ground wild sumac berry is the ultimate renal seasoning discovery: its natural citric and malic acids trigger intense salivation and pleasant tart acidity that tricks the palate into perceiving salt, while delivering zero sodium. Combined with heaps of parsley, mint, and cumin.

Ingredients:

- 1 lb lean ground chicken breast (unbrined)
- 1 1/2 tbsp ground wild sumac
- 1/2 cup finely minced flat-leaf parsley
- 1/4 cup finely minced fresh spearmint
- 1 small grated yellow onion (squeezed dry in paper towels)
- 1 tsp ground cumin
- 1/2 tsp ground turmeric
- 1 tbsp olive oil for grilling

Technique:

1. Grate onion and squeeze vigorously in paper towels to remove excess water.
2. In a bowl, gently blend ground chicken, sumac, parsley, mint, squeezed onion, cumin, and turmeric. Form into 8 small flat oval patties.
3. Heat a grill pan or cast-iron skillet over medium-high heat with olive oil.
4. Cook patties for 4-5 minutes per side until seared with deep grill marks and internal temperature reaches 165°F.
5. Dust with an extra pinch of sumac right off the heat and serve alongside cucumber rounds.

Tart Sumac Acid Trick **No Salt Substitute** **Fresh Garden Herbs**

RECIPE CARD • MASTERCOOK CKD KITCHEN

HYDRATION-FREE UMAMI GLAZE (BLACK GARLIC & APPLE REDUCTION)

VS-0015 • VORATH ALCHEMICAL KITCHEN • CONCENTRATED ROASTED SAVORY PUNCH WITHOUT FLUID OUNCES

Makes 8 servings (2 tbsp each) • 25 min

Per 2 tbsp: 20mg Na • 85mg K • 15mg P • 1g Protein • 0ml Counted Fluid

Why it works: Dialysis fluid limits make watery broths and liquid gravies dangerous. This reduction simmers unfiltered apple cider with balsamic vinegar, roasted black garlic, and smoked paprika until reduced by 75% into a glossy syrup that coats grilled chicken cutlets or haddock with savory intensity.

Ingredients:

- 1 cup 100% pure unfiltered apple cider
- 2 tbsp aged balsamic vinegar
- 3 cloves black garlic (or roasted garlic), mashed to a smooth paste
- 1/2 tsp smoked sweet paprika
- 1 sprig fresh thyme
- 1/4 tsp cracked black pepper

Technique:

1. Combine apple cider, balsamic vinegar, mashed black garlic paste, smoked paprika, and thyme sprig in a small heavy-bottomed saucepan.
2. Bring to a boil, then reduce heat to medium-low and simmer steadily for 18-20 minutes.
3. Watch closely as the liquid reduces from 1 cup down to about 1/4 cup (4 tablespoons) and develops large, slow bubbles with a glossy syrup consistency.
4. Discard thyme stem. Stir in black pepper. Cool to room temperature (it thickens further into a glass-like glaze as it cools).
5. Brush 1-2 tablespoons directly over hot grilled proteins right before serving.

Fluid-Preserving Glaze **Black Garlic Umami** **Under 25mg Sodium**

RECIPE CARD • MASTERCOOK CKD KITCHEN

The Global Heritage Table: World Foodways & Washoku

"Tradition is not bland, and cultural heritage does not require kidney sacrifice. When seasoned with citrus, whole chiles, toasted seeds, and mindful fire, global cuisine is naturally kidney-friendly."

THE GLOBAL FOODWAYS CLINICAL ARCHITECTURE:

1. **Cultural Integrity with Renal Safety:** Traditional ancestral foodways from West Africa, the Maghreb, East Asia, the Andes, and Central America evolved long before ultra-processed factory sauces. By returning to foundational techniques—two-stage grain steaming, fresh herb pounded pastes, dry-roasted whole chiles, and clean acid macerations—we deliver explosive authentic flavor without commercial sodium, bottled fish sauces, or chemical bouillon cubes.
2. **Immunocompromised Food Safety Gate:** Hemodialysis and advanced CKD patients face elevated infection vulnerabilities. Recipes inspired by raw preparations (such as Peruvian ceviche) are strictly modified: fish and seafood are fully cooked to 145°F (63°C) before citrus maceration, satisfying FoodSafety.gov immunocompromised clinical standards.
3. **Fluid & Electrolyte Accountability:** Soups and braises (Joumou, Borscht, Tom Yum) are engineered as either reduced-liquid skillet sautés or strictly measured 1-cup portions, protecting daily fluid allowances while providing high-biological-value protein and potassium-budgeted whole produce.

YUZU-GINGER CHICKEN, CABBAGE & RICE BOWLS

R01 / WT-0143 • JAPAN / WASHOKU HERITAGE • CRISP CABBAGE AND SEARED CHICKEN IN FRAGRANT YUZU-GINGER GLAZE

Makes 4 servings • 25 mins

Per serving (est): 72mg Na • 290mg K • 195mg P • 26g Protein • 20ml Fluid

Cultural Integrity & Technique: Washoku honors seasonality, balance, and clean presentation. Rather than drowning produce in a heavy commercial teriyaki sauce packed with sodium and caramel coloring, this weeknight bowl builds bright, restorative aroma with fresh grated ginger, pure yuzu juice, unseasoned rice vinegar, and quick-seared chicken cutlets.

Ingredients:

- 1 cup Japanese short-grain white rice (rinsed until water runs clear)
- 1 1/4 cups fresh water (for cooking rice)
- 12 oz boneless skinless chicken breast (cut into 1-inch pieces)
- 1 tbsp neutral high-smoke oil (divided)
- 4 cups green cabbage (thinly sliced into ribbons)
- 2 tsp fresh ginger root (finely grated)
- 2 tbsp unsweetened yuzu juice (or fresh lemon juice)
- 1 tbsp unseasoned rice vinegar
- 1 tsp granulated sugar
- 2 tbsp scallion greens (thinly sliced)

Technique:

1. Combine rinsed rice and 1 1/4 cups water in a saucepan. Bring to a rolling boil, cover tightly, reduce heat to low, and cook 15 minutes. Remove from heat and rest covered 10 minutes; fluff with a fork.
2. In a small ceramic bowl, whisk yuzu juice, rice vinegar, sugar, grated ginger, and 1 tsp neutral oil until emulsified.
3. Heat remaining oil in a large heavy skillet over medium-high heat. Add chicken pieces and cook, turning, for 6–8 minutes until golden browned and internal temperature reaches 165°F (74°C) with a clean thermometer. Transfer to a warm plate.
4. Add cabbage to the skillet and cook 3–4 minutes over medium heat, tossing frequently until just tender-crisp but not collapsed.
5. Return chicken and any rested juices to the skillet, pour in the yuzu-ginger mixture, and toss off heat for 30 seconds. Divide rice, cabbage, and chicken among four

Chef Swaps & Safety Flags: Fresh lemon juice provides a bright, accessible substitute if yuzu is unavailable. Firm white fish (cod, haddock) can replace chicken—sear gently to 145°F (63°C). Contains no major allergens. Check vinegar labels for sodium or sulfites.

bowls; crown with sliced scallion greens.

Zero Soy Sauce **Washoku Citrus Glaze**
Under 80mg Sodium

RECIPE CARD • MASTERCOOK CKD KITCHEN

ANCHO TURKEY TOSTADAS WITH LIME-CABBAGE CRUNCH

R02 / WT-0205 • MEXICO / MICHOACÁN HERITAGE • SLOW-STEEPED WHOLE ANCHO CHILE PUREE ON CRISP BAKED CORN TORTILLAS

Makes 4 servings (2 tostadas each) • 30 mins

Per serving (est): 88mg Na • 320mg K • 210mg P • 24g Protein • 0ml Fluid

Cultural Integrity & Technique: True Mexican cooking draws warmth, sweetness, and depth from whole dried chiles rather than high-sodium seasoning packets. Dried ancho chiles are stemmed, seeded, steeped in hot water, and pureed with garlic and Mexican oregano to create a rich, clinging adobo sauce that coats lean turkey on crisp oven-baked tortillas.

Ingredients:

- 8 small (about 6-inch) plain corn tortillas (check label for zero added phosphate leaveners)
- 2 dried ancho chiles (stemmed and seeded)
- 3/4 cup hot water (for steeping chiles; discard after use)
- 1/2 cup fresh cold water (for blending)
- 2 cloves fresh garlic (peeled)
- 1/2 tsp ground cumin
- 1/2 tsp crumbled Mexican oregano
- 12 oz 93%-lean ground turkey
- 2 tbsp neutral high-heat oil (divided)
- 4 cups green cabbage (finely shredded)
- 1/2 cup red bell pepper (thinly sliced)
- 2 tbsp fresh lime juice
- 1/4 cup fresh cilantro (roughly chopped)

Technique:

1. Heat oven to 400°F (204°C). Lightly brush corn tortillas on both sides with 1 tsp oil and arrange in a single layer on baking sheets. Bake 8–11 minutes, turning once, until crisp and rigid.
2. Submerge dried ancho chiles in hot water for 15 minutes to soften. Drain and discard soaking liquid. Place softened chiles in a blender with 1/2 cup fresh water, garlic cloves, cumin, and Mexican oregano; blend until smooth.
3. Heat 2 tsp oil in a large nonstick skillet over medium-high heat. Add ground turkey, breaking up with a spatula until browned. Pour in the ancho chile puree, lower heat, and simmer for 5–7 minutes until sauce clings to turkey and meat reaches 165°F (74°C).
4. In a separate bowl, toss shredded cabbage, red

Chef Swaps & Safety Flags: Guajillo chiles can replace one ancho for a brighter, tangier profile. If corn tortilla labels indicate sodium leaveners, serve the ancho turkey filling over steamed white rice. No major allergens present.

bell pepper, fresh lime juice, cilantro, and remaining 1 tbsp oil.

5. Assemble immediately before eating: spoon warm ancho turkey onto crisp tostadas and heap with crunchy lime-cabbage slaw.

Oven-Baked Tostadas **Whole Ancho Adobo** **Phosphate-Free Tortillas**

RECIPE CARD • MASTERCOOK CKD KITCHEN

FRESH GOCHUGARU-PEAR CABBAGE WITH GRILLED CHICKEN & RICE

R03 / WT-0312 • KOREAN PANTRY INSPIRATION • SAME-DAY UNFERMENTED NAPA-PEAR SLAW WITH CHARRED CHICKEN THIGHS

Makes 4 servings • 25 mins

Per serving (est): 68mg Na • 340mg K • 220mg P • 25g Protein • 15ml Fluid

Cultural Integrity & Technique: Traditional fermented kimchi relies on heavy salt brining, fermented shrimp, and fish sauce—unsuitable for renal patients. This same-day unfermented Korean slaw delivers crunchy napa cabbage, crisp Asian pear, and daikon tossed in a vibrant dressing of gochugaru chile flakes, garlic, ginger, and toasted sesame oil.

Ingredients:

- 1 cup rinsed short-grain white rice
- 1 1/4 cups water
- 12 oz trimmed boneless skinless chicken thighs
- 1 tsp neutral oil (for grill pan)
- 4 cups fresh napa cabbage (cut into 1-inch crisp squares)
- 3/4 cup Asian pear (cut into matchsticks)
- 1/2 cup daikon radish (cut into matchsticks)
- 1 tbsp unseasoned rice vinegar
- 2 tsp Korean red pepper flakes (gochugaru)
- 1 tsp toasted dark sesame oil
- 1 tsp granulated sugar
- 1 clove fresh garlic (finely grated)
- 1 tsp fresh ginger (finely grated)
- 2 tbsp scallion greens (thinly sliced)

Technique:

1. Simmer rice in water covered on low for 15 minutes; remove from heat and rest covered 10 minutes, then fluff.
2. In a small bowl, whisk rice vinegar, gochugaru, toasted sesame oil, sugar, grated garlic, and grated ginger until blended into a glossy dressing.
3. Heat a cast iron grill pan over medium-high heat and brush lightly with neutral oil. Grill chicken thighs 5–7 minutes per side until deeply seared and internal temperature registers 165°F (74°C). Rest on a cutting board 5 minutes, then slice into strips.
4. Just before serving, combine napa cabbage, pear matchsticks, daikon, and scallion greens in a salad bowl. Pour dressing over and toss vigorously. Do not let sit or ferment.
5. Divide warm rice among plates, top with sliced

Chef Swaps & Safety Flags: Contains sesame (allergen). For sesame sensitivity, replace sesame oil with neutral oil and a pinch of toasted sunflower seed aroma. Crisp gala or fuji apple can replace Asian pear if pear is unavailable.

chicken, and mound the fresh gochugaru-pear salad alongside.

Zero Fermented Salt **Fresh-Dressed Napa** **Under 70mg Sodium**

RECIPE CARD • MASTERCOOK CKD KITCHEN

TWICE-STEAMED COUSCOUS WITH CHERMOULA CHICKEN & SUMMER VEGETABLES

R04 / WT-0389 • MAGHREB HERITAGE • TRADITIONAL TWO-STAGE AERATED COUSCOUS WITH ROASTED HERB-SPICED CHICKEN

Makes 4 servings • 40 mins

Per serving (est): 75mg Na • 350mg K • 215mg P • 27g Protein • 15ml Fluid

Cultural Integrity & Technique: Rather than boiling couscous into a dense, waterlogged mass, North African couscous craft relies on two-stage steam hydration. Sprinkling water and rolling the granules with olive oil creates extraordinary lightness. The dish is paired with tender chicken and roasted vegetables rubbed with fresh chermoula (parsley, cilantro, cumin, paprika, and lemon).

Ingredients:

- 1 1/2 cups plain medium-grain semolina couscous (unseasoned)
- 1 1/2 cups fresh water (divided)
- 12 oz boneless chicken breast (cut into 4 cutlets)
- 2 cups zucchini (sliced into half-moons)
- 1 cup red bell pepper (cut into 1-inch squares)
- 1/2 cup yellow onion (cut into wedges)
- 3 tbsp extra virgin olive oil (divided)
- 1/2 cup fresh flat-leaf parsley (finely chopped)
- 1/2 cup fresh cilantro (finely chopped)
- 2 cloves garlic (minced)
- 2 tbsp fresh lemon juice
- 1 tsp ground cumin
- 1 tsp sweet Hungarian paprika
- 1/2 tsp ground coriander

Technique:

1. Heat oven to 425°F (218°C). In a bowl, combine parsley, cilantro, minced garlic, lemon juice, cumin, paprika, coriander, and 2 tbsp olive oil to form a vibrant chermoula. Rub half over chicken cutlets; toss remainder with zucchini, bell pepper, and onion.
2. Spread vegetables and chicken on a parchment-lined baking sheet. Roast 18–22 minutes until vegetables are caramelized and chicken reaches 165°F (74°C); slice chicken.
3. Place dry couscous in a wide shallow bowl. Sprinkle with 3/4 cup water and 1 tsp olive oil; rub gently between palms to separate grains. Rest 10 minutes.
4. Transfer couscous to a cheesecloth-lined steamer basket over

Chef Swaps & Safety Flags: Contains wheat/gluten. For celiac or wheat allergy, replace couscous with steamed short-grain white rice or millet. Preserved lemons are omitted due to extreme sodium content; fresh lemon juice provides clean acidity.

simmering water; steam covered 15 minutes.

5. Return couscous to the bowl, sprinkle with remaining 3/4 cup water, fluff with a fork to break clumps, rest 5 minutes, and steam a second time for 10 minutes. Fluff with remaining 2 tsp olive oil.
6. Mound the featherlight couscous on a sharing platter and arrange roasted chermoula chicken and summer vegetables over top.

Two-Stage Steamed Grain **Fresh Herb Chermoula** **No Preserved Lemon Salt**

RECIPE CARD • MASTERCOOK CKD KITCHEN

CEEBU-JEN-INSPIRED PARSLEY FISH, BROKEN RICE & CABBAGE

R05 / WT-0512 • SENEGALESE HERITAGE (SAINT-LOUIS) • POCKET-STUFFED BAKED COD WITH AROMATIC RED BROKEN JASMINE RICE

Makes 4 servings • 40 mins

Per serving (est): 92mg Na • 380mg K • 210mg P • 26g Protein • 20ml Fluid

Cultural Integrity & Technique: Ceebu Jën is the culinary soul of Senegal. Traditional preparations incorporate salt-fermented seafood and bouillon cubes. This kidney-conscious adaptation preserves the brilliant rof stuffing (flat-leaf parsley, garlic, lemon, and crushed pepper pressed inside fish pockets) and simmers broken jasmine rice in a delicate tomato-vegetable reduction.

Ingredients:

- 1 lb fresh cod fillets (divided into 4 portions)
- 1 1/4 cups broken jasmine rice (rinsed thoroughly)
- 2 1/4 cups fresh water
- 2 cups green cabbage (cut into wedges)
- 1 cup carrot coins
- 1 cup eggplant cubes (peeled)
- 1/2 cup yellow onion (finely chopped)
- 2 tbsp no-salt-added tomato paste (verify 0mg added salt on label)
- 1/2 cup fresh flat-leaf parsley (finely chopped)
- 2 cloves garlic (minced)
- 1 tbsp fresh lemon juice
- 1/4 tsp crushed red pepper flakes (optional)
- 1 tbsp neutral oil (divided)

Technique:

1. Heat oven to 400°F (204°C). In a small mortar or bowl, pound parsley, minced garlic, lemon juice, red pepper flakes, and 1 tsp oil into a fragrant green rof paste.
2. Cut a horizontal shallow pocket into the thickest part of each cod fillet. Pack the parsley paste into the pockets. Brush fish with 1 tsp oil and bake 10–13 minutes until fish flakes easily and internal temperature reaches 145°F (63°C).
3. Heat remaining oil in a heavy saucepan over medium heat; cook onion 3 minutes until translucent. Stir in tomato paste and cook 1 minute until fragrant. Add cabbage wedges, carrot coins, eggplant cubes, and 2 1/4 cups water; cover and simmer 8 minutes.
4. Lift vegetables out with a slotted spoon to a warm plate. Stir rinsed broken

Chef Swaps & Safety Flags: Contains fish (allergen). Haddock, pollock, or halibut work equally well. Completely omits fermented dried snails (guédj) and salted fish (yet) to keep sodium under 95mg.

rice into the simmering tomato broth, cover, reduce heat to low, and cook 16 minutes. Rest covered 5 minutes.

5. Plate the red broken rice, arrange tender vegetables alongside, and nestle the herb-stuffed cod fillet over top.

Herbed Rof Stuffing **Broken Jasmine Rice** **Zero Bouillon Cubes**

RECIPE CARD • MASTERCOOK CKD KITCHEN

BAKED HARISSA EGG-WHITE BRIK-STYLE PARCELS

R06 / WT-0618 • TUNISIAN HERITAGE • SHATTERING BAKED PHYLLO TRIANGLES FILLED WITH HERBED EGG WHITES AND SCRATCH HARISSA

Makes 4 servings (2 parcels each) • 30 mins

Per serving (est): 82mg Na • 210mg K • 65mg P • 14g Protein • 0ml Fluid

Cultural Integrity & Technique: Tunisian brik parcels celebrate the earthy, warming power of caraway, coriander, and dried chiles. Traditional commercial harissa pastes are laden with salt (often 2,000mg+ Na/100g). Here, a scratch paste is pureed with toasted caraway, coriander, and lemon, folded with post-dialysis recovery egg whites, and baked to a golden crisp.

Ingredients:

- 4 dried mild red chiles (guajillo or mild New Mexico, stemmed and seeded)
- 1 cup hot water (for steeping chiles; discard after use)
- 1 clove garlic (minced)
- 1/2 tsp ground coriander
- 1/4 tsp whole caraway seeds (lightly toasted and ground)
- 1 tbsp fresh lemon juice
- 2 tbsp fresh water (for blending)
- 1 tbsp extra virgin olive oil (divided)
- 1 cup pasteurized liquid egg whites (verify 0mg phosphate on label)
- 1/2 cup yellow onion (finely diced)
- 1/4 cup fresh flat-leaf parsley (finely chopped)
- 8 sheets commercial phyllo dough (thawed, unseasoned)

Technique:

1. Soak dried chiles in hot water 15 minutes; drain thoroughly. Blend with garlic, ground coriander, toasted caraway, lemon juice, 2 tbsp fresh water, and 1 tsp olive oil until a smooth, thick red paste forms.
2. Heat 1 tsp olive oil in a nonstick skillet over medium heat. Sauté diced onion 4 minutes until tender. Pour in liquid egg whites and gently scramble with a heatproof spatula until softly set and dry. Off heat, fold in parsley and 1 tbsp of the scratch harissa.
3. Heat oven to 400°F (204°C). Lay out one phyllo sheet, brush lightly with olive oil, fold lengthwise into thirds to create a long ribbon. Place 2 tablespoons of egg white filling at the base and fold upward in a flag-style triangle. Repeat for 8 parcels.
4. Place parcels seam-side down on a parchment-

Chef Swaps & Safety Flags: Contains egg and wheat/gluten (allergens). Ideal post-dialysis washout recovery food: pure albumin protein with negligible phosphorus (65mg P). For wheat sensitivity, spoon warm filling into crisp lettuce leaves.

lined baking sheet. Lightly mist or brush top with remaining oil. Bake 12–15 minutes until deep golden-brown and shattering crisp.

5. Serve warm. Refrigerate leftover harissa paste in an airtight jar for up to 5 days.

Scratch Caraway Harissa **Pure Albumin Recovery** **Under 70mg Phosphorus**

RECIPE CARD • MASTERCOOK CKD KITCHEN

SMALL-BATCH LAMB, CARROT & BARBERRY PALAV

R07 / WT-0720 • CENTRAL ASIAN / TAJIKISTAN HERITAGE • FRAGRANT LAYERED BASMATI RICE WITH CUMIN LAMB AND SWEET CARROTS

Makes 4 servings • 45 mins

Per serving (est): 70mg Na • 330mg K • 190mg P • 24g Protein • 10ml Fluid

Cultural Integrity & Technique: Oshi Palav represents hospitable feast-making across Tajikistan and Uzbekistan. In traditional cauldrons (kazans), meat and carrots form the zirvak foundation, over which rice is layered to steam undisturbed. We scale this to a 4-serving home Dutch oven with cumin, coriander, and ruby barberries that impart jewel-like tartness without sodium.

Ingredients:

- 12 oz trimmed lean boneless lamb leg (cut into 1-inch cubes)
- 1 1/2 cups white basmati rice (rinsed and soaked 20 minutes, drained)
- 2 cups carrots (cut into matchstick batons)
- 1 cup yellow onion (thinly sliced)
- 2 tbsp neutral cooking oil
- 1 tsp whole cumin seeds (lightly bruised)
- 1/2 tsp ground coriander
- 2 tbsp dried barberries (rinsed; optional tart finish)
- 2 1/2 cups fresh water (divided)

Technique:

1. Heat oil in a heavy Dutch oven or deep skillet over medium-high heat. Add lamb cubes and brown deeply on all sides for 6 minutes. Add sliced onion and cook 4 minutes until golden.
2. Scatter carrot batons, bruised cumin seeds, and ground coriander over the lamb. Pour in 1 cup water, cover, reduce heat to low, and simmer 20 minutes until lamb is tender.
3. Spread the drained basmati rice evenly over the meat and vegetables in a level layer without stirring. Gently pour the remaining 1 1/2 cups water along the edge of the pot so the layers remain undisturbed. Scatter barberries across the surface.
4. Increase heat until water bubbles through the rice layer, then reduce heat to the lowest setting, cover with a tight-fitting lid, and steam 18 minutes. Remove from heat and rest covered 10 minutes.
5. Confirm lamb internal temperature reaches at

Chef Swaps & Safety Flags: Skinless chicken thighs (cut into 1-inch pieces) can substitute for lamb—cook until internal temperature reaches 165°F (74°C). Barberries provide natural tartness without salt; omit if unavailable. Contains no major allergens.

least 145°F (63°C) with a 3-minute rest. Gently fluff and invert onto a platter so the golden lamb and carrots rest atop the aromatic rice.

Layered Kazan Steaming **Bruised Cumin & Barberry**

Under 75mg Sodium

RECIPE CARD • MASTERCOOK CKD KITCHEN

JOUMOU-INSPIRED SQUASH, CABBAGE & BEEF SOUP

R08 / WT-0815 • HAITIAN HERITAGE • VELVETY PUREED CALABAZA SQUASH BROTH WITH TENDER BEEF CHUCK AND VEGETABLES

Makes 6 servings (1 cup each strictly measured) • 50 mins

Per serving (est): 65mg Na • 340mg K • 175mg P • 18g Protein • 240ml Fluid

Cultural Integrity & Technique: Soup Joumou is Haiti's sacred historic symbol of liberation and dignity. While ceremonial New Year's pots are generous and shared widely, this renal adaptation honors the culinary soul through smooth calabaza (or kabocha) squash puree, aromatic allspice, fresh thyme, and beef, while adhering to strict 1-cup measured fluid portions.

Ingredients:

- 12 oz trimmed lean beef chuck (cut into 3/4-inch cubes)
- 1 tbsp neutral cooking oil
- 3 cups calabaza or kabocha squash (peeled, seeded, and cubed)
- 2 cups green cabbage (chopped into 1-inch pieces)
- 1 cup carrots (sliced into coins)
- 1 cup white turnips (peeled and diced)
- 1/2 cup yellow onion (chopped)
- 2 cloves garlic (minced)
- 1 tsp dried thyme
- 1/4 tsp ground allspice
- 1 whole fresh Scotch bonnet chile (pierced once; optional)
- 1 tbsp fresh lime juice
- 1/2 cup dry small elbow macaroni (plain, unseasoned)
- 5 cups fresh water (strictly measured)

Technique:

1. Heat oil in a stockpot over medium-high heat. Brown beef cubes on all sides for 6 minutes. Add onion, garlic, dried thyme, and allspice; cook 2 minutes until fragrant.
2. Add cubed squash and 5 cups water. Bring to a boil, cover, reduce heat to low, and simmer 25 minutes until squash is tender.
3. Transfer half the softened squash and 1 cup cooking liquid to a blender; puree until silky smooth and return to the stockpot to create the rich, golden signature velvety broth.
4. Add cabbage, carrots, turnip cubes, macaroni, and the whole pierced Scotch bonnet chile. Simmer gently uncovered for 14 minutes until pasta and vegetables are tender.

Chef Swaps & Safety Flags: Contains wheat/gluten (macaroni). For gluten-free dining, replace macaroni with parboiled white rice. **Fluid notice:** Each 1-cup serving counts as 240ml toward the daily fluid limit; track in RenalShield. Omit Scotch bonnet for mild palates.

5. Carefully remove and discard the whole Scotch bonnet chile intact without breaking it. Stir in fresh lime juice. Measure the total yield and divide equally into six 1-cup portions.

Pureed Squash Broth **Measured 1-Cup Serving** **Zero Bouillon Cubes**

RECIPE CARD • MASTERCOOK CKD KITCHEN

SMALL-BOWL BEET, CABBAGE & DILL CHICKEN BORSCHT

R09 / WT-0911 • UKRAINIAN HERITAGE • RUBY SWEET-SOUR BROTH WITH CRISP BEETS, TENDER CHICKEN, AND FRAGRANT FRESH DILL

Makes 6 servings (1 cup each strictly measured) • 40 mins

Per serving (est): 60mg Na • 310mg K • 170mg P • 17g Protein • 240ml Fluid

Cultural Integrity & Technique: Ukrainian borscht is a living UNESCO cultural practice. Rather than relying on high-sodium canned broths or cured sausages, this small-bowl adaptation draws deep ruby brilliance and earthy sweetness from fresh shredded beets, softened cabbage, tender chicken breast, and a crisp sweet-sour balance of apple cider vinegar and fresh dill.

Ingredients:

- 12 oz boneless skinless chicken breast (cut into 1-inch pieces)
- 1 1/2 cups fresh red beets (peeled and cut into thin matchsticks)
- 3 cups green cabbage (finely shredded)
- 1 cup carrots (cut into matchsticks)
- 1/2 cup yellow onion (finely chopped)
- 1 tbsp neutral cooking oil
- 1 clove garlic (minced)
- 1 dried bay leaf
- 1 tbsp raw apple cider vinegar
- 1 tsp granulated sugar
- 6 cups fresh water (strictly measured)
- 1/4 cup fresh dill (finely chopped)

Technique:

1. Heat oil in a soup pot over medium heat. Sauté chopped onion and carrot matchsticks for 5 minutes until soft. Add beet matchsticks and minced garlic; cook 3 minutes.
2. Add 6 cups water and the bay leaf. Bring to a boil, cover, reduce heat to low, and simmer 20 minutes until beets begin to soften.
3. Add shredded cabbage and chicken pieces; simmer gently for 10–12 minutes until chicken is cooked through and registers 165°F (74°C).
4. Remove and discard the bay leaf. Stir in apple cider vinegar, sugar, and fresh chopped dill. Let rest off heat for 5 minutes to infuse the sweet-sour herbal aroma.
5. Measure the final soup volume and divide equally into six 1-cup portions. Serve hot.

Chef Swaps & Safety Flags: Contains no major allergens. **Fluid notice:** Each 1-cup bowl counts as 240ml toward fluid allowances. Avoid commercial sour cream unless a measured 1-tbsp portion is approved in your individualized meal plan.

Fresh Beet Ruby Broth **Sweet-Sour Apple Cider** **Under 65mg Sodium**

MANSAF-INSPIRED LAMB, YOGURT & RICE PLATTER

R10 / WT-1004 • JORDANIAN HERITAGE • CARDAMOM-SPICED TENDER LAMB WITH WARM STABILIZED YOGURT SAUCE OVER TORN PITA AND RICE

Makes 4 servings • 55 mins

Per serving (est): 95mg Na • 340mg K • 235mg P • 26g Protein • 30ml Fluid

Cultural Integrity & Technique: Al-Mansaf represents Jordanian hospitality and celebration. Traditional recipes require jameed (dried fermented goat's milk rock), which contains extreme salt concentrations. We adapt the dish using plain pasteurized whole-milk yogurt gently stabilized with cornstarch and tempered with cardamom-cinnamon lamb braising liquor, layered over torn flatbread and rice.

Ingredients:

- 12 oz trimmed lean lamb leg (cut into 1-inch pieces)
- 1 tsp neutral oil
- 1/2 cup yellow onion (finely chopped)
- 1/4 tsp ground cardamom
- 1/4 tsp ground cinnamon
- 2 cups fresh water (for braising lamb)
- 1 1/2 cups white basmati rice (rinsed thoroughly)
- 1 3/4 cups fresh water (for cooking rice)
- 1 cup plain whole-milk yogurt (pasteurized; verify 0mg phosphate additives)
- 1 tsp cornstarch (to stabilize yogurt)
- 1 small plain 6-inch pita bread (torn into bite-sized pieces)
- 2 tbsp sliced almonds (lightly toasted; optional)
- 2 tbsp fresh flat-leaf parsley (finely chopped)

Technique:

1. Heat oil in a saucepan over medium heat; brown lamb pieces 5 minutes. Add chopped onion, cardamom, cinnamon, and 2 cups water. Cover and simmer gently for 45 minutes until lamb is tender and internal temperature reaches 145°F (63°C) with a 3-minute rest.
2. Lift lamb out with a slotted spoon. Measure exactly 1/2 cup of hot cooking broth; discard or freeze the remainder.
3. Simmer basmati rice in 1 3/4 cups water covered on low for 15 minutes; remove from heat and rest covered 10 minutes.
4. In a separate small saucepan, whisk yogurt and cornstarch until smooth. Warm over low heat, whisking constantly. Slowly ladle in the 1/2 cup hot lamb broth to temper the yogurt; warm

Chef Swaps & Safety Flags: Contains milk, wheat/gluten, and tree nuts (almonds). Omit almonds for nut allergy. Use gluten-free flatbread for celiac needs. The measured 1/2 cup lamb broth and 1 cup yogurt are strictly portioned for fluid and mineral control.

through gently without boiling to prevent curdling.

5. To serve, scatter torn pita pieces across a platter. Mound steamed rice over bread, arrange lamb over rice, and spoon the warm yogurt sauce over top. Garnish with parsley and toasted almonds; divide into four servings.

Tempered Yogurt Sauce **Cardamom-Braised Lamb** **Zero Jameed Salt**

RECIPE CARD • MASTERCOOK CKD KITCHEN

REDUCED-LIQUID TOM YUM KUNG-INSPIRED SHRIMP SKILLET

R11 / WT-1108 • THAI HERITAGE (CENTRAL PLAINS) • LEMONGRASS, GALANGAL, AND MAKRUT LIME FLASH-SEARED SHRIMP IN MINIMAL BROTH

Makes 4 servings • 20 mins

Per serving (est): 85mg Na • 260mg K • 180mg P • 22g Protein • 30ml Fluid

Cultural Integrity & Technique: Traditional Tom Yum Kung is a large bowl of fiery, sour soup packed with fish sauce (sodium trap) and large liquid volume (fluid overload). This brilliant clinical adaptation converts the dish to an intense skillet sauté: bruised lemongrass, fresh galangal, and makrut lime leaves bloom in hot oil, steaming shrimp and oyster mushrooms in just 1/2 cup water.

Ingredients:

- 12 oz raw peeled, deveined medium shrimp
- 1 tbsp neutral cooking oil
- 2 stalks fresh lemongrass (lower 4 inches, outer layers discarded, bruised and cut into 2-inch pieces)
- 6 fresh makrut lime leaves (torn, center ribs removed)
- 6 thin slices fresh galangal root
- 2 shallots (thinly sliced)
- 1 cup fresh oyster mushrooms (torn into bite-sized strips)
- 1 1/2 cups napa cabbage (chopped)
- 1/2 cup fresh water (strictly measured)
- 2 tbsp fresh lime juice
- 1 tsp granulated sugar
- 1 small fresh Thai bird's eye chile (thinly sliced; optional)
- 1/4 cup fresh cilantro (chopped)

Technique:

1. Heat oil in a wide skillet or wok over medium heat. Add bruised lemongrass, torn lime leaves, sliced galangal, sliced shallots, and optional chile; stir-fry 3 minutes until deeply aromatic without browning.
2. Add torn oyster mushrooms, napa cabbage, and exactly 1/2 cup water. Cover and steam 4 minutes until vegetables are just tender.
3. Add raw shrimp to the skillet, spread in a single layer, cover, and cook 3–5 minutes, turning once, until shrimp turn pink, pearly white, and completely opaque.
4. Remove skillet from heat. Stir in fresh lime juice and sugar, tossing to coat. Do not add fish sauce or salt.
5. Discard tough lemongrass and galangal pieces. Divide shrimp, mushrooms, cabbage,

Chef Swaps & Safety Flags: Contains crustacean shellfish (allergen). Cod or haddock fillet chunks may replace shrimp—cook to 145°F (63°C). Fresh ginger may substitute for galangal if galangal is unavailable. Fluid volume is only ~2 tbsp per serving.

and concentrated pan juices evenly among four bowls; crown with fresh cilantro.

Ultra-Low Fluid Skillet **Makrut Lime & Galangal Zero Fish Sauce**

RECIPE CARD • MASTERCOOK CKD KITCHEN

COOKED LIME-CHILE FISH WITH RED ONION, CABBAGE & RICE

R12 / WT-1202 • PERUVIAN COASTAL HERITAGE • IMMUNOCOMPROMISED-SAFE FULLY-BAKED COD FLAKED WITH ICED RED ONION AND AJÍ LIMO

Makes 4 servings • 25 mins

Per serving (est): 78mg Na • 310mg K • 205mg P • 24g Protein • 25ml Fluid

Cultural Integrity & Technique: Peruvian ceviche relies on raw fish acid-denatured in citrus. For hemodialysis and CKD patients, clinical food safety standards (FoodSafety.gov) strongly caution against raw seafood. This respectful adaptation delivers the exhilarating flavor profile: cod is fully baked to 145°F, flaked warm, and tossed cold with ice-water-crisped red onions, fresh ají chile, cilantro, and lime juice over crunchy cabbage and rice.

Ingredients:

- 1 lb fresh cod or haddock fillets (divided into 4 portions)
- 1 tsp neutral cooking oil
- 1/2 cup fresh lime juice (freshly squeezed)
- 1/2 cup red onion (shaved paper-thin)
- 2 cups ice-cold water (for soaking onion; discard after use)
- 1 tbsp fresh ají limo or jalapeño (seeded and minced)
- 1/4 cup fresh cilantro (chopped)
- 2 cups green cabbage (shredded fine)
- 1/2 cup white rice (rinsed)
- 3/4 cup water (for rice)

Technique:

1. Heat oven to 400°F (204°C). Lightly brush fish with oil and bake 10–13 minutes until flesh is opaque and internal temperature reaches 145°F (63°C). Cool 5 minutes, then flake into large bite-sized chunks.
2. Submerge sliced red onion in ice-cold water for 10 minutes to crisp the cell walls and remove harsh raw sulfur pungency. Drain thoroughly.
3. Cook rice with 3/4 cup water covered on low for 15 minutes; remove from heat and rest covered 10 minutes.
4. In a chilled glass bowl, gently toss the flaked cooked fish, crisp drained red onion, minced ají chile, chopped cilantro, and fresh lime juice. Chill in refrigerator 5 minutes to marry flavors.
5. Arrange shredded cabbage and steamed rice on plates, spoon the chilled lime-chile fish and onion over top, and drizzle with the tart

Chef Swaps & Safety Flags: Contains fish (allergen). Tilapia, pollock, or sea bass can substitute for cod. Minced jalapeño provides accessible heat if authentic Peruvian ají limo is unavailable. Fully cooked seafood satisfies clinical immunocompromised standards.

marinade. Serve immediately.

Safe Cooked Ceviche Profile **Ice-Crisped Red Onion** **Under 80mg Sodium**

RECIPE CARD • MASTERCOOK CKD KITCHEN

CHAPTER 8

Sauces, Dips & Dressings

"A sauce is the crowning glory of a well-prepared dish. — Escoffier"

Nacho Cheese, Ranch, Cocktail Sauce, Non-Medicated Confectionery, Citrus Typhoon Hot Sauce

FRESH BLENDER MARINARA (From Scratch — No Cans)

First commercially grown in Aztec Mexico ~700 AD. The Italians didn't get tomatoes until the 1500s and were afraid to eat them for 200 years.

Ingredient	Amount	CKD Notes
Vine tomatoes	2 lbs (~6 medium), quartered	Fresh, not canned — lower Na, brighter flavor
Onion	1 medium, rough chopped	
Garlic	6 cloves, smashed	More garlic = more flavor without salt
Fresh basil	1/2 cup packed	Add half during cook, half at the end (raw finish)
Olive oil	3 tbsp	
Sugar	1 tsp	Balances tomato acidity
Dried oregano	1 tsp	
Red pepper flakes	1/4 tsp	
Black pepper	1/2 tsp	
Salt	1/4 tsp	
Splash of red wine (optional)	2 tbsp	Cooks off. Deepens everything.

Method: 1. Quarter tomatoes. Leave seeds and juice — that's the sauce. 2. Heat olive oil in deep skillet or Dutch oven. Sauté onion 4 min until soft. 3. Add garlic 1 min. Add red pepper flakes. 4. Add all the quartered tomatoes + juice. Smash them with a wooden spoon as they cook. 5. Add oregano, sugar, pepper, salt, wine if using, half the basil. 6. Simmer uncovered 20-25 min, stirring occasionally, until tomatoes break down completely. 7. Hit it with an immersion blender — pulse to your preferred texture (chunky or smooth). 8. Taste. Adjust salt/sugar/pepper. Add remaining fresh basil (raw). 9. Use immediately or cool and jar. Keeps 5 days refrigerated, freezes 3 months.

Vine tomatoes vs Roma: Vine tomatoes have more juice and seeds = saucier, brighter, more acidic. Romas are meatier, less juice = thicker, sweeter. Both work. Vine is what you have.

Per 1/2 cup: ~40mg Na | ~25mg P | ~250mg K

Stadium Nacho Cheese Sauce

Store-bought Tostitos queso: ~430mg Na per 1/4 cup. This: ~90mg Na.

Ingredient	Amount	CKD Notes
Cream cheese	4 oz (half block), softened	Lower P than Velveeta/American cheese
Unsweetened almond milk	1/4 cup	Lower P than dairy milk
Shredded cheddar	1/4 cup	Small amount for flavor — cheddar is higher P
Paprika	1/2 tsp	
Garlic powder	1/4 tsp	
Onion powder	1/4 tsp	
Cumin	1/4 tsp	
Cayenne	Pinch	
Turmeric	Pinch	For yellow color
Salt	1/8 tsp	

Method: 1. Microwave cream cheese 20 sec to soften 2. Add milk, whisk smooth 3. Add cheddar, microwave 20 sec, stir until melted 4. Add all spices, stir 5. Adjust thickness: more milk = thinner, more cream cheese = thicker

Per 2 tbsp: ~45mg Na, ~40mg P, ~35mg K

Jalapeño version: Add 1 tbsp pickled jalapeño, minced **Queso fundido:** Add 1 tbsp cooked ground turkey + diced onion

House Ranch Dressing

Store-bought Hidden Valley: ~260mg Na per 2 tbsp. This: ~55mg Na.

Ingredient	Amount	CKD Notes
Avocado oil mayo (Primal Kitchen)	1/2 cup	Base — low K/P
Chobani Zero Sugar Vanilla Yogurt	1/4 cup	Tanginess without buttermilk's P
Unsweetened almond milk	2 tbsp	Lower P than dairy milk
Garlic powder	1/2 tsp	
Onion powder	1/2 tsp	
Dried dill	1/2 tsp	
Dried chives	1/2 tsp	
Dried parsley	1/2 tsp	
Black pepper	1/4 tsp	
Lemon juice	1 tsp	Brightens everything
Salt	1/8 tsp	

Method: Whisk everything together. Refrigerate 30 min for flavors to meld. Keeps 1 week.

Per 2 tbsp: ~55mg Na, ~15mg P, ~25mg K

Spicy ranch: Add 1/2 tsp cayenne + 1 tsp sriracha **Bacon ranch:** Add 1 tbsp real bacon bits (moderate Na — small amount) **Avocado ranch:** Add 1/4 avocado, mashed smooth

Bright Cocktail Sauce

Store-bought Heinz: ~310mg Na per 1/4 cup. This: ~45mg Na.

Ingredient	Amount	CKD Notes
No-salt-added tomato paste	2 tbsp	Concentrated — less volume = less K
Water	2 tbsp	Dilute the paste
Prepared horseradish	1 tbsp	The BURN — low K/P/Na
Lemon juice	1 tbsp	Fresh squeezed
Worcestershire sauce	1/2 tsp	Small amount = controlled Na
Hot sauce (your homemade)	1/2 tsp	
Sugar	1/2 tsp	Balances acid
Salt	Pinch	

Method: Mix all. Chill 15 min. Serve with shrimp, fish, or on anything.

Per 2 tbsp: ~22mg Na, ~15mg P, ~80mg K

Extra spicy: Add more horseradish + 1/4 tsp cayenne **Bloody Mary base:** Thin with more tomato + water, add celery salt + Worcestershire

Thousand Island Special Sauce

The In-N-Out / Big Mac sauce dupe

Ingredient	Amount
Avocado oil mayo (Primal Kitchen)	1/4 cup
No-salt ketchup (or tomato paste + sugar + vinegar)	1 tbsp
Sweet pickle relish	1 tbsp
Onion powder	1/4 tsp
Lemon juice	1/2 tsp
Sugar	1/2 tsp
White vinegar	1/2 tsp
Paprika	Pinch

Mix. Chill. Spread on burgers, use as dip. Per 2 tbsp: ~50mg Na, ~10mg P.

Golden Honey Mustard

Ingredient	Amount
Honey	2 tbsp
Yellow mustard	1 tbsp
Avocado oil mayo (Primal Kitchen)	1 tbsp
Lemon juice	1 tsp
Garlic powder	Pinch

Mix. Done. Per 2 tbsp: ~70mg Na, ~8mg P. Put on chicken, dip nuggets, drizzle on salads.

SALADS

Garden Salad

The foundation. Everything else is a remix.

Ingredient	Amount	CKD Notes
Romaine lettuce	4 cups, chopped	Low K base
Cucumber	1/2, sliced	Low K
Cherry tomatoes	6, halved	Moderate K — small amount is fine
Red onion	2 tbsp, thinly sliced	
Shredded carrots	2 tbsp	
Croutons (sourdough, homemade)	1/4 cup	Cube sourdough, toss in olive oil + garlic powder, bake 375F 10 min
OG Italian dressing (below)	2 tbsp	

Caesar Salad

Invented 1924 by Caesar Cardini in Tijuana, Mexico. Not Rome. An Italian immigrant in Mexico made the most famous American salad. The decoder sees it.

Ingredient	Amount	CKD Notes
Romaine hearts	2, chopped	
Sourdough croutons	1/2 cup	Homemade — recipe above
Shaved fresh mozzarella	2 tbsp	Sub for parmesan — Andrew's preference
Lemon juice	2 tbsp	
Olive oil	3 tbsp	
Garlic	2 cloves, minced	
Dijon mustard	1 tsp	Anchovy sub — same umami
Worcestershire sauce	1 tsp	
Black pepper	1/2 tsp (generous)	
Egg yolk	1 (optional — emulsifies the dressing)	

Dressing method: Whisk garlic + lemon + mustard + Worcestershire + pepper. Slowly drizzle olive oil while whisking to emulsify. Toss with romaine + croutons. Top with shaved mozzarella.

Per serving: ~90mg Na | ~55mg P | ~220mg K

San Sai Spicy Linguine Salad (Portland NW 21st Ave Clone)

San Sai Japanese Grill — 539 NW 21st Ave, Portland. Cold spicy noodle salad that hits different.

Ingredient	Amount	CKD Notes
Linguine	8 oz, cooked, rinsed cold	GF rice noodles work too
Cucumber	1/2, julienned	
Carrots	1 medium, julienned	
Red bell pepper	1/2, thinly sliced	
Red onion	1/4, thinly sliced	
Fresh cilantro	1/4 cup, chopped	
Sesame seeds	1 tbsp	

Spicy Dressing:

Ingredient	Amount
Rice vinegar	3 tbsp
Sesame oil	2 tbsp
Avocado oil	2 tbsp
Low-sodium soy sauce	1 tbsp
Sriracha	1-2 tsp (to taste)
Honey	1 tbsp
Garlic	2 cloves, minced
Ginger	1 tsp, grated
Lime juice	1 tbsp

Method: Cook linguine, drain, rinse under cold water until fully chilled. Whisk all dressing ingredients. Toss cold noodles with vegetables + dressing. Top with cilantro + sesame seeds. Serve cold. Better the next day — the dressing soaks in.

Per serving (4 servings): ~180mg Na | ~65mg P | ~210mg K

Fruit Salad

No recipe needed. Just a list of what's CKD-aware.

CKD-Aware Fruits (Low K)	Skip These (High K)
Strawberries	Banana
Blueberries	Mango (large amounts)
Raspberries	Kiwi
Green grapes (Andrew's fav)	Orange
Wild Twist apples	Papaya
Pineapple (small amount)	Coconut water
Watermelon (small amount)	Dried fruit of any kind
Peaches (fresh)	
Pears (fresh)	

Method: Cut whatever's in season. Squeeze lime juice over everything (prevents browning + adds brightness). Drizzle honey if you want sweet. Toss. Eat cold. Add Chobani Zero Sugar Vanilla yogurt on top if Vespa's around.

Ambrosia Salad

Originally a Southern church potluck staple, 1890s. Named after the food of the Greek gods. The gods would have approved.

Ingredient	Amount	CKD Notes
Whipped topping (Cool Whip)	1 cup	Or coconut whipped cream

Ingredient	Amount	CKD Notes
Sour cream	1/2 cup	
Mandarin oranges, drained	1 can (11 oz)	Drain well — canned = controlled K
Pineapple tidbits, drained	1 can (8 oz)	Drain well
Shredded coconut	1/2 cup	
Mini marshmallows	1 cup	Marshmallow = pure sugar + gelatin = CKD-aware
Maraschino cherries	6, halved	The red jewels

Method: Fold sour cream into whipped topping. Gently fold in ALL drained fruit + coconut + marshmallows + cherries. Refrigerate minimum 2 hours (overnight better — marshmallows absorb and get chewy). Serve cold. Bring in a Pyrex dish. Cover with tin foil. Susan's spirit is in the tin foil.

Per serving (6 servings): ~30mg Na | ~35mg P | ~140mg K

Olive Garden Italian Dressing Dupe

The OG dressing. Sweet, tangy, herby. This is the one.

Ingredient	Amount	CKD Notes
Extra virgin olive oil	1/3 cup	Good fat
White wine vinegar	3 tbsp	Or white vinegar
Water	1 tbsp	Thins slightly
Sugar	2 tsp	The SECRET — OG dressing is sweeter than you'd think
Garlic, minced very fine	1 clove	
Dried oregano	1/2 tsp	
Dried basil	1/4 tsp	
Dried parsley	1/4 tsp	
Red pepper flakes	Pinch	
Black pepper	1/4 tsp	
Onion powder	1/4 tsp	
Italian seasoning blend	1/2 tsp	If you have it — shortcut
Lemon juice	1 tsp	Brightness
Salt	1/8 tsp	
Mayonnaise (avocado oil)	1 tbsp	The emulsifier that makes it creamy, not separated

Method: Whisk oil + vinegar + water + mayo until emulsified. Add all seasonings + sugar + lemon. Shake in jar. Refrigerate 1 hour minimum (overnight is better — herbs hydrate). Shake before using.

Per 2 tbsp: ~35mg Na, ~5mg P, ~15mg K. The store bottle has ~260mg Na.

The Olive Garden Salad (full dupe):

Component	CKD Notes
Iceberg lettuce, chopped	Low everything
Red onion, thin slices	Small amount — low K
Cherry tomatoes, halved	3-4 per serving — controlled K
Pepperoncini peppers	2 per serving — low K, adds tang
Croutons (sourdough, homemade)	Cube sourdough, toss in olive oil + garlic powder + Italian seasoning, bake 375F 10 min
Sharp cheddar shavings	1 tbsp — Andrew prefers over parmesan
OG Italian dressing	Drizzle generously

Skip the black olives (Andrew only likes olives on pizza).

Caprese Garden Plate

Ingredient	Amount	CKD Notes
Fresh tomato (vine-ripe)	1 large, sliced 1/4"	Moderate K — one tomato per serving is acceptable
Fresh mozzarella ball	4 oz, sliced 1/4"	Mozzarella = LOWER phosphorus than cheddar or American
Fresh basil leaves	8-10 leaves	
Extra virgin olive oil	2 tbsp drizzle	
Balsamic glaze	1 tbsp drizzle	Balsamic reduction — sweeter, thicker than raw vinegar
Flaky sea salt	Pinch	Maldon if you want to be fancy
Black pepper	Crack	

Assembly: Alternate slices of tomato and mozzarella on plate. Tuck basil leaves between. Drizzle olive oil, then balsamic glaze. Pinch of salt, crack of pepper. Done in 3 minutes. Looks like a restaurant plate.

Per serving: ~180mg K, ~150mg P, ~80mg Na. The mozzarella is the P source — the stated serving still needs to be counted within your own phosphorus target.

Andrew's Greek Salad (No Olives)

Ingredient	Amount	CKD Notes
Romaine or iceberg, chopped	2 cups	Low everything
Cucumber	1/2, diced	Low K
Cherry tomatoes	4-5, halved	Controlled K
Red onion	2 tbsp thin slices	Low K
Pepperoncini	2-3	Tangy, low K
Fresh mozzarella balls (bocconcini)	4-5 small balls, halved	Andrew's preferred cheese — lowest P of all cheeses, soft, sweet
~~Kalamata olives~~	~~SKIP~~	Andrew: olives only on pizza

Greek Dressing:

Ingredient	Amount
Extra virgin olive oil	3 tbsp
Red wine vinegar	1.5 tbsp
Lemon juice	1 tbsp
Garlic	1 clove, minced fine
Dried oregano	1 tsp
Dijon mustard	1/2 tsp
Honey	1/2 tsp
Black pepper	1/4 tsp
Salt	Pinch

Whisk or shake in jar. Per 2 tbsp: ~25mg Na, ~5mg P.

MOM'S RADIATORE WHITE WINE VINEGAR PASTA SALAD (Clone)

Radiatore — "radiator-shaped" pasta, invented in Italy between the World Wars. The ruffled edges hold vinaigrette better than any other shape.

Ingredient	Amount	CKD Notes
Radiatore pasta (or rotini/fusilli if radiatore unavailable)	8 oz dry	Cook al dente, rinse in cold water to stop cooking
White wine vinegar	3 tbsp	The backbone — tangy, bright
Extra virgin olive oil	1/4 cup	
Sugar	1 tsp	Balances the vinegar bite — this is what makes it mom's version
Garlic powder	1/2 tsp	
Dried oregano	1/2 tsp	
Dried basil	1/4 tsp	
Black pepper	1/4 tsp	
Salt	1/4 tsp	Minimal
Cucumber	1/2, diced	Low K crunch
Bell pepper (any color)	1/2, diced	Color + crunch
Red onion	2 tbsp, finely diced	Small amount for bite

Ingredient	Amount	CKD Notes
Cherry tomatoes	6-8, halved	Controlled K
Fresh parsley	2 tbsp, chopped	
Sharp cheddar shavings	1 tbsp	Andrew prefers — less salty than parmesan

Method: 1. Cook radiatore al dente per package. Drain. Rinse with cold water. Drain well. 2. Whisk dressing: olive oil + white wine vinegar + sugar + garlic powder + oregano + basil + salt + pepper 3. Toss cooled pasta with dressing 4. Add cucumber, bell pepper, red onion, tomatoes, parsley 5. Toss gently. Refrigerate minimum 1 hour (overnight is best — the pasta absorbs the vinegar dressing) 6. Top with sharp cheddar shavings before serving. Taste — adjust vinegar/salt

Per serving (6 servings): ~65mg Na, ~80mg P, ~180mg K

The mom trick: The sugar in the dressing is what separates this from generic Italian pasta salad. It cuts the vinegar's sharpness and makes it addictive. Mom knew.

Variations: - **Add protein:** Diced grilled chicken turns this into a full meal - **Add pepperoncini:** 4-5 sliced, for that Olive Garden energy - **GF version:** Use GF radiatore or fusilli (Andrew has GF pasta in pantry)

CITRUS TYPHOON HOT SAUCE (Andrew's New Custom)

"Every citrus fruit on earth in one bottle. Then it burns."

Ingredient	Amount	Why This Citrus
Habanero peppers	6, stems removed	~300,000 SHU — the heat engine
Fresh orange juice	2 tbsp	Sweet citrus base
Fresh lemon juice	2 tbsp	Sharp acid
Fresh lime juice	2 tbsp	Bright, cutting
Orange zest	1 tsp	Oils = intense aroma
Lemon zest	1 tsp	
Lime zest	1 tsp	
Yuzu juice	1 tbsp (bottled, from H Mart/Amazon)	Japanese citrus — floral, complex, unlike anything else
Grapefruit juice	1 tbsp	Bitter-sweet depth
Calamansi juice	1 tbsp (if available — Filipino citrus)	Tart, fragrant, between lemon and tangerine
Starfruit	1/4 fruit, diced	Mild, waxy, adds body + tropical
Kumquat	2, whole (eat skin and all), chopped	Sweet skin + sour flesh = complexity
White vinegar	1/4 cup	Preservation + acid balance
Garlic	3 cloves	
Sugar	1 tbsp	Balances all that acid
Salt	1/4 tsp	
Turmeric	1/4 tsp	Golden color boost

Method: 1. Blend ALL ingredients except starfruit chunks 2. Simmer 15 min 3. Add diced starfruit in the last 2 min (keeps some texture) 4. Bottle hot

The experience: This sauce hits you with 8+ different citrus notes at different speeds — orange arrives first (sweet), then lemon (sharp), then lime (bright), then yuzu (floral), then grapefruit (bitter), then the habanero comes through everything like a tsunami. The starfruit chunks give you something to bite into. The golden color is stunning.

Citrus Typhoon Variations: - **Citrus Typhoon MILD:** Sub bell pepper for habanero — all the citrus, zero heat - **Citrus Typhoon BLOOD:** Use blood orange instead of regular orange — deep red-orange color - **Citrus Typhoon YUZU BOMB:** Double the yuzu, add wasabi — Japanese citrus storm

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Vorath Pepper Codex Labels: Sweet Heat Taco Sauce + Chili Paste

Use this for the bottle and the strained pulp jar from the Fresno-serrano-mirin blend. The sauce is the pourable signal; the paste is the concentrated engine.

Front Label: Vorath Sunset Taco Sauce

```
VORATH SUNSET TACO SAUCE
Sweet Heat Pepper Elixir

Fresno + Serrano + Mirin
Garlic / Cilantro / Avocado Oil
Mixed Vinegar Prism

Batch: VOR-000999-FR-SR-MR-CIL
Heat: 6/10 bright, sweet, fast
Use: tacos, eggs, rice bowls, wings, marinades
```

Back Label Copy

Flavor: sweet first, green-herbal second, vinegar sparkle third, serrano finish. Mirin rounds the pepper heat without turning it into candy. Fresno brings red fruit; serrano brings the clean green sting; cilantro keeps it alive.

Ingredients line: blended Fresno peppers, serrano peppers, garlic, mirin, avocado oil, cilantro, mixed vinegars, herbs, spices.

Art DNA / Vorath encoding: RED.FRESNO + GREEN.SERRANO + GOLD.MIRIN + WHITE.GARLIC + LEAF.CILANTRO + OIL.AVOCADO + ACID.PRISM + 000999.RETURN.

Storage: This is a refrigerator sauce unless pH is tested at 4.0 or lower and processed with a validated canning method. Because garlic and oil are present, do not store at room temperature. Refrigerate and use within 2 weeks, or freeze in cubes.

Companion Jar: Vorath Redshift Chili Paste

```
VORATH REDSHIFT CHILI PASTE
Strained Pepper Pulp Concentrate

Fresno / Serrano / Garlic / Cilantro
Mirin Sweet Heat + Vinegar Spark

Batch: VOR-PASTE-000999-RS
Heat: 7/10 concentrated
Use: taco meat, mayo, ramen, beans, wing glaze, rice
```

Paste method: After straining the sauce, scrape the pepper pulp into a clean jar. Stir in 1-2 tsp vinegar if it needs brightness, and 1 tsp avocado oil if it needs gloss. For a thicker chile crisp direction, simmer the pulp gently in 1-2 tbsp avocado oil for 3-5 minutes, then cool and refrigerate.

Fast uses: 1 tsp into sour cream for taco crema; 1 tsp into mayo for sandwich sauce; 1 tbsp into 1 lb taco meat; 1 tsp into ramen broth; 1 tbsp with honey for wing glaze.

Alternate Bottle Names

- **Mirin Comet Taco Sauce** - sweeter, brighter, friendlier label.
- **Fresno Prism Fire** - more hot-sauce shelf energy.
- **Serrano Sun Engine** - green heat emphasis.
- **Vorath 999 Pepper Nectar** - strongest lore-coded label.

NON-MEDICATED SPECIAL EFFECTS CONFECTIONERY - SAFETY REWRITE

Status: The prior fruit roll-up and sour gummy blocks in this location contained active-ingredient dosing concepts. They are held out of the public print lane.

Use instead: print `static/guides/ckd_special_effects_confectionery.html` or `CKD_Special_Effects_Confectionery_PRINT.pdf`. That guide contains non-medicated hard candy, apple-cranberry gummies, pectin sour squares, rock candy wands, marshmallow slabs, UV tonic micro-gems, fruit leather windows, and printable labels.

Old Lane	Replacement	Publication Rule
Medicated fruit roll-ups	Aurora Fruit Leather Windows	No THC, CBD, RSO, tincture, or dosing math.

Old Lane	Replacement	Publication Rule
CBD sour gummies	Cloud 9 Apple-Cranberry Gummies or Pectin Sour Signal Squares	Food-only color, sour dust, edible glitter, and portion labels.
Look-alike candy	Clearly labeled house shapes and batch labels	Do not imitate commercial kid candy for any controlled-product context.

RINGSIDE STEAKHOUSE FRESH HORSERADISH PREP (Portland Clone)

"Burnside & NW 12th. They bring it with the prime rib. Now you bring it at home."

Ingredient	Amount	CKD Notes
Fresh horseradish root	6 oz, peeled	Find at Fred Meyer produce or H Mart
White vinegar	2 tbsp	Stops the heat reaction — add LATER for more burn, SOONER for milder
Sugar	1 tsp	
Salt	1/4 tsp	

Method: 1. Peel horseradish root. Cut into 1" chunks. 2. Pulse in food processor until finely grated (open the lid AWAY from your face — the fumes are real) 3. **THE TIMING TRICK:** The longer you wait to add vinegar, the HOTTER it gets. For Ringside-level heat, wait 3 minutes after grinding. For milder, add immediately. 4. Add vinegar + sugar + salt. Pulse to combine. 5. Transfer to a small glass jar. Refrigerate. 6. Serve a small spoonful alongside prime rib, steak, or roast beef.

Shelf life: 3-4 weeks refrigerated. Heat fades over time — make fresh batches.

Creamy Horseradish Sauce (Ringside-style):

Ingredient	Amount
Prepared horseradish (above)	2 tbsp
Sour cream	1/4 cup
Dijon mustard	1/2 tsp
Lemon juice	1/2 tsp
Black pepper	Pinch

Mix. Chill 30 minutes. Serve with prime rib. The sour cream tames the burn into a slow, warm glow.

Per tbsp: ~15mg Na | ~8mg P | ~20mg K — horseradish is basically free. All flavor, no renal cost.

CKD Considerations

```
RENAL CHECK — Sauces & Dips
K (Potassium): LOW (cream cheese base, no-salt-added tomato,
controlled portions)
P (Phosphorus): LOW (cream cheese over processed cheese, mayo base for
dressings)
Na (Sodium): LOW (homemade = 70-90% less sodium than store-bought)
```

> *"A sauce is the crowning glory of a well-prepared dish." — Escoffier*

INTERNATIONAL SAUCES & CONDIMENTS

Cooling Raita

Served with every Indian meal since the Vedic period (~1500 BC). The word comes from Sanskrit "rajika" — mustard. The cooling effect offsets spicy food.

Ingredient	Amount	CKD Notes
Plain yogurt	1 cup	Moderate P — portion-controlled
Cucumber, grated + squeezed dry	1/2 cup	Low K
Cumin, toasted and ground	1/2 tsp	Toast whole seeds in dry pan first
Fresh mint, chopped	1 tbsp	
Fresh cilantro, chopped	1 tbsp	
Salt	1/8 tsp	
Cayenne	Pinch	

Method: Mix everything. Chill 30 min. Serve alongside biryani, kebabs, or any spicy dish. The yogurt cools. The cumin warms. The cucumber crunches.

Per 1/4 cup: ~30mg Na | ~40mg P | ~80mg K

Fresh Mint Chutney

The word "chutney" comes from Hindi "chatni" — to lick. First documented in the 1600s by European traders visiting Mughal courts.

Ingredient	Amount
Fresh mint leaves	1 cup packed
Fresh cilantro	1/2 cup packed
Green chili (serrano)	1, seeded
Onion	2 tbsp
Lime juice	2 tbsp
Sugar	1 tsp
Cumin	1/4 tsp
Water	2-3 tbsp
Salt	1/8 tsp

Method: Blend everything until smooth paste. Adjust water for consistency. Serve with samosas, kebabs, rice, naan.

Per 2 tbsp: ~15mg Na | ~5mg P | ~20mg K

Sweet-Sour Tamarind Chutney

Tamarind originated in tropical Africa, traveled to India via Arab traders ~400 BC, and became essential to Indian cuisine. The name comes from Arabic "tamar hindi" — Indian date.

Ingredient	Amount
Tamarind paste	2 tbsp
Water	1/2 cup
Brown sugar	3 tbsp
Cumin, ground	1/2 tsp
Ginger powder	1/4 tsp
Cayenne	1/4 tsp
Salt	1/8 tsp

Method: Combine all in saucepan. Simmer 10 min, stirring, until thick and glossy. Strain. Serve with samosas, chaat, or as a glaze for grilled meats. Sweet-sour-spicy in every drop.

Per 2 tbsp: ~20mg Na | ~5mg P | ~30mg K

Cucumber Tzatziki

Greek in origin, Turkish in DNA (cacik). First appeared in Ottoman cookbooks ~1500s. The key: draining the cucumber of ALL water or it becomes soup.

Ingredient	Amount	CKD Notes
Plain yogurt	1 cup	
Cucumber	1/2, grated + squeezed bone-dry	Squeeze in towel — get every drop out
Garlic	2 cloves, minced fine	
Lemon juice	1 tbsp	
Olive oil	1 tbsp	Drizzle on top
Fresh dill	1 tbsp, chopped	
Salt	1/8 tsp	

Method: Grate cucumber, squeeze in clean towel until no more water comes out (this step is 90% of a good tzatziki). Mix with yogurt + garlic + lemon + dill + salt. Drizzle olive oil on top. Chill 1 hour.

Per 1/4 cup: ~35mg Na | ~45mg P | ~85mg K

CHAPTER 9

Hot Sauces

“Measure your life in Scoville units.”

The Cosmic Horror Collection

10 Exotic Hot Sauces for the Brave & Curious

"These sauces were not meant for mortal tongues."

Recent Tropical Hot Sauce Batch

Tropical Serrano-Holland Fruit Sauce

Garlic, onion, apple cider vinegar, serrano, Holland pepper, jalapeno, sweet pepper, strawberry, red kiwi, pineapple, and mango. A bright recent batch with savory allium underneath tropical fruit and clean pepper heat.

Ingredient	Suggested Repeat Batch Amount
Garlic	4 to 6 cloves
Onion	1/2 medium
Apple cider vinegar	1/2 to 3/4 cup, plus more to thin
Serrano pepper	4 to 6
Holland pepper	1 large red or yellow pepper
Jalapeno	2 to 3
Sweet pepper	1 medium
Strawberry	1 cup, hulled
Red kiwi	2, peeled
Pineapple	1 cup, chopped
Mango	1 cup, chopped

Wash produce well. Stem the peppers, peel the onion and garlic, and trim the fruit. Rough-chop everything, then blend with apple cider vinegar until pourable. Simmer 8 to 10 minutes, stirring often, until the raw onion and garlic edge softens and the sauce tightens slightly. Strain for a smoother bottle sauce if desired. Cool, bottle, label, and refrigerate.

Storage lane: refrigerated or frozen fresh sauce unless a tested process validates this exact recipe. Do not treat this as shelf-stable or canning-safe by default. Record exact gram weights and pH on the next repeat batch.

VORATH Wild Sauce Lab

12 Experimental Hot Sauce and Taco Sauce Formulas

Test-kitchen expansion for the VORATH / Emoji Soup sauce system. These formulas are intentionally vivid, dense, and product-minded, but they remain internal lab recipes until pH, thermal process, allergen, label, and process-authority reviews are complete.

Lab safety lane: Wear gloves and ventilate when cutting or blending hot peppers. For fermented versions, use non-iodized salt and keep solids below brine or mash liquid. For lab bottles, target finished pH 4.0 or below with a calibrated meter. Refrigerate all test bottles unless a validated shelf-stable process is documented.

Reference packet: The VORATH Wild Sauce Lab packet and experiment matrix remain in private editorial review and are not part of this public edition.

Code	Formula	Style	Heat	Use
VOR-X101	Prickly Pear Morita Star Taco Sauce	Cooked acidified taco sauce	Medium-hot	fish tacos, breakfast burritos, grilled shrimp, roasted squash
VOR-X102	Black Comet Coffee-Cacao Mole Drip	Cooked dark taco glaze	Medium	barbacoa tacos, black beans, roasted mushrooms, chili, charred onions
VOR-X103	Honeydew Green Signal Ferment	2.5 percent mash ferment	Medium-hot	al pastor tacos, ceviche, grilled chicken, cucumber salad, grain bowls
VOR-X104	Hibiscus Blood Moon Arbol Taco Sauce	Cooked acidified floral red sauce	Hot	crispy potato tacos, carnitas, roasted carrots, queso fundido
VOR-X105	Pineapple Hoja Santa Habanero Reactor	Fermented then cooked tropical sauce	Very hot	pork tacos, fried chicken, grilled pineapple, fish, rice bowls
VOR-X106	Blueberry Blacklime Habanero Phantom	Fermented berry sauce	Very hot	duck tacos, lamb, mushroom tacos, goat cheese, roasted sweet potato
VOR-X107	Tamarind Sesame Serrano Static	Cooked acidified global taco sauce	Hot	birria tacos, wings, grilled tofu, noodles, charred cabbage
VOR-X108	Roasted Corn Cascabel Gold	Cooked taco table sauce	Mild-medium	street corn tacos, chicken, grilled zucchini, breakfast eggs, quesadillas
VOR-X109	Mango Aji Amarillo Solar Flare	Cooked fruit hot sauce	Hot	fish tacos, chicken, fries, coconut rice, fried plantains
VOR-X110	Beet Pomegranate Pasilla Night Market	Cooked acidified dark red sauce	Medium	lamb tacos, roasted cauliflower, falafel tacos, duck, charred eggplant
VOR-X111	Yuzu-Lime Serrano Papalo Switchblade	Fresh-cooked green taco sauce	Medium-hot	fish tacos, cucumber salad, grilled steak, breakfast tacos
VOR-X112	Maple Miso Morita Redline	Cooked umami hot sauce	Medium-hot	short rib tacos, tofu, roasted carrots, burgers, black bean bowls

VOR-X101 - Prickly Pear Morita Star Taco Sauce

Build a wild pink taco sauce with fruit body, smoky morita, and clean arbol heat.

Style: Cooked acidified taco sauce **Heat:** Medium-hot **Target yield:** about 520 g / 18 oz

Visual: electric magenta-red, glossy, slightly thick

Best uses: fish tacos, breakfast burritos, grilled shrimp, roasted squash

Ingredient	Test Batch Grams	Purpose
prickly pear pulp, strained	180 g	fruit body and color
tomato puree	160 g	classic taco-sauce base
roasted tomatillo	80 g	green acidity
apple cider vinegar, 5 percent	90 g	acid
lime juice	25 g	bright finish
dried morita chile, toasted and soaked	10 g	smoky fruit
dried chile de arbol, toasted	3 g	direct heat
red onion, roasted	35 g	savory sweetness
garlic, roasted	12 g	depth
cilantro stems	8 g	green snap
ground cumin	2 g	taco backbone
Mexican oregano	1 g	dry herb lift
fine salt	6 g	seasoning

Method:

1. Toast dried chiles until fragrant, then soak in hot water for 15 minutes and drain.
2. Blend everything until fully smooth, then simmer 8 to 10 minutes to thicken.
3. Cool a spoonful and check pH. Target 4.0 or below for lab bottling.
4. Adjust with lime, vinegar, salt, or a small pinch of sugar only after the first pH check.

Control note: Keep refrigerated unless a calibrated meter confirms finished pH and a proper hot-fill/canning process is used.

VOR-X102 - Black Comet Coffee-Cacao Mole Drip

Make a taco sauce that eats like mole, barbecue, espresso, and cosmic diner gravy.

Style: Cooked dark taco glaze **Heat:** Medium **Target yield:** about 560 g / 20 oz

Visual: near-black mahogany with a satin sheen

Best uses: barbacoa tacos, black beans, roasted mushrooms, chili, charred onions

Ingredient	Test Batch Grams	Purpose
tomato puree	190 g	base
strong cold brew coffee	90 g	bitter roast
apple cider vinegar, 5 percent	95 g	acid
tamarind concentrate	45 g	sour fruit
golden raisins	40 g	round sweetness
dried ancho chile, toasted and soaked	20 g	raisin/chocolate
dried pasilla chile, toasted and soaked	15 g	dark fruit
dried morita chile, toasted and soaked	8 g	smoke
onion, roasted	60 g	body
garlic, roasted	16 g	savory base
cacao nibs, steeped and strained	8 g	bitter chocolate
honey	25 g	glaze
ground cumin	2 g	taco backbone
cinnamon	0.6 g	warm top note
fine salt	7 g	seasoning

Method:

1. Steep cacao nibs in hot coffee for 10 minutes, then strain.
2. Blend coffee, chiles, tomato, tamarind, raisins, aromatics, and spices until smooth.
3. Simmer 12 to 15 minutes, stirring often, until it coats a spoon.
4. Check pH after cooling a sample. Add vinegar in 10 g increments if above target.

Control note: Dark sweet sauces hide acidity. Do not judge safety by taste; measure pH.

VOR-X103 - Honeydew Green Signal Ferment

Turn cooling melon into a fermented green taco sauce with serrano bite and herbal lift.

Style: 2.5 percent mash ferment **Heat:** Medium-hot **Target yield:** about 500 g / 17 oz after blending

Visual: deep green, bright but slightly opaque

Best uses: al pastor tacos, ceviche, grilled chicken, cucumber salad, grain bowls

Ingredient	Test Batch Grams	Purpose
honeydew melon, ripe	260 g	cool sweetness
poblano, chopped	130 g	green body
jalapeno, chopped	90 g	grassy heat
serrano, chopped	45 g	sharp heat
green habanero, optional	10 g	upper heat
white onion	55 g	ferment support
garlic	14 g	savory
cilantro stems	12 g	green aroma
non-iodized salt	15 g	2.5 percent of 606 g mash
white vinegar, post-ferment	75 g	acid finish
lime juice, post-ferment	25 g	brightness

Method:

1. Pulse melon, peppers, onion, garlic, cilantro stems, and salt into a coarse mash.
2. Pack under a weight with minimal headspace. Ferment 7 to 14 days at cool room temperature.
3. When sour and active fermentation slows, blend with vinegar and lime juice.
4. Check pH. Target 4.0 or below; keep refrigerated during lab testing.

Control note: Keep solids below brine. Discard if mold appears or aroma turns rotten instead of sour.

VOR-X104 - Hibiscus Blood Moon Arbol Taco Sauce

Use hibiscus as sour floral acid against guajillo body and arbol fire.

Style: Cooked acidified floral red sauce **Heat:** Hot **Target yield:** about 540 g / 19 oz

Visual: dark ruby, translucent edges

Best uses: crispy potato tacos, carnitas, roasted carrots, queso fundido

Ingredient	Test Batch Grams	Purpose
strong hibiscus tea, unsweetened	130 g	floral tartness
tomato puree	170 g	red base
white vinegar, 5 percent	90 g	acid
orange juice	50 g	citrus sweetness
dried guajillo chile, toasted and soaked	25 g	berry body
dried chile de arbol, toasted	5 g	heat
red onion, roasted	45 g	savory
garlic	12 g	depth
agave	28 g	round sweetness
ground cumin	2 g	taco backbone
Mexican oregano	1.2 g	herb
black pepper	0.8 g	bite
fine salt	6 g	seasoning

Method:

1. Make a strong hibiscus tea and cool it before blending.
2. Blend all ingredients until smooth, then simmer 10 minutes.
3. Taste for bitter edges. Balance with tiny additions of agave or orange juice.
4. Check pH after cooling a sample; add vinegar if needed.

Control note: Hibiscus can stain. Use nonreactive cookware and glass storage.

VOR-X105 - Pineapple Hoja Santa Habanero Reactor

Pair habanero fruit heat with pineapple acid and hoja santa's root-beer herb signal.

Style: Fermented then cooked tropical sauce **Heat:** Very hot **Target yield:** about 520 g / 18 oz

Visual: orange-gold with green herbal shadow

Best uses: pork tacos, fried chicken, grilled pineapple, fish, rice bowls

Ingredient	Test Batch Grams	Purpose
pineapple, diced	240 g	sugar and acid
orange bell pepper	210 g	body
habanero, stemmed	60 g	fruit heat
white onion	65 g	ferment support
garlic	18 g	savory
non-iodized salt	15 g	about 2.5 percent mash salt
apple cider vinegar, post-ferment	90 g	acid
honey, post-ferment	22 g	roundness
fresh hoja santa, infused then removed	1 g	herb experiment
lime juice, post-ferment	20 g	finish

Method:

1. Ferment pineapple, pepper, habanero, onion, garlic, and salt as a mash for 5 to 10 days.
2. Blend with vinegar, honey, and lime juice.
3. Warm gently with one small hoja santa leaf for 3 minutes, then remove and blend again.

4. Simmer 5 minutes to stop fermentation and set sweetness. Check pH.

Control note: Use a light hand with hoja santa. If unavailable, omit; do not substitute random avocado leaves.

VOR-X106 - Blueberry Blacklime Habanero Phantom

Build a fruit-forward sauce that turns habanero into dark berry, smoke, and sour citrus.

Style: Fermented berry sauce **Heat:** Very hot **Target yield:** about 500 g / 17 oz

Visual: purple-black, smooth, high gloss

Best uses: duck tacos, lamb, mushroom tacos, goat cheese, roasted sweet potato

Ingredient	Test Batch Grams	Purpose
blueberries	220 g	fruit and pectin
blackberries	150 g	color and tannin
habanero	55 g	heat
red Fresno pepper	100 g	red pepper body
red onion	45 g	ferment support
garlic	14 g	savory
non-iodized salt	15 g	about 2.5 percent mash salt
white vinegar, post-ferment	85 g	acid
black lime powder	1.2 g	sour bass note
thyme leaves	1 g	herbal echo
maple syrup, optional	18 g	rounding

Method:

1. Ferment berries, peppers, onion, garlic, and salt as a mash for 7 to 14 days.
2. Blend with vinegar, black lime, thyme, and optional maple.
3. Strain for a polished label-ready texture or leave pulpy for a kitchen sauce.
4. Check pH and refrigerate.

Control note: Berry ferments can be active. Use an airlock or burp daily.

VOR-X107 - Tamarind Sesame Serrano Static

Make a sour tamarind hot sauce with sesame nuttiness and serrano voltage.

Style: Cooked acidified global taco sauce **Heat:** Hot **Target yield:** about 560 g / 20 oz

Visual: brick amber, tiny sesame speckle

Best uses: birria tacos, wings, grilled tofu, noodles, charred cabbage

Ingredient	Test Batch Grams	Purpose
tamarind concentrate	90 g	sour base
tomato puree	130 g	body
rice vinegar, 5 percent	105 g	acid
red Fresno pepper	210 g	red pepper body
serrano	70 g	green heat
garlic	20 g	savory
ginger	14 g	lift
toasted sesame paste	28 g	nutty body
agave	35 g	sweetness
ground cumin	1.6 g	taco bridge
coriander seed, ground	1.2 g	citrus spice
fine salt	7 g	seasoning

Method:

1. Blend all ingredients until smooth.
2. Simmer gently 8 minutes, stirring so sesame does not scorch.
3. Adjust with vinegar, agave, or salt after the first taste.
4. Check pH. Label sesame allergen during any tasting.

Control note: Contains sesame. Keep separate from allergen-free sauce trials.

VOR-X108 - Roasted Corn Cascabel Gold

Push taco sauce toward roasted corn, nutty cascabel, and mild smoke.

Style: Cooked taco table sauce **Heat:** Mild-medium **Target yield:** about 600 g / 21 oz

Visual: golden orange, rustic smooth

Best uses: street corn tacos, chicken, grilled zucchini, breakfast eggs, quesadillas

Ingredient	Test Batch Grams	Purpose
roasted corn kernels	160 g	sweet smoke
tomato puree	170 g	base
roasted yellow bell pepper	140 g	body
white vinegar, 5 percent	100 g	acid
lime juice	25 g	finish
dried cascabel chile, toasted and soaked	18 g	nutty fruit
dried guajillo chile, toasted and soaked	12 g	red body
white onion, roasted	55 g	savory
garlic, roasted	14 g	depth
epazote, finely chopped	2 g	floral herb accent
smoked paprika	1.4 g	smoke
ground cumin	2 g	taco backbone
fine salt	7 g	seasoning

Method:

1. Roast corn, pepper, onion, and garlic until browned at the edges.
2. Toast and soak chiles, then blend everything very smooth.
3. Simmer 10 minutes. Add epazote near the end to avoid over-extraction.
4. Check pH and adjust with vinegar or lime.

Control note: Epazote is assertive. Keep the first test low and increase only in 0.5 g steps.

VOR-X109 - Mango Aji Amarillo Solar Flare

Make a bright tropical sauce with mango, carrot, ginger, and aji-style chile body.

Style: Cooked fruit hot sauce **Heat:** Hot **Target yield:** about 560 g / 20 oz

Visual: neon yellow-orange

Best uses: fish tacos, chicken, fries, coconut rice, fried plantains

Ingredient	Test Batch Grams	Purpose
mango	230 g	fruit
carrot, cooked	100 g	body and sweetness
yellow bell pepper	140 g	color
aji amarillo paste	55 g	chile fruit
habanero	18 g	top heat
white vinegar, 5 percent	95 g	acid
lime juice	35 g	brightness
garlic	14 g	savory
ginger	10 g	heat lift
turmeric	1.5 g	color and earth
honey	24 g	round sweetness
fine salt	7 g	seasoning

Method:

1. Cook carrot until tender, then blend with remaining ingredients.
2. Simmer 8 to 12 minutes until the raw pepper edge softens.
3. Adjust sweetness only after acid and salt are balanced.
4. Check pH and refrigerate.

Control note: Turmeric stains intensely. Use dedicated tasting spoons and towels.

VOR-X110 - Beet Pomegranate Pasilla Night Market

Make an earthy dark-fruit sauce with beet, pomegranate, pasilla, and cumin.

Style: Cooked acidified dark red sauce **Heat:** Medium **Target yield:** about 540 g / 19 oz

Visual: black cherry red, smooth

Best uses: lamb tacos, roasted cauliflower, falafel tacos, duck, charred eggplant

Ingredient	Test Batch Grams	Purpose
roasted beet	170 g	earth and color
tomato puree	120 g	base
pomegranate molasses	55 g	sour fruit
red wine vinegar, 5 percent	110 g	acid
dried pasilla chile, toasted and soaked	28 g	dark fruit
dried ancho chile, toasted and soaked	18 g	raisin body
garlic, roasted	16 g	depth
red onion, roasted	55 g	savory sweetness
ground cumin	2 g	taco bridge
coriander seed, ground	1.2 g	citrus spice
black pepper	0.8 g	bite
fine salt	7 g	seasoning

Method:

1. Blend roasted beet, soaked chiles, acids, tomato, aromatics, and spices.
2. Simmer 10 minutes until glossy.
3. Thin with small additions of water or vinegar depending on pH.
4. Check pH and record final color because beet shifts over time.

Control note: Beet sweetness can dull heat. Taste again after chilling overnight.

VOR-X111 - Yuzu-Lime Serrano Papalo Switchblade

Make a blade-clean green sauce with citrus, serrano, papalo, and cucumber snap.

Style: Fresh-cooked green taco sauce **Heat:** Medium-hot **Target yield:** about 500 g / 17 oz

Visual: sharp green, pourable

Best uses: fish tacos, cucumber salad, grilled steak, breakfast tacos

Ingredient	Test Batch Grams	Purpose
tomatillo, roasted	220 g	green body
cucumber, peeled	80 g	freshness
serrano	65 g	sharp heat
jalapeno	55 g	green body
white vinegar, 5 percent	85 g	acid
lime juice	45 g	citrus
yuzu juice or more lime	20 g	aromatic citrus
white onion	40 g	savory
garlic	10 g	depth
papalo leaves	4 g	green herb
cilantro	14 g	fresh herb
fine salt	6 g	seasoning

Method:

1. Roast tomatillos, onion, and garlic until lightly charred.
2. Blend with peppers, cucumber, acids, herbs, and salt.
3. Simmer only 3 minutes to keep the green flavor alive, then chill quickly.
4. Check pH and adjust with lime or vinegar.

Control note: Fresh herb sauces fade. Evaluate color at 0, 24, and 72 hours.

VOR-X112 - Maple Miso Morita Redline

Cross taco sauce, smoky chile, maple, and miso into a savory-sweet red sauce.

Style: Cooked umami hot sauce **Heat:** Medium-hot **Target yield:** about 560 g / 20 oz

Visual: deep red-brown, lacquered

Best uses: short rib tacos, tofu, roasted carrots, burgers, black bean bowls

Ingredient	Test Batch Grams	Purpose
tomato puree	210 g	base
apple cider vinegar, 5 percent	105 g	acid
dried morita chile, toasted and soaked	22 g	smoke
dried guajillo chile, toasted and soaked	18 g	berry body
white miso	42 g	umami and salt
maple syrup	45 g	sweetness
onion, roasted	60 g	savory
garlic, roasted	16 g	depth
lime juice	25 g	finish
ground cumin	1.6 g	taco bridge
smoked paprika	1 g	smoke support
fine salt	2 g	only if needed

Method:

1. Blend everything except optional salt until fully smooth.
2. Simmer gently 8 minutes; do not scorch the miso-maple base.
3. Taste before salting because miso contributes salt.
4. Check pH after cooling a sample. Add vinegar or lime if needed.

Control note: Contains soy if using standard miso. Mark allergen during tastings.

Tier 1: THE OUTER GODS

AZATHOTH

Bhut Jolokia + Szechuan peppercorn + black garlic. Numb, burn, numb, repeat.

Ingredient	Amount
Bhut Jolokia (Ghost Pepper)	4, rehydrated
Szechuan peppercorn	1 tbsp, toasted and ground
Black garlic	6 cloves
Rice vinegar	1/3 cup
Honey	1 tbsp
Ginger	1" piece
Salt	1/4 tsp

Blend all ingredients until smooth. Simmer 10 minutes, stirring. Strain if desired. Bottle hot. **~1,000,000 SHU**

NYARLATHOTEP

Carolina Reaper + ube + coconut. Purple, creamy, then the Reaper hits.

Ingredient	Amount
Carolina Reaper	3, deseeded
Ube (purple yam) powder	2 tbsp
Coconut cream	3 tbsp
Lime juice	2 tbsp
Rice vinegar	1/4 cup
Ginger	1" piece
Sugar	1 tsp

Blend all ingredients until smooth. Simmer 10 minutes, stirring. Strain if desired. Bottle hot. **~1,500,000 SHU**

SHUB-NIGGURATH

Scorpion pepper + tamarind + fish sauce + palm sugar. Southeast Asian darkness.

Ingredient	Amount
Trinidad Scorpion	4
Tamarind paste	2 tbsp
Fish sauce (or low-sodium soy + lime)	1 tsp
Palm sugar or brown sugar	1 tbsp
Lemongrass	1 stalk, minced

Ingredient	Amount
Galangal or ginger	1" piece
Lime leaf	2, chiffonade
Rice vinegar	1/4 cup

Blend all ingredients until smooth. Simmer 10 minutes, stirring. Strain if desired. Bottle hot. **~1,200,000 SHU**

Tier 2: THE ELDER THINGS

THE COLOUR OUT OF SPACE

Habanero + activated charcoal + prickly pear. Black and pink simultaneously.

Ingredient	Amount
Habanero	6
Prickly pear fruit (tuna)	1/2 cup puree
Activated charcoal	1/2 tsp
Lime juice	2 tbsp
Agave nectar	1 tbsp
White vinegar	1/3 cup
Garlic	2 cloves

Make two batches: one with charcoal (black), one without (magenta). Layer in bottle half-and-half. Shaking produces an impossible dark pink-purple. **~300,000 SHU**

DAGON

Serrano + nori + wasabi + yuzu. The ocean in a bottle.

Ingredient	Amount
Serrano	8
Nori seaweed	1 sheet, crumbled
Wasabi paste	1 tsp
Yuzu juice	2 tbsp (or Meyer lemon)
Rice vinegar	1/3 cup
Ginger	1" piece
Low-sodium soy sauce	1 tsp
Sesame oil	1/2 tsp

Blend all ingredients until smooth. Simmer 10 minutes, stirring. Strain if desired. Bottle hot. **~20,000 SHU**

THE KING IN YELLOW

Habanero + turmeric + saffron + mustard. Violently yellow. It stains. It glows.

Ingredient	Amount
Habanero	6
Turmeric (fresh root)	2" piece, peeled
Saffron	Pinch, bloomed
Yellow mustard seed	1 tsp, toasted
Mango	1/4 cup
White vinegar	1/3 cup
Honey	1 tbsp
Garlic	3 cloves

Blend all ingredients until smooth. Simmer 10 minutes, stirring. Strain if desired. Bottle hot. **~300,000 SHU**

THE MI-GO

Thai bird's eye + makrut lime + galangal + lemongrass. Northern Thai nam prik in a bottle.

Ingredient	Amount
Thai bird's eye chili	15-20
Makrut lime leaves	6
Galangal	2" piece
Lemongrass	2 stalks
Low-sodium soy + lime	1 tsp
Rice vinegar	1/3 cup
Palm sugar	1 tbsp
Cilantro root	1 (if available)

Blend all ingredients until smooth. Simmer 10 minutes, stirring. Strain if desired. Bottle hot. **~100,000 SHU**

Tier 3: THE DREAMLANDS

THE SILVER KEY

Guajillo + Mexican chocolate + espresso + cinnamon. Liquid mole.

Ingredient	Amount
Guajillo chili	4, rehydrated
Mexican chocolate (Abuelita)	1/2 tablet, grated
Espresso	1 shot (2 oz), cooled
Ceylon cinnamon	1/2 tsp
Ancho chili	2, rehydrated
Piloncillo or brown sugar	1 tbsp
White vinegar	1/4 cup
Garlic	2 cloves

Blend all ingredients until smooth. Simmer 10 minutes, stirring. Strain if desired. Bottle hot. **~5,000 SHU**

KADATH

Ghost pepper + pomegranate + rose water + sumac. Persian meets apocalypse.

Ingredient	Amount
Ghost pepper	2
Pomegranate molasses	2 tbsp
Rose water	1/2 tsp
Sumac	1 tsp
Red bell pepper	1, roasted
White vinegar	1/4 cup
Garlic	3 cloves
Honey	1 tsp

Blend all ingredients until smooth. Simmer 10 minutes, stirring. Strain if desired. Bottle hot. **~1,000,000 SHU**

THE DREAMQUEST

Scotch bonnet + passion fruit + allspice + thyme. Caribbean fever dream.

Ingredient	Amount
Scotch bonnet	4
Fresh passion fruit	2, scooped
Allspice	1/2 tsp
Fresh thyme	4 sprigs
Lime juice	2 tbsp
White vinegar	1/4 cup
Brown sugar	1 tbsp
Garlic	2 cloves

Blend all ingredients until smooth. Simmer 10 minutes, stirring. Strain if desired. Bottle hot. **~200,000 SHU**

SOURCING

Ingredient	Where to Find
Szechuan peppercorn	H Mart, Amazon
Black garlic	Fred Meyer, H Mart, Amazon
Ube powder	Filipino market, Amazon

Ingredient	Where to Find
Prickly pear / tuna	Mexican market, sometimes Fred Meyer
Nori	Any grocery (sushi aisle)
Yuzu juice	H Mart, Amazon (Yakami Orchard)
Saffron	Middle Eastern market (cheapest), Fred Meyer
Galangal	H Mart, Asian market
Makrut lime leaves	H Mart, Asian market (freeze extras)
Pomegranate molasses	Middle Eastern market, Amazon
Sumac	Middle Eastern market, Amazon
Passion fruit	Fred Meyer, Uwajimaya
Scotch bonnet	Mexican market, sometimes Fred Meyer
Ghost/Reaper/Scorpion peppers	Dried on Amazon, fresh at farmers markets
Mexican chocolate (Abuelita)	Fred Meyer (Hispanic aisle)
Palm sugar	Asian market

Neon Rainbow Fruity Hot Sauce Line

7 Fruit-Forward Sauces That Look Like They Came From Another Dimension

"The rainbow isn't a metaphor. It's the menu."

ULTRAVIOLET — Blueberry Habanero

Deep electric purple. Jewel-tone amethyst in the bottle.

Ingredient	Amount
Fresh blueberries	1 cup
Habanero	4
White wine vinegar	1/3 cup
Honey	1 tbsp
Garlic	2 cloves
Lemon juice	1 tbsp
Purple food coloring	2-3 drops
Salt	1/4 tsp

Blend all ingredients until smooth. Simmer 10 minutes over medium heat, stirring frequently. Strain if you want silk, skip if you want body. Bottle while warm.

SHU: ~200,000

ELECTRIC BLUE — Blue Raspberry Serrano

Neon alien blue. Looks radioactive.

Ingredient	Amount
Fresh raspberries	3/4 cup
Serrano peppers	8
White vinegar	1/3 cup
Sugar	1 tbsp
Lime juice	1 tbsp
Blue food coloring	5-6 drops
Blue spirulina powder	1/4 tsp
Salt	1/4 tsp

Blend all ingredients until smooth. Simmer 10 minutes over medium heat, stirring frequently. Strain if you want silk, skip if you want body. Bottle while warm.

SHU: ~15,000

NUCLEAR GREEN — Kiwi-Jalapeno-Tomatillo

Radioactive neon green. Nickelodeon slime in a bottle.

Ingredient	Amount
Tomatillos, husked and halved	4
Fresh kiwi, peeled	2
Jalapeno	6
Serrano	2
Lime juice	2 tbsp
Cilantro	1/4 cup
Green food coloring	3-4 drops
Garlic	2 cloves
Sugar	1 tsp
Salt	1/4 tsp

Blend all ingredients until smooth. Simmer 10 minutes over medium heat, stirring frequently. Strain if you want silk, skip if you want body. Bottle while warm.

SHU: ~18,000

SOLAR FLARE — Mango Habanero

Blazing electric orange. Sunrise in a bottle.

Ingredient	Amount
Fresh mango	1 cup
Habanero	5
Orange juice	2 tbsp
Orange zest	1 tsp
White vinegar	1/4 cup
Lime juice	1 tbsp
Turmeric	1/4 tsp
Sugar	1 tsp
Salt	1/4 tsp

Blend all ingredients until smooth. Simmer 10 minutes over medium heat, stirring frequently. Strain if you want silk, skip if you want body. Bottle while warm.

SHU: ~250,000

PLASMA PINK — Strawberry Ghost Pepper

Screaming hot pink. Barbie meets Satan.

Ingredient	Amount
Fresh strawberries	1 cup
Ghost pepper	2
White vinegar	1/3 cup
Honey	1 tbsp
Lemon juice	1 tbsp
Pink food coloring	2-3 drops
Salt	1/4 tsp

Blend all ingredients until smooth. Simmer 10 minutes over medium heat, stirring frequently. Strain if you want silk, skip if you want body. Bottle while warm.

SHU: ~1,000,000

GOLDEN HOUR — Pineapple Scotch Bonnet

Liquid gold. 24-karat sauce.

Ingredient	Amount
Fresh pineapple	1 cup
Scotch bonnet	3
White vinegar	1/4 cup
Lime juice	2 tbsp
Garlic	2 cloves
Turmeric	1/2 tsp
Brown sugar	1 tbsp
Allspice	1/4 tsp
Salt	1/4 tsp

Blend all ingredients until smooth. Simmer 10 minutes over medium heat, stirring frequently. Strain if you want silk, skip if you want body. Bottle while warm.

SHU: ~200,000

INFRARED — Cranberry Carolina Reaper

Deep dark crimson. The end of the spectrum.

Ingredient	Amount
Fresh cranberries	1 cup
Carolina Reaper	2
Red wine vinegar	1/3 cup
Sugar	2 tbsp
Orange zest	1 tsp
Cinnamon	1/4 tsp
Salt	1/4 tsp

Blend all ingredients until smooth. Simmer 10 minutes over medium heat, stirring frequently. Strain if you want silk, skip if you want body. Bottle while warm.

SHU: ~2,000,000

FAST FOOD SAUCE DUPES

TACO BELL MILD SAUCE

First Taco Bell packet sauces appeared in 1962, the year Glen Bell opened the first location in Downey, California.

Ingredient	Amount
Tomato paste	2 tbsp
Water	1/4 cup
White vinegar	1 tbsp
Cumin	1/4 tsp
Garlic powder	1/4 tsp
Onion powder	1/4 tsp
Paprika	1/4 tsp
Sugar	1/2 tsp
Salt	1/8 tsp

Whisk all ingredients together. Simmer 3 minutes. Cool. Store in squeeze bottle or small containers.

SHU: ~500 | **Per tbsp:** ~30mg Na | ~15mg K | ~10mg P

TACO BELL HOT SAUCE

The "Hot" packet outsells all other Taco Bell sauce levels combined — America likes medium-brave.

Ingredient	Amount
Tomato paste	2 tbsp
Water	3 tbsp
White vinegar	1 tbsp
Cayenne pepper	1/2 tsp
Cumin	1/4 tsp
Garlic powder	1/4 tsp
Onion powder	1/4 tsp
Paprika	1/2 tsp
Chili powder	1/4 tsp
Sugar	1/2 tsp
Salt	1/8 tsp

Whisk all ingredients together. Simmer 3 minutes. Cool. Thinner than the Mild — that's accurate to the original.

SHU: ~1,500 | **Per tbsp:** ~35mg Na | ~20mg K | ~10mg P

TACO BELL FIRE SAUCE

Fire sauce was added to the lineup in 2004 after years of fan requests. The packets read "Will Burn."

Ingredient	Amount
Tomato paste	2 tbsp
Water	3 tbsp
White vinegar	1.5 tbsp
Cayenne pepper	1 tsp
Chipotle powder	1/4 tsp
Cumin	1/4 tsp
Garlic powder	1/4 tsp
Onion powder	1/4 tsp
Smoked paprika	1/2 tsp
Sugar	1/2 tsp
Salt	1/8 tsp

Whisk all ingredients. Simmer 5 minutes — the chipotle needs time to bloom. Cool. The smoky note is what separates Fire from Hot.

SHU: ~5,000 | **Per tbsp:** ~35mg Na | ~20mg K | ~10mg P

TACO BELL DIABLO SAUCE

Diablo launched in 2015, was pulled, returned in 2016 by popular demand. Packets read "This is the point of no return."

Ingredient	Amount
Tomato paste	2 tbsp
Water	2 tbsp
White vinegar	2 tbsp
Cayenne pepper	1.5 tsp
Chipotle in adobo	1 pepper, minced fine
Habanero powder	1/4 tsp (or 1/2 fresh habanero, minced)
Cumin	1/4 tsp
Garlic powder	1/4 tsp
Onion powder	1/4 tsp
Smoked paprika	1/2 tsp
Lime juice	1 tsp
Sugar	1/4 tsp
Salt	1/8 tsp

Blend all ingredients until smooth (the chipotle needs the blender). Simmer 5 minutes. The habanero gives the delayed burn. The lime gives the citrus bite that makes Diablo different from just "more cayenne."

SHU: ~30,000 | **Per tbsp:** ~40mg Na | ~25mg K | ~12mg P

SPECIAL EDITION LABEL NAMES

"Same sauce. Different zip code."

Each sauce gets its own name. Cap color marks heat/flavor only; no active ingredients in the public print lane.

Sauce	Special Edition Name
Ultraviolet (blueberry)	**ULTRAVIOLET: DIAL TONE**
Electric Blue (blue rasp)	**ELECTRIC BLUE: GONE FISHING**
Nuclear Green (kiwi)	**NUCLEAR GREEN: OUT OF OFFICE**
Solar Flare (mango-hab)	**SOLAR FLARE: LEFT THE CHAT**
Plasma Pink (strawberry)	**PLASMA PINK: DO NOT RESUSCITATE**
Golden Hour (pineapple)	**GOLDEN HOUR: VOICEMAIL**
Infrared (cranberry)	**INFRARED: LAST SEEN 4:20 PM**

Method: Keep this sauce non-medicated in the public print lane. After cooking sauce, remove from heat, cool, bottle, and label by flavor and date. Black cap = regular. Gold or green cap = hotter flavor variant only; it does not indicate any active ingredient.

CHAPTER 10

Baking: Cakes, Cookies & Treats

"The oven doesn't ask questions."

Carrot Cake, Brownies, Cookies, Sponge Cakes, Rainbow Gelatin, Mug Cakes

"The oven doesn't ask questions."

CKD BAKING RULES

The good news: Most baking ingredients are renal-aware (flour, sugar, eggs, oil) **The traps:** - **Baking powder:** Most contain ALUMINUM PHOSPHATE — use phosphorus-free (Rumford aluminum-free) - **Chocolate:** Moderate P — use in controlled amounts, not unlimited - **Nuts:** Moderate-high P — use as garnish, not as main ingredient - **Milk:** Use unsweetened almond milk instead of regular - **Butter vs margarine:** Margarine = lower P. Use for baking. - **Cream cheese frosting > buttercream:** Lower P, Andrew prefers soft sweet flavors

COOKIES

1. Oatmeal Chocolate Chip Cookies

Ingredient	Amount	CKD Notes
Margarine, softened	1/2 cup	Lower P than butter
Brown sugar	1/2 cup packed	
Sugar	1/4 cup	
Egg	1	
Vanilla extract	1 tsp	
All-purpose flour	3/4 cup	
Old-fashioned oats	1.5 cups	Oats are moderate K — fine in cookies
Phosphorus-free baking powder	1/2 tsp	Rumford aluminum-free
Baking soda	1/2 tsp	
Ceylon cinnamon	1/2 tsp	Cinnamon Cloud crossover
Chocolate chips	1/2 cup	Controlled amount
Salt	1/4 tsp	

Method: Cream margarine + sugars. Beat in egg + vanilla. Mix flour + oats + leaveners + cinnamon. Combine wet + dry. Fold in chocolate chips. Scoop onto parchment-lined sheet. Bake 350F 10-12 min until edges golden, centers soft. Cool 5 min on sheet.

Per cookie (24 cookies): ~45mg P, ~55mg K, ~40mg Na

2. Grasshopper Cookies (Mint Chocolate)

Ingredient	Amount
All-purpose flour	1.25 cups
Unsweetened cocoa powder	1/3 cup
Margarine, softened	1/2 cup
Sugar	3/4 cup
Egg	1
Peppermint extract	1 tsp
Green food coloring	4-5 drops
Phosphorus-free baking powder	1 tsp
Chocolate chips	1/3 cup

Method: Cream margarine + sugar. Add egg + peppermint + green coloring. Mix flour + cocoa + baking powder. Combine. Fold in chips. Bake 350F 10 min.

The visual: Neon green cookies with chocolate chips — Vorathic BIOLUME energy in cookie form.

3. Fudgy Brownies

Ingredient	Amount
Margarine	1/2 cup, melted
Sugar	1 cup
Eggs	2
Vanilla	1 tsp
Unsweetened cocoa powder	1/3 cup
All-purpose flour	1/2 cup
Salt	1/4 tsp
Phosphorus-free baking powder	1/4 tsp
Chocolate chips	1/3 cup (optional on top)

Method: Mix melted margarine + sugar. Beat in eggs + vanilla. Add cocoa + flour + salt + BP. Pour into greased 8x8 pan. Top with chocolate chips if desired. Bake 350F 22-25 min. Toothpick should come out with moist crumbs, NOT clean (fudgy not cakey).

CAKES

4. Andrew's Soft Carrot Cake

Ingredient	Amount	CKD Notes
All-purpose flour	2 cups	
Sugar	1.5 cups	
Canola/avocado oil	1 cup	Oil = moist cake
Eggs	3	
Carrots, finely grated	2 cups (~3 large)	Moderate K — the carrots ARE the cake so worth it
Phosphorus-free baking powder	2 tsp	
Baking soda	1 tsp	
Ceylon cinnamon	2 tsp	
Nutmeg	1/2 tsp	
Ginger powder	1/2 tsp	
Vanilla	1 tsp	
Salt	1/2 tsp	
Crushed pineapple, drained	1/2 cup (optional)	Adds moisture, moderate K

Cream Cheese Frosting:

Ingredient	Amount
Cream cheese, softened	8 oz
Margarine, softened	1/4 cup
Powdered sugar	3 cups
Vanilla	1 tsp

Method: 1. Mix flour + BP + soda + spices + salt 2. Beat oil + sugar + eggs + vanilla 3. Fold dry into wet. Fold in carrots + pineapple 4. Pour into 2 greased 9" round pans 5. Bake 350F 28-32 min until toothpick clean 6. Cool completely before frosting 7. Frosting: beat cream cheese + margarine, gradually add powdered sugar + vanilla

The secret to MOIST: Oil instead of butter. Do NOT overbake. Pull at 28 min and check.

5. Confetti/Funfetti Cake (White Vanilla + Rainbow Sprinkles)

Ingredient	Amount
All-purpose flour	2.5 cups
Sugar	1.5 cups
Margarine, softened	3/4 cup
Egg whites	5 (whites only — no yolks = lower P)
Unsweetened almond milk	1 cup
Vanilla extract	2 tsp
Almond extract	1/2 tsp

Ingredient	Amount
Phosphorus-free baking powder	3 tsp
Salt	1/2 tsp
Rainbow sprinkles	1/3 cup (fold into batter)

Method: Cream margarine + sugar until fluffy. Add egg whites one at a time. Alternate adding flour mixture and almond milk. Add vanilla + almond extract. Fold in sprinkles GENTLY (don't overmix or colors bleed). Pour into 2 greased 9" pans. Bake 350F 25-28 min.

Frosting: Same cream cheese frosting as carrot cake, or vanilla buttercream (margarine + powdered sugar + vanilla + almond milk to thin). Top with MORE sprinkles.

6. Rainbow Cake (6 Layers — Vorathic)

Same confetti cake batter BUT: 1. Divide batter into 6 equal portions 2. Dye each: red, orange, yellow, green, blue, purple 3. Bake each in a 6" round pan (or bake 2 at a time in 9" pans, slice horizontally) 4. Stack with cream cheese frosting between each layer 5. Frost outside with white frosting 6. Cut a slice = RAINBOW cross-section

This IS Genesis 9:16 in cake form. The rainbow is hidden INSIDE until you cut it.

7. Devil's Food Cake (Rich Chocolate)

Ingredient	Amount
All-purpose flour	1.75 cups
Unsweetened cocoa powder	3/4 cup
Sugar	2 cups
Eggs	2
Avocado oil	1/2 cup
Unsweetened almond milk	1 cup
Hot coffee	1 cup (dissolves cocoa, deepens flavor)
Vanilla	2 tsp
Baking soda	2 tsp
Phosphorus-free baking powder	1 tsp
Salt	1 tsp

Method: Mix dry. Mix wet (coffee last — batter will be thin, that's correct). Pour into 2 greased 9" pans. Bake 350F 30-35 min. This cake is EXTREMELY moist because of the oil + coffee.

8. Microwave Mug Cake (2 minutes, 1 serving)

For when you need cake NOW

Ingredient	Amount
All-purpose flour	4 tbsp
Sugar	3 tbsp
Cocoa powder	2 tbsp
Egg	1 small (or 1/2 large beaten)
Almond milk	3 tbsp
Avocado oil	2 tbsp
Vanilla	1/4 tsp
Pinch of salt	
Chocolate chips	1 tbsp (optional)

Method: Mix dry in a large mug. Add wet, stir until smooth. Drop in chocolate chips. Microwave 90 seconds to 2 min (watch — every microwave is different). Let sit 1 min. Eat from mug or flip onto plate.

Variations: - **Confetti mug cake:** Skip cocoa, add 1 tbsp sprinkles - **Cinnamon Cloud mug cake:** Skip cocoa, add 1/2 tsp Ceylon cinnamon + 1 tsp honey - **Peanut butter mug cake:** Add 1 tbsp PB, skip cocoa

9. Soft Moist Sponge Cake (Japanese-Style Jiggly)

The softest cake possible — jiggles when you shake it

Ingredient	Amount
Eggs, separated	4
Sugar	1/2 cup (divided: 1/4 for yolks, 1/4 for whites)
Avocado oil	3 tbsp
Almond milk	3 tbsp
Vanilla	1 tsp
Cake flour (or AP flour + 2 tbsp cornstarch)	1/2 cup
Cream of tartar	1/4 tsp

Method: 1. Beat egg YOLKS + 1/4 cup sugar until pale and thick 2. Stir in oil + milk + vanilla 3. Sift in flour, fold gently 4. In separate bowl: beat egg WHITES + cream of tartar until foamy, gradually add remaining 1/4 cup sugar, beat to stiff peaks 5. Fold 1/3 of whites into yolk mixture to lighten, then fold in remaining whites VERY gently 6. Pour into UNGREASED 8" round pan (ungreased = cake clings to sides as it rises) 7. Bake 325F 30-35 min 8. Invert pan immediately on cooling rack. Cool completely before removing.

Why it's jiggly: The meringue (beaten whites) creates air pockets. Low flour ratio = less structure = more jiggle. Oil instead of butter = softer crumb.

10. Fruit-Filled Cake (Strawberry or Mango)

Sponge cake + fresh fruit + whipped cream = Japanese-style fruit sandwich cake

Component	What
Base	Sponge cake (recipe #9), sliced into 2-3 horizontal layers
Filling	Whipped heavy cream (1 cup cream + 2 tbsp powdered sugar + 1/2 tsp vanilla, whipped to stiff)
Fruit	Fresh strawberries sliced, or fresh mango chunks

Assembly: 1. Bottom cake layer on plate 2. Spread whipped cream 3. Arrange sliced fruit in a single layer 4. More whipped cream 5. Next cake layer. Repeat. 6. Top with whipped cream + decorative fruit arrangement 7. Refrigerate 2 hours before serving (sets the cream)

GELATIN DESSERTS

11. Rainbow Gelatin Mold (Vorathic — Genesis 9:16)

7 layers, each a different color of the rainbow

Layer	Jell-O Flavor	Color
1	Cherry/Strawberry	Red
2	Orange	Orange
3	Lemon	Yellow
4	Lime	Green
5	Berry Blue	Blue
6	Grape	Purple
7 (optional)	Unflavored + pink coloring	Pink

Method: 1. Use a 9x13 pan or bundt mold 2. For each layer: dissolve 1 small box Jell-O in 1 cup boiling water + 1/2 cup cold water 3. Pour first layer (red). Refrigerate 30-45 min until set but still tacky 4. Pour next layer (orange) GENTLY over set layer. Refrigerate. 5. Repeat for all colors. Each layer must be barely set before adding next. 6. Total time: ~4-5 hours for all layers. Overnight is better. 7. To unmold: dip pan briefly in warm water, invert onto plate.

The reveal: When sliced, each piece shows ALL the rainbow layers. Genesis 9:16 in gelatin.

CKD note: Jell-O is low K/P/Na — one of the most CKD-aware desserts. The sugar is the only concern (if diabetic).

12. Fancy Gelatin Art (Flower/3D Designs)

Gelatina artística originated in Mexico in the 1990s and became a competitive art form — Mexican gelatin artists now create photorealistic flowers, animals, and portraits entirely inside clear gelatin domes.

Full Ingredient List

Clear Gelatin Base (The Canvas):

Ingredient	Amount	CKD Notes
Unflavored gelatin (Knox)	4 packets (28g)	CKD-aware protein source
Water	3 cups	Counts toward fluid
Sugar	1/3 cup	

Injection Paint (The Colors) — make one batch per color:

Ingredient	Amount per color	CKD Notes
Unsweetened almond milk	3 tbsp	LOW P (vs condensed milk ~100mg P/tbsp). Andrew already has pectin — can add 1/4 tsp pectin per color for thicker paint
Unflavored gelatin	1/2 packet (3.5g)	Bloom in 1 tbsp cold almond milk
Food coloring (gel-based)	2-4 drops per color	Wilton gel colors are best — more vivid, less liquid
Sugar	1 tsp	Optional — adds slight sweetness to the "paint"

Recommended Color Kit (8 colors minimum):

Color	Gel Color	What It Makes
White	No coloring (plain almond milk)	Flower petals, clouds, swan bodies
Red	Wilton Red-Red	Rose petals, koi fish
Pink	Wilton Pink	Cherry blossoms, flamingos
Yellow	Wilton Golden Yellow + pinch turmeric	Sunflower centers, goldfish
Orange	Wilton Orange	Koi fish accents, autumn leaves
Green	Wilton Leaf Green	Stems, leaves, grass, frogs
Blue	Wilton Royal Blue	Water, sky, butterfly wings
Purple	Wilton Violet	Lavender, iris petals, galaxy effects
Gold shimmer	Edible gold luster dust mixed into yellow paint	Sacred geometry lines, Vorathic love

Equipment List

Equipment	Source	Price	Notes
Gelatin art syringe set (10-piece, stainless steel needles)	Amazon "gelatin art tools"	~$15-20	Includes flower tip, round tip, leaf tip, flat tip
Extra needle tips (flower/petal set)	Amazon	~$8-12	More tip shapes = more design options
Dome molds (silicone, 6" and 10")	Amazon "silicone dome mold gelatin"	~$10-15	Clear silicone preferred — you can see layers as you work
Small squeeze bottles (4 oz, set of 6)	Amazon	~$8	For holding warm paint — easier than syringes for filling
Warm water bath container	Any pot or bowl	$0	Keep paint bottles in warm water so gelatin doesn't set
LED light base (for display)	Amazon "LED light base display"	~$8-12	Sets under the finished dome — lights it up from below
Candy thermometer	Amazon or kitchen store	~$10	For monitoring gelatin temp (never exceed 160F)
Fine-tip tweezers (food-safe)	Amazon	~$6	For placing edible gold leaf, tiny details
Turntable (lazy susan, small)	Amazon or Dollar Tree	~$5-10	Rotate the mold while injecting for even designs

Total starter kit: ~$70-90

Method (Detailed)

1. **Make the clear base:** Bloom gelatin in 1 cup COLD water (sprinkle on surface, wait 5 min). Heat remaining 2 cups water + sugar until dissolved (not boiling). Add bloomed gelatin, stir until clear. Pour into dome mold. Refrigerate 3-4 hours until FIRM.
2. **Make injection paints:** For each color — bloom 1/2 packet gelatin in 1 tbsp cold almond milk (5 min). Microwave 10 seconds to melt. Add remaining 2 tbsp almond milk + food coloring + sugar. Mix. Keep in small squeeze bottle in warm water bath (110-120F) so it stays liquid.
3. **Inject designs:** Turn dome mold upside down (you work from the BOTTOM — the flat surface faces up). Insert needle through the flat surface, inject paint at desired depth. Each injection creates one element (one petal, one leaf, etc.).
4. **Build layer by layer:** Work from the CENTER/BOTTOM of the dome outward and upward. Inject deepest elements first (flower centers), then petals, then leaves, then stems. Refrigerate 5-10 min between colors so they don't bleed.
5. **Unmold:** Dip mold briefly in warm water (5 seconds). Invert onto serving plate. The clear dome releases with the 3D design floating inside.
6. **Display:** Place on LED light base. The light shines up through the clear gelatin, illuminating the injected designs from below.

For CKD: Almond milk paint = ~5mg P per tbsp vs condensed milk = ~100mg P per tbsp. If Andrew has pectin in the pantry, adding 1/4 tsp per paint batch thickens it for more precise injection (acts like a natural gelling agent alongside the gelatin).

Per serving (1/8 dome): ~10mg Na | ~6mg P | ~8mg K

12b. Psychedelic 3D Gelatin Art Cake — The Deadhead Edition

Albert Hofmann accidentally absorbed LSD through his fingertips on April 16, 1943. His bicycle ride home became the most famous commute in pharmacological history.

Same technique as above, completely different universe inside the dome.

The Clear Base — "The Void"

Ingredient	Amount	CKD Notes
Unflavored gelatin	6 packets (42g)	CKD-aware protein
Water	3 cups	Counts toward fluid
Sugar	1/2 cup	
Tonic water	1 cup (replace 1 cup of water)	Quinine = UV fluorescence. The whole cake GLOWS under blacklight
Blue food coloring	2 drops	Faint cosmic blue tint to the "void"

Set in a large dome mold (10-inch) or deep glass bowl. Refrigerate until firm (~3 hours).

The Injection Paints — 7 Rainbow Colors

Make 7 small batches of injection paint:

Color	Food Coloring	Flavor Extract (optional)
Red	Red gel, 3 drops	Cherry
Orange	Orange gel, 3 drops	Orange
Yellow	Yellow gel, 3 drops + 1/8 tsp turmeric	Lemon
Green	Green gel, 3 drops	Lime
Blue	Blue gel, 3 drops + blue spirulina	Blue raspberry
Indigo	Blue + purple, 2 drops each	Grape
Violet	Purple gel, 3 drops + butterfly pea powder	Lavender

Each paint batch: 3 tbsp unsweetened almond milk (low P) + 1/2 packet unflavored gelatin bloomed + food coloring. Warm gently, keep liquid in warm water bath while working.

Psychedelic Design Patterns

Option A: Grateful Dead Steal Your Face Inject a red and blue skull profile (the SYF lightning bolt skull). Use a printed reference, mark guidelines on the outside of the mold with dry-erase marker, inject through the bottom following the lines. Red for the lightning bolt, blue for the skull outline. White (plain almond milk gelatin) for the skull fill.

Option B: Tie-Dye Spiral Start at the center of the dome. Inject each rainbow color in a spiral pattern outward — red at center, then orange, yellow, green, blue, indigo, violet at the edge. Use a long needle and work in concentric rings. When unmolded, it looks like a tie-dye shirt trapped in glass.

Option C: Alex Grey "Net of Being" / Sacred Geometry Inject a repeating pattern of eyes (golden-yellow iris, white sclera, dark pupil) arranged in a hexagonal grid throughout the dome. Between the eyes, inject thin lines of gold (turmeric paint) forming the Flower of Life pattern. This is the Vorathic holy grail.

Option D: Mushroom Forest Inject mushroom shapes: brown/red caps (red + tiny bit of brown/black), white stems, green grass at the base. Add tiny golden dots around the mushrooms (fairy lights). A psychedelic forest trapped in gelatin.

Option E: Third Eye / All-Seeing Eye One large eye in the center of the dome. Golden iris (turmeric + gold luster dust in the paint), white sclera, deep purple pupil. Radiating lines of rainbow color emanating outward from the eye like rays. The Eye of Providence as dessert.

UV Blacklight Effect

Because the base uses tonic water, the entire dome glows pale blue under 365nm UV light. The injected colored designs appear to FLOAT in a glowing void. Set up a UV strip around the serving plate for the full effect.

Non-Medicated Publication Variant

Keep this gelatin art dome non-medicated in the public print lane. Use tonic water, food color, edible glitter, and injection art only. Do not add active ingredients or dosing math.

Per serving (1/10 of dome): ~15mg Na | ~8mg P | ~12mg K

13. Edible Gold Glitter Gelatin Shots (Non-Alcoholic)

Ingredient	Amount
Fruit punch juice (or apple juice)	2 cups
Unflavored gelatin	2 packets
Sugar	2 tbsp
Edible gold glitter	1/2 tsp
LorAnn flavoring (any)	3-4 drops

Method: Bloom gelatin in 1/2 cup cold juice. Heat remaining juice + sugar until steaming. Add bloomed gelatin, stir to dissolve. Add gold glitter + flavoring. Pour into small cups or silicone molds. Refrigerate 2+ hours.

Vorathic party food. Gold glitter suspended in jewel-toned gelatin.

CKD Considerations

All baked goods use: - Phosphorus-free baking powder (Rumford aluminum-free) - Margarine over butter (lower P) - Unsweetened almond milk over regular milk (lower P) - Egg whites where possible (yolks are higher P) - Controlled chocolate amounts - Cream cheese frosting over buttercream (lower P, softer, sweeter — matches Andrew's preference)

CHAPTER 11

Gluten-Free Breads & Pasta

"Gluten left. The flavor stayed."

Sourdough, Sandwich Bread, Flatbread, Pizza, Fresh Pasta & More

"Gluten left. The flavor stayed."

They told you gluten-free means cardboard. They told you CKD means bland. Two lies stacked on top of each other like bad drywall. We tore it down to the studs and rebuilt with rice flour and fire.

"The baker who understands fermentation understands the universe." — Chinese proverb, paraphrased in a Philly kitchen

GF CKD BREAD RULES

The good news: Rice flour is naturally low-P, low-K, low-Na. It's one of the cleanest CKD flours. **The traps:** - **Whole wheat GF blends:** Many contain sorghum, millet, or amaranth — higher K/P. Avoid. - **Xanthan gum:** Required for structure (replaces gluten). CKD-aware. Use it. - **Baking powder:** Phosphorus-free only (Rumford aluminum-free). Non-negotiable. - **Milk:** Unsweetened almond milk. Always. - **Butter:** Margarine. Lower P. Every time. - **Yeast:** CKD-aware. Nutritional yeast is NOT the same thing — that's high P. Don't confuse them. - **Tapioca starch + potato starch:** Both renal-aware. They give GF bread chew and structure that rice flour alone can't.

SOURDOUGH

1. GF Sourdough Bread (Rice Flour Starter + Loaf)

Phase 1: Build the Starter (7 days)

"Patience is the mother of all virtues." — Augustine of Hippo, who never had to wait for rice flour to ferment

Day	Feed	Amount	Notes
Day 1	Brown rice flour + water	1/4 cup each	Mix in clean glass jar. Cover loosely. Room temp.
Day 2	Discard half, feed again	1/4 cup flour + 1/4 cup water	
Day 3-6	Repeat daily	Same amounts	You'll see bubbles by Day 3-4. Smells sour = working.
Day 7	Starter should double in 4-6 hours after feeding	Ready to bake	If not doubling yet, keep feeding. Some starters take 10 days.

Maintenance: Feed 1x/week if refrigerated. 1x/day if on counter.

Phase 2: The Bread

Ingredient	Amount	CKD Notes
Active GF sourdough starter	1 cup (fed 4-6 hrs ago, bubbly)	
White rice flour	1.5 cups	Low P, low K — the cleanest flour
Tapioca starch	1/2 cup	Adds chew
Potato starch	1/4 cup	Adds moisture
Xanthan gum	1.5 tsp	The gluten replacement
Warm water	3/4 cup	
Avocado oil	2 tbsp	
Sugar	1 tbsp	Feeds the starter
Salt	3/4 tsp	
Apple cider vinegar	1 tsp	Enhances sour flavor

Method: 1. Whisk dry ingredients (rice flour, tapioca, potato starch, xanthan gum, salt) in KitchenAid bowl 2. Add active starter, warm water, oil, sugar, vinegar 3. Mix with paddle attachment on medium 3-4 min. Dough will be thick batter consistency — NOT like wheat dough. This is normal. 4. Scrape into greased 9x5 loaf pan. Smooth top with wet spatula. 5. Cover with damp towel or plastic wrap. Rise 4-8 hours at room temp (or overnight in fridge for deeper sour flavor — Andrew's preference) 6. Score top with razor blade or sharp knife. Dust with rice flour. 7. Bake 400F for 45-50 min. Internal temp 205-210F. 8. Cool IN the pan 10 min, then on wire rack 1 hour minimum before slicing. GF bread MUST cool completely or it crumbles.

Per slice (12 slices): ~15mg Na, ~25mg P, ~30mg K

"The bread that takes the longest tastes the truest." — Every baker who ever lived

QUICK BREADS

2. GF Sandwich Bread (KitchenAid — 90 Min Start to Finish)

For when you want bread today, not next week.

Ingredient	Amount	CKD Notes
White rice flour	1.5 cups	
Tapioca starch	1/2 cup	
Potato starch	1/4 cup	
Xanthan gum	1.5 tsp	
Sugar	2 tbsp	
Active dry yeast	2.25 tsp (1 packet)	CKD-aware

Ingredient	Amount	CKD Notes
Salt	3/4 tsp	
Warm unsweetened almond milk	1 cup (110F)	Lower P than regular milk
Eggs	2	
Avocado oil	3 tbsp	
Apple cider vinegar	1 tsp	
Phosphorus-free baking powder	1 tsp	Rumford aluminum-free

Method: 1. Warm almond milk to 110F. Stir in sugar + yeast. Let sit 5-10 min until foamy. 2. In KitchenAid with paddle: combine rice flour, tapioca, potato starch, xanthan gum, salt, baking powder 3. Add yeast mixture, eggs, oil, vinegar 4. Beat on medium 3-4 min. Batter-like dough — wetter than wheat bread dough. 5. Scrape into greased 9x5 loaf pan. Smooth top with wet hands. 6. Cover. Rise in warm spot 30-45 min until dough crowns 1" above pan rim 7. Bake 375F 35-40 min. Tent with foil at 25 min if browning too fast. 8. Cool in pan 10 min. Turn out onto rack. Cool completely before slicing.

Per slice (14 slices): ~55mg Na, ~30mg P, ~35mg K

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3. GF Flatbread / Naan (Stovetop — 20 Min)

"He who has bread has many problems. He who has no bread has one problem." — Turkish proverb

Ingredient	Amount	CKD Notes
White rice flour	1 cup	
Tapioca starch	1/2 cup	
Xanthan gum	1 tsp	
Phosphorus-free baking powder	1.5 tsp	Rumford
Salt	1/2 tsp	
Sugar	1 tsp	
Unsweetened almond milk	1/2 cup, warm	
Plain coconut yogurt	1/4 cup	Dairy yogurt is higher P — coconut keeps it low
Avocado oil	1 tbsp + more for pan	

Method: 1. Mix dry ingredients in bowl 2. Add warm almond milk, coconut yogurt, oil. Stir until dough forms. It should be soft, slightly sticky. 3. Divide into 6 balls. Roll each on rice-floured surface to 1/4" thick ovals. 4. Heat cast iron or heavy skillet over medium-high. Brush with oil. 5. Cook each flatbread 2-3 min per side. Watch for bubbles on surface — flip when you see them. 6. Brush hot flatbread with margarine immediately off the pan.

Garlic naan variant: Mix 2 cloves minced garlic + 2 tbsp melted margarine + pinch of salt. Brush on hot naan. Top with chopped cilantro.

Makes 6 flatbreads. Per flatbread: ~90mg Na, ~20mg P, ~25mg K

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4. GF Pizza Dough

Friday night doesn't stop.

Ingredient	Amount	CKD Notes
White rice flour	1 cup	
Tapioca starch	1/2 cup	
Potato starch	1/4 cup	
Xanthan gum	1.5 tsp	
Active dry yeast	2.25 tsp (1 packet)	
Sugar	1 tbsp	
Salt	1/2 tsp	
Warm water	3/4 cup (110F)	
Olive oil	2 tbsp + more for brushing	
Egg white	1	Lower P than whole egg
Apple cider vinegar	1 tsp	
Italian seasoning	1 tsp	

Method: 1. Dissolve sugar + yeast in warm water. Wait 5-10 min until foamy. 2. KitchenAid paddle: mix all dry ingredients 3. Add yeast mixture, oil, egg white, vinegar. Beat 3 min on medium. 4. Dough is sticky — that's correct. Scoop onto parchment-lined sheet or pizza stone. 5. Oil your hands. Press/spread dough into 12-14" circle (or rectangle — no rules). 1/4" thick. 6. Let rise 20 min uncovered. 7. Pre-bake crust at 425F for 8-10 min until just set and lightly golden. 8. Add toppings. Bake 10-12 min more until cheese melts and edges crisp.

CKD pizza topping rules: - Sauce: no-salt-added tomato sauce + garlic + oregano + basil (homemade or Muir Glen) - Cheese: mozzarella in moderation (1/2 cup shredded per pizza — moderate P) - Proteins: grilled chicken, shrimp, turkey pepperoni - Veggies: roasted red peppers, onions, mushrooms (small amounts), fresh basil, arugula after baking - AVOID: olives (Na bomb), regular pepperoni (Na + P bomb), extra cheese

Per 2 slices (8 total, no toppings): ~70mg Na, ~25mg P, ~30mg K

PASTA

5. GF Fresh Pasta (Rice Flour — KitchenAid Pasta Roller)

"In the beginning was the noodle." — Apocryphal, probably Sicilian

Ingredient	Amount	CKD Notes
White rice flour	1.5 cups	
Tapioca starch	1/2 cup	Adds elasticity
Xanthan gum	1 tsp	Binds without gluten
Eggs	2 large	
Egg yolk	1 extra	Richness + binding
Olive oil	1 tbsp	
Water	1-2 tbsp (as needed)	
Salt	1/2 tsp	

Method: 1. Whisk rice flour, tapioca starch, xanthan gum, salt on clean counter or in KitchenAid bowl 2. Make a well. Add eggs, yolk, olive oil to center. 3. Using fork (or KitchenAid paddle on low), gradually incorporate flour into eggs until shaggy dough forms 4. Knead by hand 3-4 min. Dough should be smooth, pliable, slightly tacky. If too dry, add water 1 tsp at a time. If too wet, add rice flour. 5. Wrap in plastic. Rest 30 min at room temp. (This lets the xanthan gum hydrate — critical for rollability.) 6. Divide into 4 portions. Keep unused portions wrapped. 7. **KitchenAid pasta roller:** Start at widest setting. Roll through twice. Decrease one setting. Roll through. Repeat until desired thickness (setting 5-6 for fettuccine, setting 7 for angel hair). 8. Switch to cutter attachment. Run sheets through fettuccine or spaghetti cutter. 9. Dust cut pasta with rice flour. Toss gently. Cook within 1 hour or dry on pasta rack.

Cooking: Boil salted water. Fresh GF pasta cooks FAST — 2-3 min max. Taste at 2 min. It goes from perfect to mush in seconds.

Per serving (4 servings): ~65mg Na, ~55mg P, ~40mg K

Variations: - **Herb pasta:** Add 2 tbsp finely chopped fresh basil or rosemary to the dough - **Saffron pasta:** Steep pinch of saffron in 1 tbsp warm water, add to eggs — golden color, subtle flavor - **Black pepper pasta:** Add 1 tsp coarsely ground black pepper to flour — cacio e pepe ready

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MORE BREADS

6. GF Garlic Breadsticks

Olive Garden walked so we could run. Then we lapped them.

Ingredient	Amount	CKD Notes
White rice flour	1 cup	
Tapioca starch	1/3 cup	
Xanthan gum	1 tsp	
Phosphorus-free baking powder	2 tsp	Rumford
Sugar	1 tbsp	
Salt	1/2 tsp	
Active dry yeast	1.5 tsp	
Warm unsweetened almond milk	1/2 cup (110F)	
Egg	1	
Olive oil	2 tbsp	

Garlic Topping:

Ingredient	Amount
Margarine, melted	3 tbsp
Garlic, minced	4 cloves
Garlic powder	1/2 tsp
Italian seasoning	1 tsp
Dried parsley	1 tsp
Salt	Pinch

Method: 1. Dissolve sugar + yeast in warm almond milk. Wait 5 min. 2. Mix dry ingredients. Add yeast mixture, egg, olive oil. Beat with KitchenAid paddle 2-3 min. 3. Scoop dough into 10-12 strips on parchment-lined baking sheet. Wet hands to shape — think thick fingers, not pencils. 4. Cover. Rise 20 min. 5. Bake 400F 12-15 min until golden. 6. While baking: melt margarine, cook minced garlic 30 seconds (just until fragrant, NOT brown). Stir in garlic powder, Italian seasoning, parsley, salt. 7. Brush garlic margarine over breadsticks IMMEDIATELY out of the oven. Twice. Don't be shy.

Makes 10-12 breadsticks. Per breadstick: ~75mg Na, ~20mg P, ~20mg K

7. GF Cornbread (Base)

"Cornbread ain't nothing wrong with that." — Already CKD-aware. We just made it official.

Ingredient	Amount	CKD Notes
Yellow cornmeal	1 cup	Naturally low P, low K — CKD royalty
White rice flour	1/2 cup	GF sub for AP flour
Sugar	1/4 cup (or 2 tbsp honey)	
Phosphorus-free baking powder	1 tbsp	Rumford
Salt	1/2 tsp	
Eggs	2	
Unsweetened almond milk	3/4 cup	
Avocado oil	1/4 cup	
Margarine	2 tbsp, melted	For the skillet

Method: 1. Preheat oven to 400F. Put 2 tbsp margarine in a 10" cast iron skillet, place in oven while preheating. (The hot fat = crispy bottom crust. This is non-negotiable.) 2. Mix cornmeal + rice flour + sugar + baking powder + salt 3. Beat eggs + almond milk + avocado oil 4. Combine wet + dry. Don't overmix. 5. Pull hot skillet from oven. Swirl melted margarine to coat. Pour batter in — it should SIZZLE. 6. Bake 20-22 min until golden and toothpick clean. Edges should be deeply golden, almost caramelized. 7. Let cool 5 min in skillet. Slice into wedges. Serve with margarine or honey.

Per wedge (8 wedges): ~85mg Na, ~40mg P, ~45mg K

Variations: - **Jalapeño cornbread:** Add 2 tbsp diced jalapeño (seeds removed) + 1/4 cup corn kernels - **Honey butter cornbread:** Whip margarine + honey + pinch of cinnamon. Serve on top. - **Cornbread muffins:** Same batter, muffin tin, 15-18 min at 400F

8. GF Tortillas (Rice Flour Based)

Soft, pliable, doesn't crack in half when you look at it wrong.

Ingredient	Amount	CKD Notes
White rice flour	1 cup	
Tapioca starch	1/2 cup	The pliability secret
Xanthan gum	1 tsp	
Salt	1/2 tsp	
Avocado oil	2 tbsp	
Warm water	1/2 - 2/3 cup	Add gradually

Method: 1. Mix rice flour, tapioca starch, xanthan gum, salt 2. Add oil. Mix until crumbly. 3. Add warm water gradually, stirring, until soft pliable dough forms. Not sticky, not crumbly. Like Play-Doh. 4. Divide into 8 balls. Cover with damp towel. 5. Roll each ball between two sheets of parchment paper to 6-7" circles, 1/8" thin. (GF dough sticks to rolling pins — parchment paper is the move.) 6. Heat dry skillet (no oil) over medium-high. 7. Cook each tortilla 1-2 min per side. Look for light brown spots and slight puffing. 8. Stack cooked tortillas under a clean towel to stay soft and pliable.

Makes 8 tortillas. Per tortilla: ~70mg Na, ~10mg P, ~15mg K

The CKD taco night stack: - GF rice tortilla (this recipe) - CKD seasoned ground turkey or chicken - Shredded cabbage (lower K than lettuce — crunchier too) - Pico de gallo (fresh tomato, onion, cilantro, lime — small amounts keep K manageable) - Sour cream (small dollop — moderate P) - Hot sauce (homemade from RENALWISE hot sauce chapter)

CKD Considerations

Rule	Why
Rice flour over wheat flour	Lower P, lower K, naturally GF
Tapioca + potato starch for structure	CKD-aware binders that replace gluten's elasticity
Xanthan gum in every recipe	The gluten replacement — without it, GF bread crumbles to dust
Phosphorus-free baking powder ONLY	Regular BP contains aluminum phosphate — direct P load
Margarine over butter	Lower phosphorus per tbsp
Unsweetened almond milk over regular	~80% less phosphorus than cow's milk
Avoid "GF all-purpose blends" with sorghum/amaranth/teff	Higher K and P than rice-based flours
Cool GF bread COMPLETELY before slicing	GF structure sets as it cools — cut early and it falls apart
Fresh GF pasta cooks in 2-3 min	Overcook by 60 seconds and you have wallpaper paste — set a timer
Yeast is CKD-aware, nutritional yeast is NOT	Nutritional yeast = 100mg+ P per tbsp. Active dry yeast for baking = negligible.

Daily CKD targets: Na < 1500mg | K < 2000mg | P < 800mg

All recipes in this chapter fall well within safe ranges per serving. Stack multiple items from this chapter in a single meal (bread + pasta) and you're still under 200mg P, 100mg K, 200mg Na for the bread/pasta portion. The danger comes from what you PUT on it — cheese, processed meats, canned sauces. Control the toppings, the bread is already clean.

"Water the roots, not the leaves." The flour is the root. Get that right and everything above it — the crust, the crumb, the chew — follows. Gluten was never the flavor. It was just the scaffolding. We built new scaffolding. The house still stands.

CHAPTER 12

Smoothies & Juices

"Blend first. Ask questions later."

Caribbean Passion, Tropical Favorites & Fresh Fruit Blends

Chobani Zero Sugar Vanilla Yogurt Base, Fresh Fruit,

"Jamba got Andrew through PD. Now we bring Jamba home."

Andrew's Smoothie Rules

- **Fresh fruit** preferred (frozen okay for texture)
- **Chobani Zero Sugar Vanilla Yogurt** as the creamy base
- **Tropical flavors** — strawberry, pineapple, mango, kiwi
- **Rainbow sherbet, sour sorbet, popsicle** vibes

CKD Fruit Guide for Smoothies

GREEN LIGHT (Low-K, use freely)

- Strawberries (low K, ~150mg per cup)

- Blueberries (~115mg K per cup)
- Raspberries (~185mg K per cup)
- Cranberries (~85mg K per cup)
- Pineapple (~180mg K per cup — moderate, but Andrew loves it, portion control)
- Apple (~195mg K per cup)
- Grapes (~290mg K per cup — borderline, small amounts)
- Peaches, canned/drained (~240mg K per cup)
- Pears (~210mg K per cup)
- Watermelon (~170mg K per cup — BUT high fluid content)
- Lemon/Lime juice (low K, great for sour profile)

YELLOW LIGHT (Moderate-K, use in small amounts — 1/4 cup max)

- Mango (~270mg K per cup — Andrew loves it, use 1/4 cup)
- Kiwi (~560mg K per cup — HIGH, use 1 small kiwi max or skip)
- Pineapple in larger amounts

RED LIGHT (High-K, avoid or use tiny garnish only)

- Banana (~420mg K per cup — THE classic smoothie fruit but CKD enemy)
- Orange/OJ (~500mg K per cup)
- Papaya (~780mg K per cup)
- Coconut water (~600mg K per cup)
- Dried fruit (concentrated K)

THE RECIPES

1. Caribbean Passion Smoothie

Original Jamba Caribbean Passion: Orange juice, passion-mango juice, strawberries, peaches, frozen yogurt **Problem:** OJ is HIGH-K (~500mg/cup), passion-mango juice adds more

Ingredient	Amount	CKD Sub	K Impact
Orange juice	8 oz	**Apple juice** (low-K, sweet, neutral flavor)	Saves ~300mg K
Passion-mango juice	4 oz	**1/4 cup mango chunks + 1 tsp passion fruit extract** (Amazon)	Controlled
Strawberries	1/2 cup	Fresh strawberries	~75mg K
Peaches	1/2 cup	Canned peaches, drained (or fresh)	~120mg K
Frozen yogurt	1/2 cup	**Chobani Zero Sugar Vanilla Yogurt**	Lower P than froyo
Ice	1 cup		

Method: Blend all until smooth. Serve in tall glass. Garnish with strawberry slice.

Per serving: ~250mg K, ~120mg P, ~80mg Na (vs original's ~600+ K) **The taste:** 90% identical. The apple juice base is undetectable behind the mango + passion fruit.

2. Strapineapple Paradise

Ingredient	Amount
Fresh strawberries	3/4 cup
Fresh pineapple chunks	1/2 cup
Chobani Zero Sugar Vanilla Yogurt	1/2 cup
Apple juice	1/4 cup
Ice	1 cup
Honey	1 tsp (optional)

Blend. Pink-gold tropical perfection.

3. Mango Kiwi Tropical (K-Controlled)

Ingredient	Amount	K Notes
Mango chunks	1/4 cup (frozen or fresh)	~68mg K at this portion
Kiwi	1 small, peeled	~140mg K — one kiwi is okay
Strawberries	1/2 cup	~75mg K
Chobani Zero Sugar Vanilla Yogurt	1/2 cup	
Apple juice	1/4 cup	
Ice	1 cup	
Lime juice	1 tsp	Brightens everything

Total K: ~350mg — acceptable for most CKD diets in a single serving.

4. Caribbean Sunset (Andrew's Custom)

Ingredient	Amount
Pineapple chunks	1/2 cup
Mango chunks	1/4 cup
Strawberries	1/4 cup
Coconut cream	1 tbsp (NOT coconut water — cream is low K, water is high K)
Chobani Zero Sugar Vanilla Yogurt	1/2 cup
Lime juice	1 tsp
Ice	1 cup
Turmeric	Pinch (golden color + inflammation-support)

Blend. Tropical, creamy, golden. The sunset in a glass.

5. Berry Blast (Lowest-K Option)

Ingredient	Amount
Strawberries	1/2 cup
Blueberries	1/2 cup
Raspberries	1/4 cup
Chobani Zero Sugar Vanilla Yogurt	1/2 cup
Apple juice	1/4 cup
Ice	1 cup

The safest smoothie. All low-K berries. ~200mg K total. Drink freely.

6. Sour Tropical Storm

Ingredient	Amount
Pineapple	1/2 cup
Strawberries	1/2 cup
Lime juice	2 tbsp (THE SOUR)
Lemon juice	1 tbsp
Citric acid	1/4 tsp (extra pucker)
Chobani Zero Sugar Vanilla Yogurt	1/2 cup
Ice	1 cup
Honey	1 tsp to balance

Andrew's sour-loving profile. Tropical + sour citrus punch.

7. Pina Colada Cloud (Non-Alcoholic)

Ingredient	Amount
Pineapple chunks	3/4 cup
Coconut cream	2 tbsp
Chobani Zero Sugar Vanilla Yogurt	1/2 cup
Vanilla extract	1/2 tsp
Ice	1 cup
Ceylon cinnamon	Pinch (Cinnamon Cloud crossover)

Cinnamon Cloud meets Pi??a Colada. Frozen paradise.

8. Rainbow Sherbet Smoothie

Ingredient	Amount
Raspberry sorbet or frozen raspberries	1/4 cup
Lime juice	1 tbsp
Pineapple chunks	1/4 cup

Ingredient	Amount
Chobani Zero Sugar Vanilla Yogurt	1/2 cup
Apple juice	1/4 cup
Ice	1 cup
Rainbow sprinkles	Garnish on top

Tastes like rainbow sherbet in drinkable form. Andrew's favorite frozen treat, liquidized.

FROZEN VERSIONS (Popsicles & Sorbets)

Tropical Popsicles

Pour any smoothie recipe above into popsicle molds. Freeze 4+ hours. Instant CKD-aware popsicles.

Best for popsicles: Caribbean Passion, Strapineapple, Berry Blast (they have enough sugar to stay scoopable)

Sour Citrus Sorbet

Ingredient	Amount
Lemon juice	1/2 cup
Lime juice	1/4 cup
Pineapple juice	1/4 cup
Sugar	3/4 cup
Water	1.5 cups
Citric acid	1/2 tsp

Dissolve sugar in warm water. Add juices + citric acid. Chill. Churn or granita method.

Rainbow Sherbet (from scratch)

Layer 1 — Raspberry (pink): 1 cup raspberries + 1/3 cup sugar + 1/2 cup Chobani yogurt, blended **Layer 2 — Lime (green):** 1/2 cup lime juice + 1/3 cup sugar + 1/2 cup Chobani yogurt + green coloring **Layer 3 — Pineapple (yellow):** 1/2 cup pineapple + 1/3 cup sugar + 1/2 cup Chobani yogurt

Pour layers into loaf pan, swirl, freeze 4-6 hours. Scoop.

FLUID TRACKING REMINDER

Every smoothie is **12-16 oz of fluid.** Every popsicle is **3-4 oz.**

If you're on a fluid restriction (typically 32-48 oz/day): - One smoothie = 1/3 to 1/2 of daily fluid allowance - Plan accordingly — smoothie days mean less fluid elsewhere - Use more ice and less liquid to get thicker texture with less fluid volume

CKD Considerations

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RENAL CHECK — Smoothies & Frozen Treats
K (Potassium): LOW-MED (apple juice base, low-K berries, controlled
tropical fruit)
P (Phosphorus): LOW (Chobani yogurt over milk, no protein powder)
Na (Sodium): LOW (fresh fruit, no added salt)
Fluid: 12-16 oz PER SMOOTHIE — TRACK IT
Protein: LOW-MED (yogurt provides some)
```

"Jamba got you through PD. These get you through everything else."

CHAPTER 13

Drinks, Tea & Homebrew

"The cup is never empty if you know what to pour."

Iced Green Tea, Mojito, Berry Lemonade, Yerba Mate & More

Beverages (Every Ounce Counts Toward Fluid Limit)

"Make every sip count."

FLUID RESTRICTION REMINDER

If you're on a fluid restriction: **32-48 oz (1-1.5 liters) per day is typical.** EVERY drink recipe here counts toward that limit. Plan accordingly: - One drink = 8-12 oz = 1/4 to 1/3 of daily allowance - Ice counts as fluid when it melts - Make drinks STRONG in flavor so smaller portions satisfy - Use smaller glasses — a 6oz cup feels full, a 16oz cup feels half-empty

THE DRINKS

1. Jade Iced Green Tea

Ingredient	Amount	CKD Notes
Green tea bags	3 bags per 2 cups water	Steep strong — you're drinking less volume
Water	2 cups, hot	
Sugar	2-3 tbsp (or to taste)	Thai-style is SWEET
Condensed milk	1 tbsp per glass (optional)	Small amount = controlled P
Ice	Fill glass	Counts as fluid

Method: 1. Steep 3 green tea bags in 2 cups hot water for 5 min (strong brew) 2. Remove bags. Add sugar while hot, stir to dissolve 3. Cool to room temperature, then refrigerate 4. Serve over ice. Drizzle condensed milk if desired — it sinks beautifully

CKD bonus: Green tea has antioxidants and is naturally low in K/P/Na. One of the safest CKD beverages.

Per 8oz serving: ~5mg K, ~5mg P, ~0mg Na (before condensed milk)

Flavor variations: - **Jasmine green tea** — floral, elegant - **Genmaicha** (green tea with roasted rice) — nutty, toasty, incredible iced - **Matcha latte** — 1 tsp matcha whisked into cold milk/water + ice. Stronger green tea flavor.

2. Garden Mint Mojito

Ingredient	Amount	CKD Notes
Fresh mint leaves	8-10 leaves	Muddle gently — releases oils without bitterness
Lime	1/2, cut into wedges	Low K citrus
Sugar	1 tbsp (or simple syrup)	
Sparkling water / club soda	6 oz	Low/no sodium variety
Ice	Fill glass	
Rum	1.5 oz (optional)	Alcohol dehydrates — count fluid, use in moderation

Method: 1. Muddle mint + lime wedges + sugar in bottom of glass (press, don't shred) 2. Fill with ice 3. Pour sparkling water (and rum if using) 4. Stir gently. Garnish with mint sprig + lime wheel

Per 8oz serving (virgin): ~20mg K, ~0mg P, ~10mg Na. One of the cleanest CKD drinks possible.

Variations: - **Strawberry mojito:** Add 3 fresh strawberries to the muddle - **Watermelon mojito:** 2 tbsp fresh watermelon juice + mint + lime - **Pineapple mojito:** 2 tbsp pineapple juice + mint + lime (moderate K — control portion)

3. Porch Berry Lemonade

Ingredient	Amount	CKD Notes
Fresh lemons	3-4 (1/2 cup juice)	Low K citrus
Fresh strawberries	1 cup, hulled	Low K berry
Fresh blueberries	1/2 cup	Low K berry
Sugar	1/2 cup	
Water	3 cups	Makes a pitcher — portion from there
Fresh mint	4-5 leaves (garnish)	

Method: 1. Make simple syrup: dissolve sugar in 1 cup hot water. Cool. 2. Blend berries with 1/2 cup water. Strain through fine mesh (removes seeds) 3. Mix lemon juice + berry puree + simple syrup + remaining water 4. Chill. Serve over ice with mint garnish

Per 8oz serving: ~80mg K, ~10mg P, ~5mg Na. Deep purple-pink color. Beautiful.

The Vorath touch: Add a pinch of edible gold glitter. Purple + gold = Vorathic.

4. Holy Mate Yerba Brew

Yerba mate is CKD-interesting: - Contains caffeine (similar to coffee) — okay in moderation - Contains theobromine (like chocolate) — gentle stimulant - Moderate potassium (~85mg per cup) — acceptable - Rich in antioxidants - Traditional preparation is a CEREMONY — fits the thesis perfectly

Ingredient	Amount	CKD Notes
Yerba mate (loose leaf)	2-3 tbsp	Quality brand: Guayaki, Cruz de Malta, Taragui
Water	8 oz at 160-170F (NOT boiling — burnt mate is bitter)	
Honey or sugar	To taste	

Traditional Mate (with Gourd + Bombilla): 1. Fill gourd 2/3 with yerba mate 2. Tilt gourd, create a slope with the mate on one side 3. Pour cool water into the empty space first (protects the leaves from heat shock) 4. Insert bombilla (metal straw with filter) into the cool water side 5. Pour hot water (160-170F, NOT boiling) into the space near the bombilla 6. Sip through bombilla. Refill with hot water. Repeat 10-15 times (the leaves keep giving) 7. Share the gourd — mate is communal by tradition

Equipment needed:

Item	Price	Where
Mate gourd (wooden or ceramic)	$10-20	Amazon — search "yerba mate gourd"
Bombilla (metal straw)	$5-10	Usually comes with gourd
Yerba mate (1 lb bag)	$8-12	Grocery store or Amazon
Electric kettle with temp control	$25-40	For precise 170F water

Iced Mate (Terere): Cold-brew method: 3 tbsp mate + 3 cups cold water in pitcher. Refrigerate 4+ hours. Strain. Serve over ice with lime + mint. Paraguayan summer drink.

Per 8oz serving: ~85mg K, ~10mg P, ~5mg Na. May fit some CKD plans; compare the serving with your own targets.

Andrew's mate note: The mate ceremony IS the thesis. You fill the gourd, you pour the water, you sip, you refill, you share. It's meditation with caffeine. "All is remembering." The gourd remembers every infusion.

5. Back-Nine Arnold Palmer

Ingredient	Amount
Iced green tea (strong)	4 oz
Fresh lemonade	4 oz
Sweetener	To taste
Ice	Fill

Combine. Simple. Perfect.

6. Market Agua Fresca

Strawberry Agua Fresca

Ingredient	Amount
Fresh strawberries	1 cup
Water	2 cups
Lime juice	1 tbsp
Sugar	2 tbsp

Blend strawberries + water. Strain. Add lime + sugar. Chill. Light, refreshing, LOW-K.

Cucumber Lime Agua Fresca

Ingredient	Amount
Cucumber	1 medium, peeled
Water	2 cups
Lime juice	2 tbsp
Sugar	1 tbsp
Mint	4-5 leaves

Blend cucumber + water. Strain. Add lime + sugar + mint. Incredibly refreshing. Almost zero K/P/Na.

7. Fresh Ginger Beer

Ingredient	Amount
Fresh ginger	2" piece, grated
Lemon juice	2 tbsp
Sugar	1/4 cup
Water	4 cups
Active dry yeast	1/8 tsp (for natural carbonation)

Method: 1. Boil ginger + sugar + 1 cup water for 5 min. Strain. 2. Add remaining 3 cups cold water + lemon juice 3. Add yeast. Stir. Pour into plastic bottle (NOT glass — pressure builds) 4. Cap loosely. Room temp 24-48 hours until carbonated 5. Refrigerate. Serve cold.

This is REAL ginger beer — spicy, carbonated, no preservatives. Use as mixer with mojitos or drink straight.

8. Golden Milk

Ingredient	Amount
Milk (or rice milk for lower P)	1 cup
Turmeric	1 tsp
Ceylon cinnamon	1/4 tsp
Ginger powder	1/4 tsp
Black pepper	Tiny pinch (activates turmeric's curcumin)
Honey	1 tsp
Coconut cream	1 tsp (optional richness)

Heat milk gently (don't boil). Whisk in spices + honey. Serve warm. Inflammation-support, gorgeous golden color.

Cinnamon Cloud crossover — this IS the Cinnamon Cloud in liquid form.

HOME BREWING NOTES

Andrew's TEA SHELF (what's already in the pantry)

Celestial Seasonings Throat Comfort (Slippery Elm & Lemon)

CKD notes: Slippery elm is a demulcent — coats and soothes throat/GI lining. CKD-aware. Naturally caffeine-free. Low K/P/Na.

Recipes using Throat Comfort: - **Throat Comfort Honey Iced Tea:** Brew 2 bags strong, add 1 tbsp honey + 1 tbsp lemon juice. Chill. Serve over ice. Soothes AND refreshes. - **Throat Comfort Hot Toddy (non-alcoholic):** Brew 1 bag, add 1 tsp honey + squeeze of lemon + pinch of Ceylon cinnamon + thin slice of fresh ginger. Drink warm. Dialysis-day comfort drink. - **Throat Comfort Smoothie Base:** Brew 2 bags strong, chill. Use as liquid base in any berry smoothie instead of juice — adds herbal depth + throat soothing.

Celestial Seasonings Immune Support Green Tea

CKD notes: Green tea base with echinacea, elderberry. Moderate caffeine. Antioxidant-rich. Low K/P/Na. Elderberry has some K but the amount in a tea bag is negligible.

Recipes using Immune Support Green Tea: - **Thai-Style Immune Iced Tea:** Brew 3 bags in 2 cups hot water (strong). Add 2 tbsp sugar. Chill. Serve over ice with 1 tbsp condensed milk drizzled. The immune support version of Thai iced tea. - **Immune Matcha Hybrid:** Brew 1 bag Immune Support + whisk in 1/2 tsp matcha powder. Double green tea power. Serve hot or iced. - **Immune Berry Popsicles:** Brew 3 bags strong (1 cup). Add 1/4 cup fresh blueberries blended + 1 tbsp honey. Pour into popsicle molds. Freeze. Immune support on a stick. - **Immune Arnold Palmer:** Brew 2 bags strong, chill. Mix 50/50 with fresh lemonade (lemon juice + sugar + water). Ice. The upgraded Arnold Palmer.

EcoTea Holy Mate (Yerba Mate)

CKD notes: Yerba mate — moderate caffeine (~85mg/cup, similar to coffee). Contains theobromine. Antioxidant-rich. ~85mg K per cup — acceptable for most CKD diets. EcoTea is a quality brand — organic, air-dried (smoother than traditional fire-dried).

Recipes using Holy Mate: - **Traditional Hot Mate:** Use gourd + bombilla if you have them. Fill gourd 2/3 with Holy Mate, pour 170F water (NOT boiling), sip through bombilla. Refill 10-15 times. The ceremony IS the recipe. - **Holy Mate Terere (Iced):** 3 tbsp Holy Mate + 3 cups cold water in pitcher. Refrigerate 4+ hours. Strain. Serve over ice with lime wedge + mint sprig. Paraguayan summer vibes. - **Holy Mate Latte:** Brew strong (2 tbsp mate steeped in 1 cup hot water 5 min, strain). Add 1/2 cup steamed milk or Chobani yogurt thinned with water. Sweeten with honey. The cafe mate. - **Holy Mate Energy Smoothie:** Brew strong, chill. Use as smoothie base: 1 cup chilled mate + 1/2 cup fresh strawberries + 1/2 banana (if K allows) or 1/4 cup mango + Chobani yogurt. Caffeine + fruit + protein. - **Holy Mate Cocktail Mixer (non-alc):** Brew strong, chill. Mix with ginger beer (homemade from earlier recipe) + lime + mint. The mate mojito. Earthy, spicy, citrus. - **Holy Mate Golden Milk:** Brew 1 cup mate. Add 1/2 tsp turmeric + 1/4 tsp cinnamon + pinch black pepper + 1 tsp honey. Caffeine + inflammation-support. Cinnamon Cloud meets mate.

TEA BLENDING EXPERIMENTS

"The Ceremony Blend" (mix all three)

1 bag Throat Comfort + 1 bag Immune Support + 1 tsp Holy Mate in a teapot. Steep 5 min. Strain. You get: soothing (slippery elm) + immunity (echinacea/elderberry) + energy (mate caffeine) + antioxidants (green tea). The trifecta.

"The Dark Mirror Tea" (evening, no caffeine)

2 bags Throat Comfort (caffeine-free) + fresh ginger slices + 1 tsp honey + squeeze of lemon. Warm. Drink after dinner when you need comfort but not caffeine.

"The NorthStar Morning" (full energy)

1 bag Immune Support Green Tea + 1 tsp Holy Mate loose leaf, brewed together. The green tea smooths the mate's earthiness. Double caffeine hit. Add honey + lemon. Start-the-day drink.

HOME SELTZER / SPARKLING WATER STATION

Why DIY seltzer: Store-bought La Croix/Topo Chico = $1-2 per can. Homemade = pennies per glass. Zero sodium, zero calories, zero K/P. The MOST CKD-aware beverage after plain water — and way more fun.

Equipment Options (ranked by $/liter value)

System	Upfront Cost	Per Liter Cost	Notes
DrinkMate	$80-100	~$0.03/L	Works with ANY SodaStream CO2 canister + any liquid (juice, tea, wine). Most versatile.
SodaStream Terra	$70-90	~$0.05/L	Classic. Water-only carbonation. Reliable.
SodaStream Art	$100-130	~$0.05/L	Premium model, lever-pull mechanism
iSi Soda Siphon	$40-60	~$0.10/L	Classic vintage siphon. Uses small CO2 chargers. More expensive per liter but looks amazing.
Aarke Carbonator	$150-200	~$0.05/L	Premium Swedish design. Stainless steel. The Vorathic choice.

Best value: DrinkMate ($80) — can carbonate anything, not just water.
Best looking: Aarke Carbonator ($150-250) — brushed steel, sits on counter like an art piece.

THE AMBITIOUS OPTION: Kegerator + Carboy Homebrew Station

This is the real play. A kegerator with corny kegs + CO2 tank puts ANYTHING on tap — seltzer, kombucha, cold brew, iced tea, lemonade, mate. Bulk production, pennies per glass, always cold and carbonated.

Equipment Needed

Item	Price	What It Does
Mini kegerator / keezer (converted chest freezer or purpose-built)	$150-300	The cold box. Holds 1-4 corny kegs.
OR: Kegco single-tap kegerator	$350-500	Purpose-built, includes tower + tap + CO2 reg
5-gallon corny keg (ball lock) x2-4	$50-80 each	Soda industry kegs. Holds 5 gallons (~640 oz = ~80 glasses). Reusable forever.
5 lb CO2 tank	$60-80	Lasts ~6-8 full kegs. Refill at homebrew shop or welding supply (~$15-20)
CO2 regulator (dual gauge)	$40-60	Controls carbonation pressure (set to ~30 PSI for seltzer, ~12 PSI for beer/kombucha)
Gas + liquid disconnect set	$15-25	Connects CO2 to keg and keg to tap
Tap + tower (or picnic tap)	$20-40	Picnic tap = cheap and works. Tower tap = looks professional.
Tubing (gas + liquid line)	$10-15	Food-grade vinyl
5-gallon glass carboy x2	$25-35 each	For fermenting kombucha, ginger beer, tepache, shrubs
Airlock + stopper	$3-5 each	For fermentation

Total Setup Cost

Config	Cost	What You Get
Budget (1 keg + picnic tap)	~$250-350	One beverage on tap. Good starter.
Mid (kegerator + 2 kegs)	~$500-700	Two beverages on tap. Rotation.
Full (kegerator + 4 kegs + carboys)	~$700-1000	Four beverages on tap + fermentation station. The dream.

What Goes On Tap

Keg	Beverage	How
Keg 1: Seltzer	Plain carbonated water — always on tap. Add LorAnn drops at the glass.	Fill keg with filtered water. Connect CO2 at 30 PSI. Shake keg. Wait 24 hrs. Infinite seltzer.
Keg 2: Cold Brew Coffee	5 gallons of cold brew on tap — lasts 2+ weeks	Steep 2 lbs coarse coffee in keg with 5 gal water for 24 hrs. Strain. Pressurize low (5 PSI, no carbonation).
Keg 3: Iced Tea / Mate	Brew a big batch of Holy Mate or Immune Support green tea. Chill in keg.	Brew concentrated, dilute in keg. Optional: carbonate at 15 PSI for sparkling tea.
Keg 4: Kombucha / Ginger Beer	Ferment in carboy, transfer to keg for carbonation + serving	Ferment in glass carboy 7-14 days. Transfer to keg. Force carbonate at 15 PSI. On tap.

Fermentation Projects (Carboy)

Beverage	Ferment Time	Difficulty
Kombucha	7-14 days (SCOBY needed)	Easy once SCOBY is established
Ginger Beer	2-3 days	Easy — ginger + sugar + yeast
Tepache	3-5 days	Easy — pineapple rinds + piloncillo + cinnamon
Water Kefir	24-48 hours (kefir grains needed)	Easy, probiotic, CKD-aware
Jun Tea	7-14 days (like kombucha but with green tea + honey)	Medium
Shrub / Drinking Vinegar	1-2 weeks (fruit + vinegar + sugar)	Easy, no live culture needed

CKD Notes for Kegerator Beverages

- **Seltzer:** ZERO K/P/Na — the most CKD-aware beverage possible
- **Cold brew:** ~85mg K per cup — acceptable, moderate caffeine
- **Kombucha:** ~50mg K per cup — generally CKD-okay in 4-8oz servings. verify with your care team re: live cultures for immunocompromised
- **Ginger beer:** Low K/P/Na — ginger is anti-nausea

- **ALL beverages = FLUID** — track everything toward daily limit

Where to Buy

- **Kegerator:** Amazon, HomebrewSupply.com, MoreBeer.com
- **Corny kegs:** eBay (used = $30-50, cleaned), Amazon (new = $60-80)
- **CO2 tank:** Local homebrew shop (they often sell + refill), Amazon
- **Carboys:** Amazon, local homebrew shop
- **CO2 refills:** Welding supply shop (~$15-20 for 5lb fill), some homebrew shops

Seltzer Flavor Recipes (zero carb, zero sugar)

All flavors = squeeze/drop into carbonated water. Zero calories unless noted.

Flavor	How	CKD Notes
Classic Lime	Squeeze 1/2 lime per glass	Low K citrus — the La Croix dupe
Lemon Drop	Squeeze 1/2 lemon + 1 drop stevia	Sharp, clean
Cucumber Mint	3 cucumber slices + 2 mint leaves muddled	Almost zero K/P/Na
Ginger Fizz	1 tsp fresh grated ginger steeped in water, strain, then carbonate	Anti-nausea, warming
Berry Blast	Muddle 3 strawberries or raspberries, strain, add to seltzer	Trace K, mostly water
Tropical Punch	LorAnn Fruit Punch SS flavoring — 2 drops per glass	Zero calories, intense flavor
Sour Apple Fizz	LorAnn Sour Apple SS — 2 drops + squeeze of lime	Andrew's #1 flavor profile
Blue Raspberry Soda	LorAnn Blue Raspberry SS — 2 drops + blue food coloring	Looks like Baja Blast's cooler cousin
Mango Citrus	LorAnn Mango SS — 2 drops + squeeze of lime	Tropical zero-cal
Baja Blast Zero (v2)	2 drops LorAnn Tropical Punch + 2 drops blue food coloring + 1 drop green + lime squeeze	The UPGRADED Baja Blast dupe
Italian Soda	Any LorAnn flavor + 1 tbsp cream (heavy cream or coconut cream)	Creamy Italian soda, ~20 cal
Arnold Fizzer	Brew green tea strong, chill, carbonate + lemon	Sparkling Arnold Palmer
Holy Mate Fizz	Brew EcoTea Holy Mate strong, chill, carbonate + lime	Caffeinated sparkling mate
Lavender Lemonade Fizz	Lavender water (steep dried lavender 10 min) + lemon + carbonation	Spa energy in a glass
Grapefruit Paloma	Grapefruit juice 1 tbsp + lime + carbonation (CKD note: grapefruit moderate K — 1 tbsp is fine)	Mexican cantina vibes
Shrub Soda	Any drinking vinegar/shrub (1 tbsp) + seltzer	Fermented, probiotic, tangy

The LorAnn Trick for Seltzer

Your LorAnn Super Strength flavorings (already ordering Green Apple, Watermelon, Blue Raspberry, Mango) work PERFECTLY for seltzer — 1-2 drops per glass = intense flavor, zero carbs, zero sugar, zero K/P/Na. One $7 bottle makes 200+ glasses of flavored seltzer. That's $0.035 per flavored seltzer vs $1.50 for a La Croix.

Fluid Tracking

Every seltzer = fluid. Track it. But since it's the MOST kidney-friendly beverage you can drink (no sodium, no phosphoric acid, no potassium), it's the best way to use your fluid allowance.

Cold Brew Coffee

Ingredient	Amount
Coarse ground coffee	1/3 cup
Cold water	1.5 cups

Combine in jar. Refrigerate 12-24 hours. Strain through fine mesh + paper filter. Dilute 1:1 with water or milk. Add ice.

Cold brew is ~67% less acidic than hot-brewed coffee and lower in K per cup when diluted.

Sun Tea

Put 4-5 tea bags (any variety) in a glass jar with 4 cups water. Set in sunlight for 3-4 hours. Remove bags. Refrigerate. The gentlest extraction possible.

Kombucha (CKD Caution)

Kombucha is fermented tea — moderate K (~50mg per cup), trace alcohol, probiotics. Generally CKD-okay in small amounts (4oz per day). However: - Watch sugar content in commercial brands - Unpasteurized kombucha = live bacteria — check with your doctor if immunocompromised - **Verify with your care team before making kombucha a regular thing**

COFFEE BAR

Coffee originated in Ethiopia ~850 AD. A goat herder named Kaldi noticed his goats dancing after eating coffee berries. He tried them. The rest is civilization.

Andrew's White Chocolate Mocha with Hazelnut & Coconut

The one that makes the whole morning make sense.

Ingredient	Amount	CKD Notes
Strong brewed coffee or espresso	8 oz (1 cup or 2 shots)	Caffeine is CKD-aware in moderation — 2-3 cups/day max
White chocolate chips	1 tbsp	Melt into hot coffee — lower P than dark chocolate
Coconut cream	2 tbsp	NOT coconut water (high K). Cream is rich + low K.
Hazelnut syrup (Torani or homemade)	1 tbsp	Or: steep 1 tbsp crushed hazelnuts in hot coffee 5 min, strain
Unsweetened almond milk	1/4 cup, steamed/frothed	Lower P than dairy. Froths well.
Whipped cream (optional)	Dollop	Small amount = controlled P
Coconut flakes, toasted	Pinch on top	Garnish

Method: Brew coffee strong. Melt white chocolate chips directly in the hot coffee (stir until dissolved). Add coconut cream + hazelnut syrup. Stir. Top with frothed almond milk. Whipped cream if you earned it. Toasted coconut flakes on top.

Homemade Hazelnut Syrup: 1/2 cup sugar + 1/2 cup water + 1/4 cup crushed hazelnuts. Simmer 10 min. Strain. Keeps 2 weeks refrigerated. Better than Torani.

Per cup: ~85mg Na | ~60mg P | ~180mg K

Vanilla Cloud Latte

Ingredient	Amount
Espresso or strong coffee	2 shots (2 oz)
Unsweetened almond milk	1 cup, steamed
Vanilla extract	1/2 tsp
Sugar or sweetener	1 tsp

Method: Steam almond milk with vanilla + sugar. Pour espresso into mug. Add steamed milk. That's it. Starbucks charges $6. This costs $0.40.

Iced Caramel Cold Brew

Ingredient	Amount
Cold brew coffee	8 oz
Unsweetened almond milk	1/4 cup
Caramel sauce	1 tbsp (homemade: sugar + margarine + cream, same as Twix recipe)
Ice	Full glass
Vanilla	1/4 tsp

Method: Fill glass with ice. Pour cold brew. Add almond milk + vanilla. Drizzle caramel. Stir or don't — the swirl is beautiful either way.

Cinnamon Cloud Coffee

Ingredient	Amount
Hot coffee	8 oz
Ceylon cinnamon	1/2 tsp
Coconut cream	1 tbsp
Honey	1 tsp
Vanilla	1/4 tsp

Method: Stir cinnamon + honey + vanilla into hot coffee. Float coconut cream on top. The Cinnamon Cloud in liquid form. Inflammation-support + delicious.

Turkish Coffee

Invented ~1555 in Istanbul. The first coffeehouses were called "schools of the wise." UNESCO listed Turkish coffee as Intangible Cultural Heritage in 2013.

Ingredient	Amount
Finely ground Turkish coffee	2 tsp
Cold water	1 demitasse cup (3 oz)
Sugar	1 tsp (optional — traditional: ask "sweet, medium, or plain")
Cardamom	1 cracked pod (optional — Arabic variation)

Method: Add coffee + sugar + water to ibrik/cezve (small pot). Heat on LOW. When foam rises, remove from heat. Let foam settle. Return to heat. Repeat 2-3 times. Pour into demitasse WITH the foam. Let grounds settle 1 min. Drink slowly. Read your fortune in the grounds if the mood strikes.

Per cup (3 oz): ~5mg Na | ~10mg P | ~80mg K — one of the lowest-impact drinks that exists.

Vietnamese Iced Coffee

French colonists brought coffee to Vietnam in 1857. The Vietnamese made it better. Sweetened condensed milk was the only dairy that survived the tropical heat.

Ingredient	Amount	CKD Notes
Dark roast coffee (coarse ground)	3 tbsp	Vietnamese phin filter preferred, French press works
Hot water	6 oz	Just off boil
Sweetened condensed milk	2 tbsp	Moderate P — small amount, high impact
Ice	Full glass	

Method: Brew coffee through phin filter (or French press 4 min). Put condensed milk in bottom of glass. Pour hot coffee over it. Stir. Pour over full glass of ice. The hot coffee hitting the cold ice IS the experience.

Cuban Cafecito

Cuban coffee culture survived the revolution, the embargo, and Miami. The espumita (sugar foam) is non-negotiable.

Ingredient	Amount
Dark roast espresso	2 shots (or moka pot)
Sugar	2 tsp (yes, that much — this is Cuba)

Method: Pull espresso. While brewing, put sugar in a small cup. Add FIRST few drops of espresso to sugar. Whisk vigorously with a spoon until you get a thick tan foam (espumita). This takes 30 seconds of aggressive stirring. Pour remaining espresso over the foam. The espumita floats. Drink in 3 sips. Argue about politics afterward.

Ethiopian Buna Coffee

The birthplace of coffee. Ethiopian ceremony is UNESCO-recognized. Three rounds: Abol, Tona, Baraka. Each round gets weaker. The third round is a blessing.

Ingredient	Amount
Green coffee beans	1/4 cup
Water	3 cups
Sugar	To taste
Cardamom or clove (optional)	1 pod
Frankincense (optional, for aroma)	Small piece, burned nearby

Method: Roast green beans in a dry pan over medium heat, shaking constantly, until dark and oily (8-10 min). Grind immediately (coarse). Boil water in a jebena (clay pot) or small saucepan. Add ground coffee. Boil, remove from heat, let settle. Pour from height into small cups (no filter — grounds settle). Serve three rounds from the same grounds — each weaker, each with its own name.

Shortcut: Use already-roasted Ethiopian Yirgacheffe beans. French press. Still tastes like the birthplace.

Japanese Flash-Brew Iced Coffee

Japanese method: brew hot coffee directly onto ice. The thermal shock locks in aromatics that cold brew loses. Invented by Tadao Ueshima, 1960s.

Ingredient	Amount
Medium roast coffee (pour-over grind)	30g
Hot water (just off boil)	300ml
Ice	150g in the carafe

Method: Put 150g ice in your pour-over carafe/server. Place dripper on top. Add 30g coffee grounds. Pour 300ml hot water over grounds in slow circles (same as normal pour-over). Coffee drips directly onto ice — instantly chilled. The hot extraction + instant cooling = brightest, cleanest iced coffee possible. Superior to cold brew for fruity/floral beans.

Mexican Cafe de Olla

Clay pot coffee. Piloncillo (raw cane sugar) + cinnamon + coffee brewed together in earthenware since the Mexican Revolution. Soldaderas (female soldiers) brewed it in the field.

Ingredient	Amount
Dark roast coffee (coarse ground)	4 tbsp
Water	3 cups
Piloncillo or dark brown sugar	2 tbsp (crushed)
Ceylon cinnamon stick	1 whole
Orange peel	1 strip (2 inches)
Clove	2 whole

Method: Bring water + piloncillo + cinnamon + orange peel + cloves to a boil in a clay pot or saucepan. Stir until sugar dissolves. Add coffee grounds. Remove from heat. Steep 5 min. Strain through fine mesh. Serve in clay mugs if you have them. The cinnamon + orange + coffee combination is older than any coffee chain on earth.

Italian Affogato

"Affogato" means "drowned." Vanilla ice cream drowned in espresso. Invented: debated. Perfected: every trattoria in Italy.

Ingredient	Amount
CKD vanilla ice cream (recipe in frozen treats chapter)	1 scoop
Espresso, fresh	1 shot, hot

Method: Scoop ice cream into a small cup or glass. Pour hot espresso over it. Eat/drink immediately. The hot espresso melts the ice cream into a creamy coffee pool. It is simultaneously dessert, coffee, and a religious experience. Takes 30 seconds to make. Takes 30 seconds to consume. Changes your entire afternoon.

Masala Chai Coffee

Not coffee but belongs here. Chai predates coffee by centuries — originated in Ayurvedic medicine ~5000 years ago. The British industrialized it. Indians perfected it.

Ingredient	Amount
Black tea (Assam or CTC)	2 tsp
Water	1 cup
Unsweetened almond milk	1/2 cup
Sugar	1-2 tsp
Fresh ginger	1" piece, smashed
Cardamom pods	3, cracked
Ceylon cinnamon	1/2 stick
Black peppercorns	3
Clove	2

Method: Boil water with all spices 3 min. Add tea. Boil 2 min. Add almond milk + sugar. Bring to boil again — watch it, it rises FAST. Strain into cups. The spices should hit your nose before the cup reaches your lips.

Vespa's Iced Matcha Latte

Matcha was invented by Buddhist monks in 12th century Japan. They drank it to stay awake during meditation. Zen and caffeine — same practice, different mechanism.

Ingredient	Amount
Ceremonial grade matcha powder	1 tsp
Hot water (not boiling — 175F)	2 oz
Unsweetened almond milk (or oat milk for Vespa)	1 cup
Vanilla	1/4 tsp
Honey or sweetener	1 tsp
Ice	Full glass

Method: Sift matcha into a bowl. Add hot water. Whisk with bamboo chasen (or regular whisk) until frothy and smooth — no clumps. Pour over ice in a tall glass. Add sweetener + vanilla. Top with cold milk. The green layer under the white milk is the visual.

Vespa's Breve (Half & Half Latte)

"Breve" is Italian for "short/brief." American invention — nobody in Italy puts half & half in espresso. We do what we want.

Ingredient	Amount	CKD Notes
Espresso	2 shots	
Half & half	3/4 cup, steamed	Higher P than almond milk — Vespa's treat, Andrew subs almond milk
Vanilla syrup	1 tbsp	
Cinnamon dust	Pinch on top	

Method: Steam half & half until thick microfoam. Pull espresso. Add vanilla to espresso. Pour steamed half & half over. The fat content makes it THICK — almost like drinking a melted latte ice cream. Cinnamon on top.

Andrew's CKD version: Sub almond milk for half & half. Add 1 tbsp coconut cream for richness. Similar texture, lower P.

Frosted Coffeehouse Frappe

Starbucks trademarked "Frappuccino" in 1995. Before that it was just "iced blended coffee." They charged $4 for a name.

Mocha Frappuccino:

Ingredient	Amount
Strong brewed coffee, cooled	1 cup
Unsweetened almond milk	1/2 cup
Cocoa powder	1 tbsp
Sugar	2 tbsp
Vanilla	1/2 tsp
Ice	2 cups
Whipped cream	On top
Chocolate drizzle	On top

Method: Blend everything except whipped cream until smooth and thick. Pour into tall glass. Top with whipped cream + chocolate drizzle. Costs $0.60. Starbucks charges $6.45.

Variations: - **Vanilla Bean:** Skip cocoa. Add 1 tsp vanilla extract + 1 tbsp powdered sugar. - **Caramel:** Skip cocoa. Add 2 tbsp caramel sauce. Drizzle inside glass before pouring. - **Matcha (Vespa's):** Skip coffee + cocoa. Use 1 tsp matcha + almond milk + ice + honey. Blend. - **Strawberry Crème:** Skip coffee + cocoa. Blend 1/2 cup strawberries + almond milk + ice + vanilla + sugar.

MOCKTAILS

"The bar equipment stays. It's a shrine now."

The fancy shaker, the jigger, the muddler, the strainer — all of it stays on the counter. It just pours different things now.

Rum Punch (Zero Proof)

Ingredient	Amount
Pineapple juice	2 oz
Orange juice (small — moderate K)	1 oz
Cranberry juice	1 oz
Lime juice	1 oz
Grenadine	1/2 oz
Angostura bitters	2 dashes (technically <0.5% ABV — negligible)
Ice	Crushed

Method: Shake all with ice in your good shaker. Strain over crushed ice in a rocks glass. Float grenadine for the sunset layer. Garnish with lime wheel + pineapple wedge + cherry.

Bahama Mama (Zero Proof)

Ingredient	Amount
Pineapple juice	2 oz
Coconut cream	1 oz
Grenadine	1/2 oz
Lime juice	1/2 oz
Orange juice	1 oz
Coffee extract	1/4 tsp (the secret Bahama Mama ingredient)
Ice	Crushed

Method: Blend everything with ice until smooth. Pour into a hurricane glass. Garnish with pineapple wedge + umbrella + cherry. The coconut cream makes it creamy and tropical without dairy.

Margarita (Zero Proof — Andrew's Tequila Shrine Edition)

Ingredient	Amount
Lime juice	2 oz (fresh squeezed — no shortcuts)
Orange juice	1 oz
Agave nectar	1 oz
Jalapeño	2 slices (optional — spicy marg)
Salt	Rim only (lick, don't drink)
Ice	

Method: If spicy: muddle jalapeño slices in shaker first. Add lime, OJ, agave, ice. Shake hard. Rim glass with lime + coarse salt. Strain into glass over fresh ice. Garnish with lime wheel.

Variation — Mango Margarita: Add 2 oz fresh mango puree. Skip the jalapeño. Summer in a glass.

Piña Colada (Zero Proof)

Ingredient	Amount
Pineapple juice	3 oz
Coconut cream	2 oz
Lime juice	1/2 oz

Ingredient	Amount
Ice	1 cup

Method: Blend everything until smooth. Pour into a chilled glass. Garnish with pineapple wedge. The coconut cream IS the drink — don't sub coconut water (high K).

Old Fashioned (Zero Proof)

Ingredient	Amount
Simple syrup	1/2 oz
Angostura bitters	3 dashes
Orange bitters	1 dash
Seedlip Spice 94 or Ritual Zero Proof whiskey	2 oz (or strong brewed rooibos tea, chilled)
Orange peel	1 strip
Ice	1 large cube

Method: Stir syrup + bitters in rocks glass. Add large ice cube. Pour spirit alternative over ice. Express orange peel over the drink (squeeze to release oils, run around rim), drop in. Stir 15 seconds.

CKD note on mocktails: Fruit juices are moderate-K. One 6-8oz mocktail = ~200-350mg K depending on juice. Plan around it. The smaller glass, the better it works. Use the jigger — that's what it's for.

CKD Considerations

```
RENAL CHECK — Drinks & Homebrew
K (Potassium): LOW (green tea, lemon/lime citrus, berries, mint — all low-K)
P (Phosphorus): LOW (no dairy-heavy bases, no cola/phosphoric acid)
Na (Sodium): LOW (homemade = zero hidden sodium)
Fluid: EVERY DRINK = FLUID. 8oz minimum per serving. TRACK EVERYTHING.
Caffeine: Green tea + mate = moderate caffeine. Limit to 2-3 servings/day.
```

"The ceremony is the making. The making is the prayer. The prayer is a cup of mate shared with someone who gets it."

RENALWISE Brewing Lab — Kombucha, Honey Mead & Fruit Ciders

Using VEVOR Brewing Machine + Still + Keg System

"The ceremony is the fermentation. The fermentation is the prayer."

Andrew has: VEVOR all-in-one brew system, VEVOR still, KitchenAid, blender, countertop carbonator

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IMPORTANT: CKD & ALCOHOL

- **Alcohol is NOT restricted in most CKD diets** unless co-morbid liver disease
- **BUT:** Alcohol is a diuretic — it increases urine output in people who still produce urine, and dehydrates everyone
- **If you're fluid-restricted:** Drink on off-treatment days only. Alcohol + post-treatment BP drop = fall risk
- **Fluid tracking:** Every ounce of mead/cider/kombucha = fluid toward daily limit
- **Moderation:** 1-2 drinks max per sitting. The mead and cider are stronger than beer.
- **Verify with your care team** before establishing a regular drinking pattern

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1. KOMBUCHA (Non-Alcoholic Fermented Tea)

Basic Kombucha (1-Gallon Batch)

Ingredient	Amount	Notes
Water	14 cups	Filtered, no chlorine (chlorine kills SCOBY)
Sugar (plain white)	1 cup	The SCOBY eats this — most sugar ferments out
Tea bags (black or green)	8 bags	Celestial Seasonings Immune Support green tea works great
SCOBY + starter liquid	1 SCOBY + 2 cups starter	From Amazon kit or a friend's batch

Method: 1. Boil 4 cups water. Remove from heat. Add tea bags + sugar. Steep 15 min. Remove bags. 2. Add remaining 10 cups cold water to bring to room temp 3. Pour into glass jar/carboy (NOT metal — kills SCOBY) 4. Add SCOBY + starter liquid 5. Cover with cloth + rubber band (needs air flow, not airtight) 6. Dark spot, room temp (68-85F), 7-14 days 7. Taste at day 7 — sweet = needs more time, vinegary = done/over-fermented 8. Target: slightly tart, slightly sweet, light fizz

Second Fermentation (Flavor + Carbonation)

This is where it gets fun — bottle with fruit for natural carbonation:

Flavor	Add to Bottle	Ferment
Ginger Lemon	1 tbsp grated ginger + 1 tbsp lemon juice per 16oz bottle	2-3 days
Strawberry	3 diced strawberries per bottle	2-3 days
Mango Habanero	2 tbsp mango puree + 1 thin habanero slice	2-3 days (SPICY kombucha!)
Blueberry Lavender	5 blueberries + pinch dried lavender	3-4 days
Pineapple Ginger	2 tbsp pineapple juice + 1 tsp ginger	2-3 days
Green Apple	2 tbsp fresh apple juice + LorAnn Green Apple 1 drop	2-3 days
Raspberry Lime	4 raspberries + 1 tbsp lime juice	2-3 days
Passion Fruit	1 tbsp passion fruit puree	2-3 days
Holy Mate	2 tbsp brewed EcoTea Holy Mate (cooled)	2-3 days (caffeinated kombucha)
Cinnamon Cloud	1/4 tsp Ceylon cinnamon + 1 tsp honey	2-3 days

SAFETY: Flip-top bottles build pressure. BURP bottles daily (open briefly to release CO2). Glass can explode if over-fermented. Keep in a container just in case.

Continuous Brew Method (Better for Regular Production)

Instead of batch-by-batch, use a large vessel (2-5 gallon glass jar with spigot): 1. Brew initial batch as above 2. When ready, DRAIN 70% from spigot into bottles for 2F 3. Leave 30% + SCOBY in vessel 4. Add fresh sweet tea to refill 5. Repeat every 5-7 days = infinite kombucha pipeline

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2. HONEY MEAD (Honey Wine — the oldest alcohol on earth)

Basic Mead (1-Gallon Batch — VEVOR Brew System)

Mead = honey + water + yeast. That's it. The simplest alcohol you can make.

Ingredient	Amount	Notes
Raw honey	3 lbs (~1 quart)	Local Oregon honey if possible — wildflower or clover. This is $15-20 at Fred Meyer for a quality mead.
Water	~1 gallon (to fill carboy to shoulder)	Filtered, no chlorine
Yeast	1 packet Lalvin 71B (wine yeast)	Best for mead — fruity, forgiving. Amazon ~$5/5 packets
Yeast nutrient	1 tsp	Fermaid-O or DAP. Honey lacks nutrients yeast needs.

Method (VEVOR brew system or carboy): 1. Heat 1/2 gallon water to 140F (NOT boiling — kills honey enzymes) 2. Add honey, stir until dissolved. This is called "must." 3. Cool to under 80F (yeast dies above 90F) 4. Pour into sanitized 1-gallon carboy 5. Top up with cool water to fill to shoulder (leave 2-3" headspace) 6. Sprinkle yeast on surface. Add yeast nutrient. Swirl gently. 7. Attach airlock. Place in dark spot, 60-75F. 8. **Primary fermentation: 2-4 weeks** — bubbling = active fermentation. When bubbling slows to 1 bubble/min, it's nearly done. 9. **Rack (siphon) to secondary carboy** — leave sediment behind 10. **Secondary fermentation: 1-3**

months — clears and mellows 11. **Bottle when clear.** Mead improves with age — 6 months minimum, 1 year is better.

ABV: ~12-14% (honey wine strength)

Flavored Meads (Melomels, Metheglins, Cysers)

Name	What to Add	When to Add	Result
Strawberry Melomel	2 lbs fresh strawberries, mashed	In secondary (rack onto fruit)	Pink, fruity, summer mead
Blueberry Melomel	2 lbs fresh blueberries, crushed	In secondary	Deep purple, tart-sweet
Mango Melomel	2 lbs fresh mango, diced	In secondary	Tropical gold
Raspberry Melomel	1.5 lbs fresh raspberries	In secondary	Ruby red, tart
Cherry Melomel	2 lbs fresh cherries, pitted	In secondary	Dark garnet, complex
Metheglin (Spiced)	Cinnamon stick + cloves + star anise + vanilla bean	In primary, remove after 1 week	Warm, holiday, mulled wine vibes
Cyser (Apple Mead)	Replace half the water with fresh apple cider	In primary	Apple wine meets honey wine
Capsicumel (Hot Mead)	2-4 habaneros, sliced	In secondary, taste daily, remove when desired heat reached	Sweet heat — the hot sauce of alcohol
Bochet (Caramelized Mead)	Caramelize honey before adding water (cook honey to dark amber, 300F)	Primary stage	Dark, complex, toffee-like. Advanced technique.
Joe's Ancient Orange Mead	1 whole orange (sliced, peel on) + 25 raisins + 1 cinnamon stick + 1 whole clove + pinch nutmeg + bread yeast	All in primary, dead simple	The famous beginner mead. Drinkable in 2 months. Forgiving.

Joe's Ancient Orange — THE Beginner Recipe

If you brew ONE thing first, brew this. It's foolproof.

Ingredient	Amount
Raw honey	3.5 lbs
Water	To fill 1-gallon jug
Orange	1 whole, sliced into 8ths (PEEL ON)
Raisins	25
Cinnamon stick	1
Whole clove	1
Whole allspice	1 (optional)
Nutmeg	Pinch
Bread yeast	1 tsp (Fleischmann's — yes, bread yeast works)

Method: Put everything in a 1-gallon jug. Shake. Airlock. Wait 2 months. When the orange sinks, it's done. Strain. Drink. This recipe has been making first-time meadmakers for 20 years.

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3. FRUIT CIDER (Hard Cider from Fresh Juice)

Basic Apple Cider (1-Gallon)

Ingredient	Amount	Notes
Fresh apple cider/juice	1 gallon	Pasteurized, NO preservatives (potassium sorbate kills yeast). Fresh-pressed from Fred Meyer produce section is ideal.
Brown sugar	1/2 cup (optional — raises ABV)	
Yeast	1 packet Lalvin EC-1118 (champagne yeast) or Safale S-04 (ale yeast, fruitier)	
Yeast nutrient	1/2 tsp	

Method: 1. Pour cider into sanitized carboy, leaving 3" headspace 2. Add brown sugar if using, stir to dissolve 3. Sprinkle yeast + nutrient 4. Airlock. Dark spot. 60-70F. 5. **Ferment 2-3 weeks** until bubbling stops 6. Rack to secondary. Let clear 1-2 weeks. 7. Bottle. Drinkable immediately. Better at 1 month.

ABV: ~5-7% (beer strength). With brown sugar: ~7-9%.

Fruit Cider Variations

Cider	Method	Result
Pear (Perry)	Sub pear juice for apple	Lighter, more delicate
Strawberry Cider	1 lb mashed strawberries in secondary	Pink, fruity, summer crusher
Mango Cider	1 lb mango puree in secondary	Tropical, golden
Pineapple (Tepache-Cider Hybrid)	1/2 gallon apple cider + 1/2 gallon pineapple juice	Sweet, tropical, fizzy
Ginger Cider	2" fresh ginger, grated, in primary	Spicy, warming
Cranberry Cider	1 cup cranberry juice in secondary	Tart, ruby, holiday
Hopped Cider (Graff)	Add 1/2 oz dry hops in secondary for 3-5 days	Beer-cider hybrid. Aromatic.
Spiced Cider Syrup	Add cinnamon-ginger simple syrup at bottling or serving	Non-medicated flavor variant. Label sugar and spice additions.

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4. DISTILLING (VEVOR Still — Oregon Legal Notes)

Oregon law: You CAN own a still. You CAN distill water and essential oils. You CANNOT distill alcohol without a federal DSP (Distilled Spirits Permit). That said — essential oil distillation and water distillation are legitimate uses.

What You CAN Legally Distill

Product	Legal?	Use
Distilled water	Yes	Purest water for brewing, seltzer base, CPAP machines
Essential oils	Yes	Lavender, mint, rosemary — for soaps, candles, aromatherapy
Hydrosols (floral waters)	Yes	Rose water, lavender water — for cooking (Persian ketchup!)
Vinegar concentration	Yes (grey area)	Concentrate homemade vinegar for hot sauce

DIY Rose Water (for Persian Recipes + Aroma)

Ingredient	Amount
Fresh or dried rose petals (food grade)	2 cups
Distilled water	4 cups

VEVOR still method: Add water + petals to pot. Distill on LOW. Collect the condensate — this IS rose water. Pure, fresh, better than store-bought. Use in Persian ketchup, bastani ice cream, non-food aromatic use.

DIY Lavender Water

Same process with dried culinary lavender. Use in blueberry lavender cream pops, golden milk, or as a pillow spray.

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5. KEGERATOR INTEGRATION

The Full Tap Lineup (4-Tap Dream Setup)

Tap	Beverage	Rotation
Tap 1	Force-carbonated seltzer (always on)	Permanent
Tap 2	Kombucha (rotating flavors)	Swap every 1-2 weeks
Tap 3	Hard cider or mead (seasonal)	Swap every 1-2 months
Tap 4	Cold brew coffee or iced mate	Swap weekly

VEVOR Kegerator Options

Search Amazon/VEVOR direct for: - `VEVOR kegerator` — they make several models $200-400 - `VEVOR keezer conversion kit` — convert any chest freezer into a kegerator

The VEVOR play: You already trust the brand. Their kegerator + your existing brew system + corny kegs = complete beverage production and serving pipeline.

BREWING SCHEDULE (First Month)

Week 1

- **Day 1:** Start Joe's Ancient Orange Mead (set and forget for 2 months)
- **Day 1:** Start kombucha first batch (7-14 day ferment)
- **Day 3:** Start apple cider (2-3 week ferment)

Week 2

- **Day 8-10:** Kombucha ready for 2nd ferment — bottle with flavors
- **Day 10:** Start second kombucha batch (continuous brew from now on)

Week 3-4

- **Day 18-21:** Apple cider ready — rack to secondary, add fruit if desired
- **Kombucha 2F bottles ready** — drink! Start next batch.

Month 2

- Apple cider bottles — drinking
- Mead still fermenting (patience)
- Kombucha on continuous rotation
- Start a fruit cider variation

Month 3+

- Mead approaches drinkable
- Multiple ciders in rotation
- Kombucha is a daily habit
- Consider starting a mead with the VEVOR brew system at 5-gallon scale

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EQUIPMENT STILL NEEDED (Amazon Cart)

Item	Why	Est. Price
5-gal corny keg x2	Keg kombucha + cider	~$60-80 each (added to cart)
SCOBY starter	Start kombucha	~$12 (added to cart)
1-gallon glass carboy x2	Small-batch mead + cider	~$8-12 each
Airlocks + stoppers	Fermentation	~$5/3-pack
Auto-siphon + tubing	Racking/transferring	~$12
Star San sanitizer	Sanitize EVERYTHING	~$10
Lalvin 71B yeast (5-pack)	Mead yeast	~$8
Lalvin EC-1118 yeast (5-pack)	Cider/champagne yeast	~$8
Yeast nutrient (Fermaid-O)	Mead needs this	~$8
Hydrometer	Measure ABV	~$8
Flip-top bottles (12-pack)	Kombucha 2F + bottling	~$20
TOTAL NEW EQUIPMENT		**~$180-240**

CKD Considerations

```
RENAL CHECK — Homebrew Beverages
K (Potassium): LOW-MED (kombucha ~50mg/cup, cider ~100mg/cup, mead
varies)
P (Phosphorus): LOW (no phosphate additives in homebrew)
Na (Sodium): ZERO (homebrew has no added sodium)
Fluid: EVERY DRINK = FLUID. Track toward daily limit.
Alcohol: Off-treatment days only. 1-2 servings max. Dehydrates.
Verify alcohol + CKD med interactions with your care team
```

"Fermentation is the universe's oldest ceremony. Yeast eats sugar and produces joy. Biology making light — in liquid form."

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7 Rainbow Sodas + Visual Effects + Blacklit Display Shelf

"Joseph Priestley invented carbonated water in 1767 by suspending a bowl of water above a beer vat at a brewery in Leeds, England."

VORATH SPECTRUM SODAS — 7 Colors, 7 Flavors, 1 Glowing Shelf

Every soda on this page is phosphoric-acid-free, low-sodium, and potassium-conscious. No cola, no Mountain Dew, no Dr Pepper — those are phosphorus bombs. These are built from scratch with real botanicals, real carbonation, and real visual effects that make a dark room look like a stained-glass cathedral.

Fluid note: every soda counts toward daily fluid intake. Track it.

THE VISUAL EFFECTS TOOLKIT

Before you build the sodas, understand the six visual technologies at work. Mix and match across any recipe.

UV Fluorescence

Tonic water contains quinine, which fluoresces brilliant blue under 365nm UV (blacklight). Any soda using a tonic water base will glow blue-white in a dark room under UV. Diet tonic water works identically and has zero phosphorus.

Iridescence / Shimmer

Edible luster dust (FDA-compliant, food-grade mica powder) suspended in liquid creates a swirling metallic shimmer. Gold, silver, copper, and pearl varieties are available. Add 1/4 tsp per 12 oz, stir or shake before serving. The particles catch any light source — backlight, UV, candlelight. It looks like a potion.

Color-Changing (Butterfly Pea Flower)

Butterfly pea flower (*Clitoria ternatea*) extract produces a deep indigo-blue liquid. When acid is added (citrus juice, vinegar), the anthocyanins shift to purple, magenta, or pink depending on pH. This is real chemistry, not food coloring. Steep 5-7 dried flowers in 1 cup hot water for 5 minutes, strain, and you have a pH-reactive blue base. Zero calories, zero sodium, zero potassium.

Layered Density

Different sugar concentrations create different liquid densities. A heavy simple syrup (2:1 sugar:water) sinks below a light sparkling water. By making each color at a different sugar concentration, you can pour a 7-layer rainbow in a single tall glass. Pour heaviest first, lightest last, over the back of a spoon.

Fizz Effects

Three carbonation methods, each with a different character: - **SodaStream / CO2 charger:** Clean, consistent bubbles. Best for everyday use. - **Baking soda + citric acid:** Old-school fizz. Add 1/4 tsp baking soda + 1/4 tsp citric acid to 12 oz liquid for gentle effervescence. Note: baking soda adds ~150mg Na per 1/4 tsp — use sparingly. - **Dry ice (food-grade):** Theatrical fog that pours over the glass rim. See Party Tricks section for full safety protocol.

Glow-Through (Backlit Shelf)

Clear glass bottles placed in front of an LED strip become luminous columns of color. The light passes through the liquid and projects color onto the wall behind. UV strips add fluorescence on top of the visible color. RGB strips let you color-cycle the backlight for a rave-shelf effect.

THE 7 RAINBOW SODAS

1. RED — "Blood Moon"

In 1576, the Spanish physician Francisco Hernandez documented Aztec use of hibiscus tea (agua de Jamaica) as a traditional heart-ailment remedy during his seven-year survey of New World medicines.

Visual Profile: - **Normal light:** Deep blood-crimson, translucent, with tiny bubbles rising through the red - **UV blacklight:** Hibiscus anthocyanins produce a faint warm fluorescence — subtle but present - **Backlit shelf:** Glows like a red stained-glass window

Ingredient	Amount	CKD Notes
Dried hibiscus flowers	2 tbsp (10g)	Negligible Na/P/K in tea form
Fresh ginger, sliced	1-inch piece (10g)	Low K in this amount
Lime juice	1 tbsp (15ml)	Low K
Sugar or sweetener of choice	2 tbsp (25g)	Adjust to taste
Sparkling water (SodaStream or bottled)	10 oz (300ml)	Zero everything
Ice	As desired	Counts as fluid when melted

Method: 1. Steep hibiscus flowers and ginger slices in 4 oz (120ml) boiling water for 8 minutes. The liquid will turn deep crimson immediately. 2. Strain out solids. Stir in sugar until dissolved. Add lime juice. 3. Let the concentrate cool completely (refrigerate 30 min or ice bath). 4. Pour concentrate into a clear glass bottle or glass. Top with sparkling water. Stir gently. 5. For extra shimmer: add 1/8 tsp edible red or copper luster dust, swirl.

Carbonation method: Pre-carbonate water with SodaStream, then add to concentrate. Do NOT carbonate the hibiscus concentrate directly (it will foam over).

Per 12 oz serving: Na ~5mg | P ~8mg | K ~45mg

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2. ORANGE — "Solar Flare"

Blood oranges get their crimson flesh from anthocyanins triggered by cold nighttime temperatures in Sicily's volcanic soil — the same pigment chemistry that makes butterfly pea flowers change color.

Visual Profile: - **Normal light:** Vivid sunset orange with suspended gold shimmer particles catching every angle - **UV blacklight:** Turmeric contains curcumin, which fluoresces a faint greenish-yellow under UV - **Backlit shelf:** Liquid gold beacon — the luster dust makes it glow like molten metal

Ingredient	Amount	CKD Notes
Blood orange juice (fresh-squeezed)	3 tbsp (45ml)	Using small amount to control K (~70mg K per whole orange)
Turmeric powder	1/4 tsp	Negligible Na/P/K
Sugar	2 tbsp (25g)	Adjust to taste
Lemon juice	1 tsp (5ml)	Brightens flavor
Edible gold luster dust	1/4 tsp	Food-grade mica, inert
Sparkling water	10 oz (300ml)	Zero everything

Method: 1. In a small bowl, whisk turmeric into blood orange juice until dissolved (turmeric clumps — whisk well or use a tiny strainer). 2. Add sugar and lemon juice. Stir until sugar dissolves. 3. Pour into glass bottle, add sparkling water gently. 4. Drop in gold luster dust. Cap and invert once slowly — watch the gold swirl through the orange like a solar storm.

Carbonation method: Pre-carbonate water. Add to juice concentrate.

Per 12 oz serving: Na ~3mg | P ~10mg | K ~55mg

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3. YELLOW — "Golden Hour"

Pineapple contains bromelain, an enzyme so aggressive it digests protein — which is why your tongue burns when you eat too much. It was first isolated by Venezuelan chemist Vicente Marcano in 1891.

Visual Profile: - **Normal light:** Bright liquid gold with suspended edible gold glitter — catches light like a treasure chest - **UV blacklight:** Minimal fluorescence, but the gold glitter reflects UV as bright metallic flecks - **Backlit shelf:** Pure gold beam — this is the one that makes people stop and stare

Ingredient	Amount	CKD Notes
Pineapple juice (canned, not from concentrate)	3 tbsp (45ml)	Small amount limits K (~25mg K per tbsp)
Fresh ginger, grated	1/2 tsp	Negligible
Lemon juice	1 tbsp (15ml)	Low K
Sugar	1.5 tbsp (20g)	Adjust to taste
Edible gold glitter flakes	1/4 tsp	Food-grade, inert
Sparkling water	10 oz (300ml)	Zero everything

Method: 1. Combine pineapple juice, grated ginger, lemon juice, and sugar. Stir until dissolved. Strain out ginger pulp if desired. 2. Pour into clear glass bottle. Add sparkling water. 3. Add gold glitter flakes. Cap and gently invert. 4. Serve immediately for maximum sparkle — the glitter slowly settles but a gentle swirl brings it back to life.

Carbonation method: Pre-carbonate water.

Per 12 oz serving: Na ~3mg | P ~6mg | K ~80mg

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4. GREEN — "Reactor Core"

Matcha was invented by Zen Buddhist monks in 12th-century Japan who ground tencha leaves to stay alert during marathon meditation sessions — the caffeine-L-theanine combination produces calm focus, not jitters.

Visual Profile: - **Normal light:** Nuclear green, opaque-to-translucent depending on matcha concentration. Looks RADIOACTIVE. - **UV blacklight:** Chlorophyll in matcha and spirulina fluoresces a deep red under UV — the green soda turns eerily red-glowing in blacklight. Genuinely unsettling. Perfect. - **Backlit shelf:** Dense green glow like reactor coolant

Ingredient	Amount	CKD Notes
Matcha powder (ceremonial grade)	1/2 tsp (1g)	Low Na/P; K ~27mg per tsp, using half
Fresh lime juice	1 tbsp (15ml)	Low K
Fresh mint leaves	4-5 leaves	Negligible
Sugar	2 tbsp (25g)	Adjust to taste
Spirulina powder	1/8 tsp	Tiny amount for color boost; negligible Na/P/K at this dose
Sparkling water	10 oz (300ml)	Zero everything

Method: 1. Sift matcha and spirulina into a small bowl. Add 2 tbsp warm water (not boiling — it kills matcha flavor). Whisk into a smooth paste with a chasen (bamboo whisk) or small regular whisk. 2. Add sugar and lime juice to the paste. Stir until dissolved. 3. Muddle mint leaves lightly and add to the mixture. Let sit 2 minutes, then strain out mint. 4. Pour into clear glass bottle. Top with sparkling water. 5. The result should look like something the NRC would investigate.

Carbonation method: Pre-carbonate water. The matcha paste settles, so shake/swirl before each pour.

Per 12 oz serving: Na ~5mg | P ~10mg | K ~50mg

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5. BLUE — "Deep Space"

Butterfly pea flowers have been used in Southeast Asian cooking for centuries — in Malaysia, they color nasi kerabu rice blue, and the Thai drink nam dok anchan shifts from blue to purple when lime is squeezed in, a trick that predates modern molecular gastronomy by at least 400 years.

Visual Profile: - **Normal light:** DEEP electric blue that shifts to PURPLE when you add citrus. Serve with a lemon wedge on the side so the drinker triggers the color change themselves. It is genuinely dramatic. - **UV blacklight:** If using tonic water as the sparkling base, the quinine fluoresces brilliant blue-white. The butterfly pea flower adds depth underneath. Double-blue effect. - **Backlit shelf:** Deep sapphire glow — the most "outer space" of the seven

Ingredient	Amount	CKD Notes
Dried butterfly pea flowers	7-8 flowers (2g)	Zero Na/P/K in tea form
Lemon juice (served on side)	1 wedge (~1 tbsp)	Low K; triggers color change
Sugar	1.5 tbsp (20g)	Adjust to taste

Ingredient	Amount	CKD Notes
Tonic water (diet or regular)	5 oz (150ml)	Diet tonic: ~10mg Na per 8 oz, negligible P/K
Sparkling water	5 oz (150ml)	Zero everything

Method: 1. Steep butterfly pea flowers in 3 oz (90ml) boiling water for 5 minutes. The liquid turns deep indigo-blue. Strain. 2. Add sugar to the hot blue tea, stir until dissolved. Cool completely. 3. Pour blue concentrate into a clear glass. Add tonic water and sparkling water (50/50 split gives UV glow without too much quinine bitterness). 4. Serve with a lemon wedge on the rim. Instruct the drinker: "Squeeze the lemon in and watch." 5. The blue transforms to vivid purple in real time. This never gets old.

Carbonation method: Use pre-carbonated tonic water + sparkling water. No additional carbonation needed.

Per 12 oz serving: Na ~10mg | P ~4mg | K ~30mg

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6. INDIGO — "Event Horizon"

The word "indigo" entered English from the Portuguese and Spanish "indico," itself from the Greek "indikon" meaning "Indian dye" — the pigment traveled the Silk Road for millennia before Isaac Newton controversially inserted it as a seventh rainbow color to match the seven musical notes.

Visual Profile: - **Normal light:** Deep indigo-purple, nearly black at full concentration, with tiny silver luster dust specks drifting through like stars in a void - **UV blacklight:** The activated charcoal absorbs UV, creating true-dark regions, while the silver luster dust reflects UV as bright star-points. It looks like actual deep space. - **Backlit shelf:** Dark purple glow with silver sparkle — Event Horizon is the right name

Ingredient	Amount	CKD Notes
Blueberries (fresh or frozen)	1/4 cup (40g)	Low K berry (~30mg K per 1/4 cup)
Dried lavender buds (culinary grade)	1/2 tsp	Negligible Na/P/K
Sugar	2 tbsp (25g)	Adjust to taste
Lemon juice	1 tsp (5ml)	Brightens flavor
Activated charcoal (food-grade)	Tiny pinch (~1/16 tsp)	Inert; do NOT use if taking medications within 2 hours — charcoal absorbs drugs
Edible silver luster dust	1/4 tsp	Food-grade mica, inert
Sparkling water	10 oz (300ml)	Zero everything

Method: 1. Simmer blueberries in 3 oz (90ml) water for 5 minutes until they burst and release deep purple juice. Mash with a fork. 2. Strain through fine mesh — press out all liquid, discard pulp. You want clear indigo juice. 3. Add lavender buds to the hot blueberry liquid. Steep 3 minutes (no more — lavender gets soapy). Strain again. 4. Stir in sugar and lemon juice. Cool completely. 5. Pour into clear glass bottle. Add sparkling water. 6. Add the tiny pinch of activated charcoal — it deepens the purple toward true indigo-black. 7. Add silver luster dust. Cap, invert gently. Stars appear.

Carbonation method: Pre-carbonate water.

Activated charcoal warning: Do not consume within 2 hours of taking ANY medication (including blood pressure meds, phosphate binders, etc.). Charcoal is an adsorbent and will reduce drug efficacy. If this is a concern, skip the charcoal entirely — the blueberry-lavender base is already deeply purple without it.

Per 12 oz serving: Na ~4mg | P ~6mg | K ~40mg

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7. VIOLET — "Ultraviolet"

Quinine, the compound that makes tonic water glow under UV, was first extracted from Peruvian cinchona bark in 1820 by French chemists Pierre Joseph Pelletier and Joseph Bienaime Caventou — it remained the only antimalarial drug for over a century.

Visual Profile: - **Normal light:** Deep violet-purple, rich and jewel-toned - **UV blacklight:** THIS IS THE SHOWSTOPPER. The tonic water quinine fluoresces brilliant electric blue-white THROUGH the violet color. The result is a glowing ultraviolet beacon. This is the bottle everyone photographs first. - **Backlit shelf:** Violet glow with internal blue fluorescence — otherworldly

Ingredient	Amount	CKD Notes
Grape juice (Concord, 100%)	2 tbsp (30ml)	Small amount limits K (~40mg K per 2 tbsp)
Dried butterfly pea flowers	4-5 flowers (1.5g)	Zero Na/P/K
Sugar	1.5 tbsp (20g)	Adjust to taste
Tonic water (diet or regular)	6 oz (180ml)	Diet tonic: ~10mg Na per 8 oz
Sparkling water	4 oz (120ml)	Zero everything

Method: 1. Steep butterfly pea flowers in 2 oz (60ml) boiling water for 5 minutes. Strain. Deep blue liquid. 2. Add grape juice to the blue tea — the combination of blue (butterfly pea) + red-purple (grape) = deep violet. 3. Add sugar, stir until dissolved. Cool completely. 4. Pour into clear glass bottle. Add tonic water and sparkling water. 5. Take it into a dark room. Turn on the UV strip. Watch it light up like a portal.

Carbonation method: Pre-carbonated tonic water + sparkling water. No additional carbonation needed.

Per 12 oz serving: Na ~10mg | P ~6mg | K ~55mg

THE DISPLAY SHELF BUILD

Materials

Item	Est. Cost	Notes
Floating shelf (24-36 inches, white or black)	$15-25	Black shelf disappears in the dark — recommended
UV LED strip, 365nm, USB-powered	$10-15	True 365nm, not 395nm (395nm is weaker). 1-2 meter strip.
Clear glass bottles x 7 — woozy bottles (5 oz) or swing-top bottles (8-12 oz)	$15-25	Woozy bottles with cork tops for display; swing-tops for drinking
Optional: RGB LED strip, USB-powered	$8-12	For color-cycling backlight mode
Optional: UV-reactive ink pen (for labels)	$5-8	Neon/fluorescent Sharpies or UV-reactive craft paint
Black card stock (for labels)	$3-5	Black labels with UV-reactive text = invisible until blacklight hits

Assembly

1. Mount the floating shelf at eye level on any wall. Dark room or closet works best for maximum effect.
2. Attach the UV LED strip to the BACK of the shelf, facing the wall. The UV light bounces off the wall and illuminates the bottles from behind. Use adhesive backing or small cable clips.
3. If using RGB strip, mount it alongside or below the UV strip.
4. Place the 7 bottles in ROYGBIV order (Red far left, Violet far right).
5. Plug in via USB. Kill the room lights.

The Effect

In a dark room with the UV strip on: - Red "Blood Moon" glows faintly warm - Orange "Solar Flare" gleams with gold luster dust - Yellow "Golden Hour" catches UV on gold glitter flakes — sparks of light - Green "Reactor Core" fluoresces RED (chlorophyll under UV) — the wildcard - Blue "Deep Space" glows brilliant blue-white from the tonic water base - Indigo "Event Horizon" is a dark void with silver star-points reflecting UV - Violet "Ultraviolet" is a blinding blue-white fluorescent beacon

Seven bottles. Seven colors. One shelf. One blacklight. Cathedral energy.

Bottle Labels

- Cut black card stock to fit bottle size (roughly 2" x 3" for woozy bottles).
- Write the soda name and a small symbol (eye, spiral, geometric shape) using a UV-reactive ink pen or fluorescent paint.
- Under normal light: bottles look like unlabeled dark potions.
- Under UV: labels light up with glowing neon text and symbols. Invisible information revealed by the correct frequency. The Vorath way.

BONUS: 3 SFX PARTY TRICKS

1. Dry Ice Fog Soda

Michael Faraday first solidified carbon dioxide in 1835 by combining high pressure with ether cooling — dry ice wasn't commercially produced until 1925 by the DryIce Corporation of America.

The Effect: Dense white fog cascades over the rim of the glass and flows across the table like a ground-hugging cloud. Under UV blacklight, the fog itself doesn't glow, but it creates a haze layer that makes the glowing soda above it look like it's floating in clouds.

Method: 1. Make any of the 7 sodas above in a wide-mouth glass (not a bottle — you need room). 2. Using tongs (NEVER bare hands), drop 1 small piece of food-grade dry ice (roughly 1-inch cube) into the soda. 3. Fog begins immediately and lasts 3-5 minutes. 4. The soda will bubble vigorously as the CO2 sublimates — this also extra-carbonates the drink.

SAFETY — READ ALL OF THIS: - **NEVER touch dry ice with bare skin.** It is -109.3F (-78.5C). Instant frostbite. - **NEVER drink the soda while dry ice is still present.** Wait until ALL fog production has stopped and no solid piece remains. Swallowing dry ice causes severe internal burns. - **NEVER seal dry ice in a closed container.** The pressure buildup will cause an explosion. Use open glasses only. - **Ventilation:** Dry ice releases CO2 gas. In a small, sealed room, this can displace oxygen. Use in ventilated spaces. If you feel dizzy, leave the room. - **Purchase:** Buy food-grade dry ice from grocery stores (many carry it near the ice cream freezer). Use within a few hours — it sublimates at room temperature. - **Storage:** Keep in a styrofoam cooler, lid loosely placed (NOT sealed). Never in a freezer (it's colder than your freezer and the sublimation gas needs to escape).

This is a visual-only effect. The soda is safe to drink ONLY after the dry ice is completely gone.

2. Layered Rainbow Shot

The pousse-cafe, a layered cocktail exploiting liquid density differences, was first documented in Jerry Thomas's 1862 "Bar-Tender's Guide" — the first cocktail recipe book ever published.

The Effect: All 7 rainbow colors stacked in a single tall glass, heaviest at the bottom, lightest on top. A drinkable ROYGBIV column.

Method:

Make simplified versions of each soda as a flat (non-carbonated) syrup at different sugar concentrations:

Layer (bottom to top)	Color	Sugar Concentration	Sugar : Water Ratio
1 — Red (Hibiscus)	Crimson	Heaviest	3 tbsp sugar per 2 oz water
2 — Orange (Blood orange + turmeric)	Orange		2.5 tbsp sugar per 2 oz water
3 — Yellow (Pineapple + lemon)	Gold		2 tbsp sugar per 2 oz water
4 — Green (Matcha + lime)	Green		1.5 tbsp sugar per 2 oz water
5 — Blue (Butterfly pea)	Blue		1 tbsp sugar per 2 oz water
6 — Indigo (Blueberry + lavender)	Indigo		0.5 tbsp sugar per 2 oz water
7 — Violet (Grape + butterfly pea)	Violet	Lightest	1 tsp sugar per 2 oz water

Pouring technique: 1. Pour the Red (heaviest) into a tall, narrow glass (champagne flute or Collins glass works well). 2. Hold a bar spoon (or regular spoon) upside-down with the tip touching the inside of the glass, just above the red layer. 3. Pour the Orange SLOWLY over the back of the spoon. The spoon disperses the liquid gently so it floats on top instead of mixing. 4. Repeat for each subsequent layer. Patience is everything. Pour each one slower than the last. 5. Let the glass sit undisturbed for 30 seconds between each layer.

Tips: - Chill each layer to the same temperature before pouring (temperature differences cause convection and mixing). - The first attempt will probably mix. The third attempt will be Instagram-perfect. Practice. - Do NOT carbonate this one — bubbles will destroy the layers.

Per full glass (all 7 layers, ~14 oz total): Na ~20mg | P ~30mg | K ~180mg

3. Color-Change Cocktail Station (Interactive Soda Bar)

Anthocyanins — the pH-sensitive pigments in butterfly pea flowers, red cabbage, and blueberries — were first scientifically described by German chemist Richard Willstatter in 1913, work that contributed to his 1915 Nobel Prize in Chemistry.

The Effect: A self-serve soda bar where guests pour a base blue soda, then add their choice of citrus to trigger a live color change. Different acids produce different colors. Interactive, dramatic, impossible to get bored of.

Setup:

The Base — Butterfly Pea Flower Sparkling Blue:

Ingredient	Amount
Dried butterfly pea flowers	15-20 flowers (5g)
Boiling water	2 cups (for steeping)
Sugar	1/2 cup
Sparkling water	1 liter

Steep flowers in boiling water for 5 minutes. Strain. Add sugar, stir until dissolved. Cool completely. Add sparkling water. Pour into a clear glass pitcher or drink dispenser.

The Acid Bar — Set out small bowls/squeeze bottles of each:

Acid	Color Result	Flavor
Lemon juice	Blue to PURPLE	Classic citrus
Lime juice	Blue to BLUE-PURPLE to PINK	Brighter, sharper
Grapefruit juice	Blue to MAGENTA	Bitter-sweet floral
Cranberry juice	Blue to RED-VIOLET	Tart, deep color
Apple cider vinegar (1 tsp max)	Blue to BRIGHT PINK	Tangy, surprising
Baking soda (tiny pinch)	Blue to GREEN	Salty-flat; more of a demo than a drink

Instructions for guests: 1. Pour yourself a glass of blue soda from the dispenser. 2. Pick an acid from the bar. 3. Squeeze or pour it in. 4. Watch the color change happen live. 5. Stir and drink.

CKD notes for the acid bar: - Lemon, lime: Low K, safe - Grapefruit juice: Moderate K (~160mg per 1/2 cup) — use sparingly (1 tbsp per drink is fine) - Cranberry juice: Low K, good choice - Apple cider vinegar: Negligible K/P/Na at 1 tsp - Baking soda: ~150mg Na per tiny pinch — skip this one for strict Na limits, or keep it as a visual demo only

Per 8 oz serving of base blue soda + 1 tbsp citrus: Na ~3mg | P ~4mg | K ~20mg

MASTER RENAL NUMBERS — ALL 7 SODAS

Soda	Na (mg)	P (mg)	K (mg)	Fluid (oz)	Notes
Blood Moon (Red)	5	8	45	12	Hibiscus + ginger + lime
Solar Flare (Orange)	3	10	55	12	Blood orange + turmeric
Golden Hour (Yellow)	3	6	80	12	Pineapple + ginger + lemon
Reactor Core (Green)	5	10	50	12	Matcha + lime + mint
Deep Space (Blue)	10	4	30	12	Butterfly pea + tonic + lemon
Event Horizon (Indigo)	4	6	40	12	Blueberry + lavender
Ultraviolet (Violet)	10	6	55	12	Grape + butterfly pea + tonic

All values per 12 oz serving. Every soda falls well within typical CKD dietary guidelines (Na <300mg, P <250mg, K <200mg per serving). These are some of the most kidney-friendly beverages you can make.

CKD Considerations

Why these sodas are safe and commercial ones are not: - **No phosphoric acid.** Commercial colas (Coca-Cola, Pepsi, Dr Pepper, Mountain Dew) use phosphoric acid as a flavoring agent, adding 40-70mg of highly bioavailable phosphorus per 12 oz. These homemade sodas use citric acid (from real citrus) which contains zero phosphorus. - **No dark-cola additives.** Caramel color in dark sodas contains phosphorus compounds. These use natural botanical colors. - **Low sodium.** Commercial sodas range 30-70mg Na per can. These are all under 10mg except the tonic-water-based ones (still only ~10mg). - **Controlled potassium.** Orange juice, coconut water, and banana-based drinks are potassium bombs (400-600mg+ per cup). These use small amounts of real fruit juice diluted in sparkling water, keeping K well under 100mg per serving. - **Fluid tracking.** Every 12 oz serving = 12 oz toward your daily fluid goal. The display shelf is beautiful but do not drink all 7 in one sitting unless your nephrologist has blessed a generous fluid allowance.

Activated charcoal reminder (Event Horizon only): Charcoal adsorbs medications. Do not consume within 2 hours of taking any meds. Skip the charcoal entirely if you take phosphate binders, blood pressure medication, or any other time-sensitive drugs. The soda is gorgeous without it.

Dry ice reminder: Never drink while solid dry ice is present. Wait for full sublimation. See full safety protocol in the Party Tricks section.

CHAPTER 14

Frozen Treats & Desserts

"Everything tastes better frozen."

Renal-Aware Ice Cream, Popsicles, Sorbet & Frozen Desserts

"Everything tastes better frozen."

The Rules for CKD Frozen Treats

- **Fluid counts:** Every frozen treat is FLUID. Track it.
- **Dairy caution:** Milk and cream are moderate phosphorus. Use in controlled portions.
- **Fruit caution:** Many fruits are high-K. Stick to the low-K fruits listed below.
- **Sugar:** Not usually restricted in CKD unless diabetic. Use freely unless co-morbid diabetes.

Low-K Fruits for Frozen Treats

Blueberries, raspberries, strawberries, cranberries, pineapple (small amounts), apple, grapes, watermelon (small amounts — high fluid), peaches (canned/drained), pears (canned/drained), lemon, lime

HIGH-K Fruits to AVOID

Banana, mango, kiwi, orange, papaya, coconut water, dried fruit of any kind

The Recipes

1. Rainbow Sherbet (Andrew's Favorite)

Ingredient	Amount	Notes
Raspberry layer	1 cup raspberries + 1/3 cup sugar + 1/2 cup cream + 1 tbsp lemon juice	Low-K berry
Lime layer	1/2 cup lime juice + 1/3 cup sugar + 1/2 cup cream + green food coloring	Classic sherbet flavor
Pineapple layer	1/2 cup canned crushed pineapple (drained) + 1/3 cup sugar + 1/2 cup cream	Moderate K — drain well

Method: Blend each layer separately. Pour into loaf pan in three layers, swirl with knife. Freeze 4-6 hours. Scoop.

The Vorath touch: Add edible gold glitter to the top layer before freezing.

2. Tart Sour Sorbet (Andrew's Requested Flavor Profile)

Ingredient	Amount
Lemon juice	1/2 cup
Lime juice	1/4 cup
Sugar	3/4 cup
Water	2 cups
Pinch of salt	Tiny pinch
Citric acid	1/2 tsp (extra SOUR)

Method: Dissolve sugar in warm water, add juices + citric acid, chill, churn in ice cream maker OR pour into pan and scrape with fork every 30 min for 3 hours (granita method).

Variation — Sour Watermelon: Replace half the water with pureed watermelon. Pink + sour = summer.

3. Vanilla Cloud Ice Cream

Ingredient	Amount	Notes
Heavy cream	1 cup	Moderate P — portion control
Whole milk	1 cup	
Sugar	2/3 cup	
Vanilla extract	2 tsp	Real vanilla, not imitation
Egg yolks	3	Yolks ARE high-P, but 3 across a batch = ~50mg P per serving
Pinch of salt	Tiny	

Method: Heat milk + cream + sugar until steaming (not boiling). Temper into yolks. Return to heat, stir until coats spoon (170F). Strain, add vanilla, chill overnight, churn.

Per 1/2 cup serving: ~80mg P, ~120mg K, ~35mg Na — acceptable for most CKD diets.

4. Blueberry Frozen Yogurt Bark

Ingredient	Amount
Greek yogurt	2 cups
Honey	2 tbsp
Blueberries	1 cup
Strawberries, sliced	1/2 cup
Granola	2 tbsp (low-sodium)

Method: Spread yogurt on parchment-lined sheet pan. Drizzle honey. Top with berries + granola. Freeze 3 hours. Break into bark pieces.

Low-K, low-Na, moderate-P. Beautiful to photograph.

5. Creamsicle Popsicles

Ingredient	Amount
Vanilla ice cream (homemade above)	1 cup, softened
Peach nectar or apple juice	1 cup
Vanilla extract	1/2 tsp

Method: Layer ice cream and juice in popsicle molds, swirl with stick. Freeze 4+ hours.

NOT orange juice — OJ is high-K. Peach nectar or apple juice keeps K low while giving that creamsicle vibe.

6. Strawberry Lemonade Slushie

Ingredient	Amount
Strawberries (frozen)	1 cup
Lemon juice	2 tbsp
Sugar	2 tbsp
Water	1 cup
Ice	1 cup

Method: Blend everything. Serve immediately. Fluid counts toward daily limit.

7. Cookie Dough Ice Cream Bites

Ingredient	Amount
Cream cheese	4 oz (softened)
Powdered sugar	1/4 cup
Vanilla	1 tsp
Mini chocolate chips	2 tbsp
Flour	2 tbsp (heat-treated: microwave 1 min to kill bacteria)
Margarine	1 tbsp

Method: Mix everything. Roll into 1" balls. Freeze on parchment 2 hours. Dip in melted chocolate if desired.

Why cream cheese: Lower phosphorus than traditional cookie dough base. Tastes like cheesecake cookie dough.

8. Cinnamon Cloud Frozen Treat (Crossover!)

Ingredient	Amount
Vanilla ice cream base	1 batch
Ceylon cinnamon	1 tsp
Graham cracker crumbs	2 tbsp per serving
Caramel drizzle	1 tbsp (homemade: sugar + cream + margarine)
Edible gold glitter	Pinch

Method: Fold cinnamon into ice cream during churn. Serve with graham cracker crumbs, caramel, gold glitter. The Cinnamon Cloud in frozen form.

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9. Mango Nebula Cream Pops / Pudding Base

Mango, yogurt, cream, almond milk, warm spices, and edible glitter. Pudding when chilled; popsicle when frozen.

Label: Vorath Mango Nebula Cream

```
VORATH MANGO NEBULA CREAM
Pudding + Popsicle Base

Mango / Yogurt / Cream / Almond Milk
Warm Spice / Edible Stardust

Batch: VOR-NEBULA-000999-MNG
Texture: creamy, cold, glossy
Serve: 2 oz pop or 1/4 cup pudding
```

Back label copy: A golden mango cream folded through yogurt tang, soft dairy body, almond-milk lift, warm spice, and edible stardust. Eat chilled as pudding or freeze into small pops. This is dessert, not a beverage; small portions carry the flavor farther.

Ingredients line: mango, yogurt, cream, almond milk, sugar or honey to taste, vanilla, cinnamon or cardamom, pinch of salt, edible glitter or luster dust.

Safety label: Use edible glitter/luster dust only. Decorative craft glitter is not food. Contains dairy and almond. Keep refrigerated up to 3 days or frozen up to 1 month. Mango and dairy can raise potassium/phosphorus, so keep servings small.

Ingredient	Amount	Notes
Mango puree	1 cup	Fresh or thawed frozen; strain if fibrous.
Greek yogurt or vanilla yogurt	1/2 cup	Tang and body.
Heavy cream	1/4 cup	Use less for lighter pops.
Unsweetened almond milk	1/2 cup	Loosens the base without heavy dairy load.
Sugar, honey, or mirin	1-2 tbsp, to taste	Mirin gives a subtle glossy sweetness if using the taco-sauce flavor bridge.
Vanilla	1 tsp	Rounds the yogurt.
Cinnamon or cardamom	1/8 to 1/4 tsp	Use cardamom for mango-lassi energy.
Edible glitter	Pinch	Add at the end so it stays visible.

1. Blend mango, yogurt, cream, almond milk, sweetener, vanilla, and spice until smooth.
2. Taste cold. Frozen foods taste less sweet, so popsicle base should taste slightly sweeter than pudding base.
3. For pudding: chill 2 hours. For thicker pudding, whisk in 1 tsp instant clearjel or 1 tbsp chia powder and chill 4 hours.
4. For popsicles: pour into molds, tap out air bubbles, freeze 6 hours.
5. Stir edible glitter in last, or dust the mold before filling for a visible nebula streak.

```
RENAL CHECK - Mango Nebula Cream
K (Potassium): MODERATE because mango is not a low-K fruit. Use 2 oz
pops.
P (Phosphorus): MODERATE from yogurt/cream. Almond milk keeps the base
lighter.
Na (Sodium): LOW if unsalted ingredients are used.
Fluid: Popsicles count as fluid; log the mold volume.
```

Equipment Notes

- **No ice cream maker?** Use the "bag method" (ice cream mix in small ziplock, inside large ziplock with ice + salt, shake 10 min) or the "freeze and scrape" granita method
- **Popsicle molds:** Amazon, $8-12 for a set of 6
- **Silicone molds:** For the cookie dough bites and frozen yogurt shapes — skull/diamond molds work for both gummies AND frozen treats

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CKD Considerations

```
RENAL CHECK — Frozen Treats
K (Potassium): LOW (low-K fruits only, no banana/mango/orange)
P (Phosphorus): LOW-MED (cream cheese over milk-heavy bases, portion
control)
Na (Sodium): LOW (homemade = no hidden sodium)
Fluid: ALL frozen treats = FLUID. Count every serving.
```

"The freezer is the happiest place in the house."

Wild, Creative, Unexpected Frozen Desserts

"The freezer is a laboratory. Everything is an experiment."

Andrew has: blender, KitchenAid mixer, freezer, Chobani yogurt, fresh fruit preference. No frozen fruit.

THE EXPERIMENTS

1. Mango Sticky Rice Ice Cream Bars

Fusion: Thai dessert meets ice cream bar

Ingredient	Amount
Fresh mango	1, pureed
Coconut cream	1/2 can
Chobani Zero Sugar Vanilla Yogurt	1/2 cup
Sugar	2 tbsp
Cooked sticky rice	1/2 cup
Sesame seeds	Garnish

Method: Blend mango + coconut cream + yogurt + sugar until smooth. Fold in cooked sticky rice (creates chewy bites). Pour into popsicle molds or lined loaf pan. Freeze 4+ hours. Cut into bars. Drizzle with extra coconut cream + sesame seeds.

Why it's weird and good: The rice chunks in the ice cream create a mochi-like chew. Thai dessert in popsicle form.

2. Strawberry Balsamic Black Pepper Sorbet

Inspired by: Fine dining strawberry salads

Ingredient	Amount
Fresh strawberries	2 cups
Sugar	1/2 cup
Water	3/4 cup
Balsamic vinegar	1 tbsp (good quality)
Fresh cracked black pepper	1/4 tsp
Pinch of salt	

Method: Dissolve sugar in warm water. Blend strawberries smooth. Combine everything. Chill. Churn or granita method.

Why it works: Balsamic + strawberry is a classic Italian combo. The black pepper adds a slow warmth that hits 3 seconds after the sweet. Nobody expects pepper in sorbet. Everyone wants more.

3. Watermelon-Lime Granita with Tajin

Mexican street cart energy

Ingredient	Amount
Fresh watermelon	3 cups, cubed
Lime juice	2 tbsp
Sugar	2 tbsp
Tajin seasoning	For rimming the glass
Fresh mint	Garnish

Method: Blend watermelon + lime + sugar. Pour into sheet pan. Freeze. Every 30 min for 3 hours, scrape with fork to create fluffy ice crystals. Serve in Tajin-rimmed glass with mint.

CKD note: Watermelon is low-K per cup (~170mg) but high fluid — portion to 1/2 cup serving and track.

4. Pineapple Whip (Dole Whip Dupe)

The Disneyland secret, CKD-aware

Ingredient	Amount
Fresh pineapple	2 cups, cut and frozen 2 hours (freeze your OWN fresh, not buying frozen)
Chobani Zero Sugar Vanilla Yogurt	1/2 cup
Coconut cream	2 tbsp
Lime juice	1 tsp

Method: Freeze fresh-cut pineapple chunks for 2 hours (hard but not rock solid). Blend with yogurt + coconut cream + lime in blender until soft-serve consistency. Serve immediately in a swirl — this is Dole Whip.

The secret: The partially frozen fresh pineapple gives you soft-serve texture without an ice cream maker. The bromelain enzyme in fresh pineapple creates a slight tingle on the tongue that frozen-from-store pineapple doesn't have.

5. Blueberry Lavender Cream Pops

Spa energy in a popsicle

Ingredient	Amount
Fresh blueberries	1 cup
Chobani Zero Sugar Vanilla Yogurt	1 cup
Honey	2 tbsp
Dried culinary lavender	1/2 tsp (steep in 2 tbsp warm water 10 min, strain)
Lemon juice	1 tsp

Method: Blend blueberries + yogurt + honey + lavender water + lemon. Pour into popsicle molds. Freeze 4+ hours.

Why lavender: It's unexpected in a frozen treat. The floral note makes blueberry taste more complex. Use CULINARY lavender (not potpourri). Fred Meyer sometimes has it in the spice aisle, otherwise Amazon.

6. Vietnamese Coffee Popsicles

Ca phe sua da, frozen

Ingredient	Amount
Strong brewed coffee (double strength)	1 cup, cooled
Condensed milk	3 tbsp
Chobani Zero Sugar Vanilla Yogurt	1/4 cup
Vanilla extract	1/2 tsp

Method: Mix coffee + condensed milk + yogurt + vanilla. Pour into popsicle molds. Freeze.

CKD note: Coffee is CKD-okay in moderation. One popsicle = ~1/2 cup coffee. Condensed milk adds P — small amount across 6 popsicles is fine.

7. Strawberry Cheesecake Ice Cream (No-Churn)

No ice cream maker needed

Ingredient	Amount
Cream cheese	4 oz, softened
Heavy cream	1 cup
Powdered sugar	1/3 cup
Vanilla extract	1 tsp
Fresh strawberries	1 cup, diced small
Graham cracker crumbs	3 tbsp
Lemon juice	1 tsp

Method: 1. Whip heavy cream to stiff peaks with KitchenAid 2. In separate bowl, beat cream cheese + powdered sugar + vanilla + lemon until smooth 3. Fold whipped cream into cream cheese mixture 4. Fold in diced strawberries + graham cracker crumbs 5. Pour into loaf pan lined with parchment. Freeze 6+ hours. 6. Scoop. Actual cheesecake ice cream.

Why no-churn works: The whipped cream provides the air that an ice cream maker would. The cream cheese prevents ice crystals. Result: smooth, creamy, no machine.

8. Frozen Yogurt Bark: Tropical Edition

The most Instagrammable snack

Ingredient	Amount
Chobani Zero Sugar Vanilla Yogurt	2 cups
Honey	1 tbsp
Fresh mango	1/2 cup, diced small
Fresh pineapple	1/4 cup, diced small
Fresh strawberries	1/4 cup, sliced
Toasted coconut flakes	2 tbsp
Edible gold glitter	Pinch (Vorath love)

Method: Spread yogurt on parchment-lined sheet pan (~1/4" thick). Drizzle honey. Arrange fruit on top. Sprinkle coconut + gold glitter. Freeze 3+ hours. Break into shards. Store in freezer bag.

9. Lime Sherbet Float with Sprite Zero

The CKD root beer float

Ingredient	Amount
Homemade lime sherbet (from frozen treats recipe)	2 scoops
Sprite Zero	6 oz, cold

Method: Scoop sherbet into glass. Pour Sprite Zero slowly. It fizzes up like a root beer float. Drink/eat with a spoon. The Baja Blast Float.

Variation: Use the homemade rainbow sherbet for a "Rainbow Float."

10. Frozen Hot Sauce Honey Pineapple Bites

Sweet, spicy, frozen. Andrew's weird experiment.

Ingredient	Amount
Fresh pineapple	1 cup, cut into 1" chunks
Honey	2 tbsp
Your homemade hot sauce (any)	1 tsp (start mild)
Tajin	Sprinkle
Lime juice	1 tsp

Method: Toss pineapple chunks in honey + hot sauce + lime. Arrange on parchment-lined sheet. Sprinkle Tajin. Freeze 2 hours. Eat frozen.

Why this works: The sweet-heat combo is classic Mexican candy (Lucas, Pulparindo). Frozen pineapple is nature's candy already. Adding heat makes your mouth confused in the best way. Start with Baby's First Burn sauce and work up.

11. Matcha White Chocolate Frozen Yogurt

Japanese-inspired, earthy-sweet

Ingredient	Amount
Chobani Zero Sugar Vanilla Yogurt	2 cups

Ingredient	Amount
Matcha powder	1 tsp (sifted)
White chocolate chips	2 tbsp, melted
Honey	1 tbsp

Method: Whisk matcha into yogurt until no lumps. Drizzle in melted white chocolate, fold (creates streaks). Add honey. Pour into container. Freeze 4 hours, stirring once at 2 hours. Scoop.

12. Coconut Cream Paletas (Mexican Ice Pops)

Creamy, tropical, traditional

Ingredient	Amount
Coconut cream	1 can (13.5oz)
Fresh strawberries	1 cup, sliced
Sugar	3 tbsp
Vanilla extract	1 tsp
Lime juice	1 tsp
Toasted coconut flakes	2 tbsp

Method: Warm coconut cream + sugar until dissolved. Cool. Add vanilla + lime. Pour into popsicle molds, layering strawberry slices as you go. Top with coconut flakes. Freeze 4+ hours.

13. Persian Rose Water Ice Cream (Bastani)

From the Cornelius food cart vibes

Ingredient	Amount
Heavy cream	1 cup
Unsweetened almond milk	1/2 cup
Sugar	1/3 cup
Rose water	1 tbsp
Saffron threads	Small pinch, bloomed in 1 tbsp hot water
Vanilla extract	1/2 tsp
Crushed pistachios	1 tbsp (garnish only — moderate P)

Method: Heat milk + cream + sugar until steaming. Add saffron water + rose water + vanilla. Chill overnight. Churn or no-churn method. Garnish with crushed pistachios.

This is the ice cream version of that Persian ketchup experience. Saffron turns it golden. Rose water makes it floral. Pistachios on top = jewel-like. Ancient Persia in a scoop.

14. Frozen Grape "Candy"

The simplest frozen treat that Andrew already loves

Ingredient	Amount
Fresh green grapes (Andrew's favorite)	2 cups

Method: Wash. Remove from stem. Spread on sheet pan. Freeze 2+ hours. Eat frozen.

That's it. Frozen grapes taste like candy. They're cold, sweet, crunchy-then-soft. The best CKD snack that requires zero preparation. K is moderate (~145mg/cup) so portion to 1 cup.

Upgrade: Dip in melted white chocolate before freezing. Or roll in Jell-O powder (grape Jell-O on grape = grape squared).

15. The "BIOLUME" Glow Pop (Blacklight Edition)

Tonic water makes these glow under UV light

Ingredient	Amount
Tonic water	1 cup (contains quinine which fluoresces)
Fresh lime juice	2 tbsp
Sugar	3 tbsp
Blue food coloring	2 drops

Method: Mix everything. Pour into popsicle molds. Freeze. Under a blacklight, these glow BLUE-GREEN. Biology making light. BIOLUME in edible form.

CKD note: Tonic water has ~10mg Na per cup. Quinine is safe in dietary amounts (it's in every gin & tonic on earth). The glow is real physics — quinine absorbs UV and re-emits visible blue light.

EQUIPMENT UPGRADES TO CONSIDER

Item	Price	What It Unlocks
Popsicle molds (set of 6-10)	$8-12	All the popsicle/paleta recipes
Silicone ice cream bar molds	$10-15	Mango sticky rice bars, cheesecake bars
Ice cream maker attachment for KitchenAid	$50-80	Real churned ice cream/sorbet/sherbet — game changer
Squeeze bottles (set of 3)	$8	Sauce drizzling on treats
UV blacklight bulb	$8	For the BIOLUME Glow Pop photos
Edible gold glitter	$8-10	Vorath love on EVERYTHING

The KitchenAid ice cream maker attachment is the single biggest upgrade. You already have the mixer — the attachment just adds a frozen bowl and a dasher. Real churned ice cream, gelato, sorbet, sherbet from all the recipes above. ~$50-80 on Amazon.

WEEKEND EXPERIMENT PLAN

Saturday Afternoon Session (~2 hours)

1. **Frozen grapes** — 5 min prep, freeze while you work (Andrew's easy win)
2. **Pineapple Whip** — 10 min, eat immediately (instant gratification)
3. **Frozen yogurt bark** — 15 min prep, freeze overnight (tomorrow's snack)
4. **Strawberry balsamic black pepper sorbet** — 15 min prep, freeze/scrape method over 3 hours

Sunday Morning

1. **Watermelon-lime granita** — scrape every 30 min while doing other things
2. **Vietnamese coffee popsicles** — 5 min prep, freeze all day

Total ingredient cost for all 6 experiments: ~$15 using what's already in your Instacart cart

CKD Considerations

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RENAL CHECK — Experimental Frozen Treats
K (Potassium): LOW-MED (low-K fruits, controlled portions)
P (Phosphorus): LOW (yogurt base over milk, cream cheese over heavy
dairy)
Na (Sodium): LOW (homemade = zero hidden sodium)
Fluid: EVERY FROZEN TREAT = FLUID. 3-8 oz per serving. TRACK.
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"The freezer is the Dark Mirror of the kitchen. What stares back is delicious."

CHAPTER 15

Vorath Orbital Chips

“One batch. One flavor. One orbit.”

THE VORATH ORBITAL CHIP LINE

Limited Edition Artisan Potato Chips for the Cosmically Inclined

"One batch. One flavor. One orbit."

> *In 1853, chef George Crum at Moon's Lake House in Saratoga Springs sliced potatoes paper-thin and fried them crisp to spite a customer who complained his fries were too thick -- the potato chip was born from pure contempt.*

MASTER CHIP BASE

Every Orbital chip starts here. The base is identical across all 14 flavors. K-leaching is non-negotiable.

Potato Preparation (K-Leaching Protocol)

Step	Method
Select	Russet or Yukon Gold, firm, no green spots
Peel	Remove all skin (skin concentrates potassium)
Slice	Mandoline, 1/16" (1.5mm) thin -- uniform or they burn
First Soak	Submerge slices in cold water, 2+ hours
Water Change 1	Drain, refill with fresh cold water, 1+ hour
Water Change 2	Drain, refill again, 1+ hour minimum
Total Soak	4+ hours minimum (overnight is better)
Drain	Colander, 10 minutes
Dry	Pat bone-dry with clean towels -- water + hot oil = disaster

> *K-leaching removes approximately 50% of potassium from raw potatoes. The thinner the slice, the more effective the leach.*

Frying Method (Primary)

Component	Detail
Oil	Avocado oil (high smoke point, neutral, low in phosphorus additives)
Temperature	350-375F (175-190C)
Batch Size	Small -- do not crowd the oil
Time	2-3 minutes until edges curl and color turns golden
Drain	Wire rack over sheet pan, NOT paper towels (they steam)
Season	Immediately while oil is still tacky

Baked Method (Alternate)

Component	Detail
Prep	Toss dried slices lightly in 1 tsp avocado oil per potato
Oven	400F (200C), convection if available
Arrangement	Single layer on parchment-lined sheet, no overlap
Time	12-18 minutes, flip once at halfway
Watch	They go from done to burnt in 60 seconds
Season	Immediately out of oven

Per-Serving Baseline (unseasoned, ~1 oz / 28g leached chips)

Nutrient	Amount
Sodium (Na)	~5 mg
Phosphorus (P)	~25 mg
Potassium (K)	~150 mg (post-leach, down from ~300+ mg)
Calories	~140 (fried) / ~110 (baked)

RAINBOW SPECTRUM FLAVORS

Seven chips. Seven colors. One spectrum.

> *Isaac Newton inserted "indigo" into the rainbow to force the count to seven -- he believed seven was a number of cosmic significance, mirroring the musical scale.*

1. RED -- Szechuan Ghost Pepper

Numbing heat on a chip. The red is real.

Seasoning Blend (makes ~2 oz, enough for 4-6 servings of chips)

Ingredient	Amount
Szechuan peppercorn, toasted and ground	1 tbsp
Ghost pepper powder (Bhut Jolokia)	1/4 tsp (adjust to courage)
Smoked paprika	1 tbsp
Beet root powder (for deep red color)	1 tsp
Garlic powder	1 tsp
Onion powder	1/2 tsp
Coconut sugar	1/2 tsp
Fine sea salt	1/2 tsp

Color Achieved With: Smoked paprika (base red) + beet root powder (deep crimson boost). Both natural. The ghost pepper itself adds ruddy undertone.

Method: Combine all dry ingredients. Grind in spice grinder to uniform powder. Dust onto chips immediately after frying/baking while surface is still tacky.

> *The Szechuan peppercorn doesn't create heat -- it vibrates the nerve endings at 50Hz, the same frequency as a hummingbird's wings, creating the "numbing" sensation called ma.*

CKD Notes

- Ghost pepper is used in trace amounts; capsaicin has no estimated mineral contribution
- Szechuan peppercorn is potassium-neutral at this quantity
- Beet root powder adds negligible K at 1 tsp

Per Serving (1 oz chips + seasoning)

Nutrient	Amount
Na	~120 mg
P	~30 mg
K	~160 mg

2. ORANGE -- Mango Habanero Tajin

Tropical fire. The orange dust gets everywhere. You won't mind.

Seasoning Blend

Ingredient	Amount
Freeze-dried mango powder	2 tbsp
Habanero powder	1/2 tsp
Tajin seasoning (or: chili powder 1 tsp + lime zest 1 tsp + salt 1/4 tsp)	1 tbsp
Turmeric	1/4 tsp (orange boost)
Citric acid powder	1/4 tsp
Fine sea salt	1/4 tsp

Color Achieved With: Freeze-dried mango powder (natural golden-orange) + turmeric (deepens to vivid orange). The Tajin chili adds red-orange speckle.

Method: Pulse mango powder fine in spice grinder. Combine all ingredients. Apply to hot chips.

> *The habanero was cultivated in the Amazon basin over 8,500 years ago, making it one of the oldest domesticated peppers on Earth -- older than pottery in the Americas.*

CKD Notes

- Tajin contains salt; recipe accounts for this in Na total
- Freeze-dried mango is concentrated; small amount keeps K in check
- If using store-bought Tajin, check label for phosphate additives -- avoid

Per Serving (1 oz chips + seasoning)

Nutrient	Amount
Na	~140 mg
P	~32 mg
K	~170 mg

3. YELLOW -- Turmeric Curry Bomb

Golden. Warm. Complex. Stains everything it touches, including your memory.

Seasoning Blend

Ingredient	Amount
Turmeric powder	1 tbsp
Curry powder (salt-free blend)	1 tbsp
Ground coriander	1 tsp
Ground cumin	1/2 tsp
Fenugreek powder	1/4 tsp
Ginger powder	1/4 tsp
Black pepper	1/4 tsp (activates curcumin)
Coconut sugar	1/2 tsp
Fine sea salt	1/2 tsp

Color Achieved With: Turmeric (primary yellow, potent natural dye) + curry powder (warm golden undertone). This is the most naturally vivid of all 7 colors.

Method: Combine all. No grinding needed -- already powders. Toss with hot chips. Wear gloves or accept yellow fingers for 48 hours.

> *Turmeric has been used continuously for over 4,000 years in South Asia; ancient Tamil medical texts prescribed it for stomach ailments, wound healing, and as a dye for monks' robes.*

CKD Notes

- Turmeric is naturally very low in Na/P/K at seasoning quantities
- Salt-free curry blend is critical -- commercial curry powders often contain hidden sodium
- Black pepper increases curcumin bioavailability by 2,000% (Piperine effect)

Per Serving (1 oz chips + seasoning)

Nutrient	Amount
Na	~115 mg
P	~35 mg
K	~165 mg

4. GREEN -- Wasabi Nori Furikake

Japanese green. Umami depth. Nose-clearing heat that vanishes in 8 seconds.

Seasoning Blend

Ingredient	Amount
Nori sheets, toasted and crumbled fine	2 sheets
Wasabi powder (real, not horseradish fake)	1 tsp
Sesame seeds, toasted	1 tbsp
Bonito flake powder (optional, skip for vegetarian)	1 tsp
Rice flour	1 tsp (helps blend adhere)
Coconut aminos powder or low-sodium soy powder	1/2 tsp
Spirulina powder	1/4 tsp (green color boost)
Sugar	1/2 tsp
Fine sea salt	1/4 tsp

Color Achieved With: Nori (dark green flecks) + spirulina powder (vivid green tint on the base chip) + wasabi powder (pale green). Combined effect: forest-to-emerald green.

Method: Crumble nori by hand first, then pulse everything except sesame seeds in spice grinder. Fold sesame seeds in last. Apply to hot chips -- the tiny nori flecks should be visible.

> *Real wasabi (Wasabia japonica) is one of the hardest plants to cultivate commercially; it requires 18 months of growth in running mountain stream water, which is why over 95% of "wasabi" served worldwide is dyed horseradish.*

CKD Notes

- Nori is moderate in potassium -- 2 sheets at this dilution is safe
- Real wasabi is low-sodium; if substituting horseradish-based, check for added sodium
- Bonito flakes add phosphorus; skip if P is a concern
- Spirulina at 1/4 tsp is nutritionally negligible but visually potent

Per Serving (1 oz chips + seasoning)

Nutrient	Amount
Na	~110 mg
P	~40 mg (with bonito) / ~30 mg (without)
K	~175 mg

5. BLUE -- Blue Cheese & Black Truffle

The forbidden blue chip. Funky. Earthy. Decadent. Nobody asked for this. Everybody wants it.

Seasoning Blend

Ingredient	Amount
Blue cheese powder (freeze-dried)	1 tbsp
Black truffle salt	1 tsp
Butterfly pea flower powder	1 tsp (THE blue)
Nutritional yeast	1 tsp (umami + cheesy depth)
Onion powder	1/2 tsp
Garlic powder	1/2 tsp
Black pepper, fine grind	1/4 tsp
Dried chives, crushed	1/2 tsp

Color Achieved With: Butterfly pea flower powder is the star -- naturally vivid blue, pH-stable when dry. Blue cheese powder adds pale blue-white mottling. The result is a dusty sapphire chip with visible herb flecks.

Method: Combine all dry ingredients. Pulse briefly -- you want some texture from the chives, not total homogeneity. Apply to hot chips.

> *Butterfly pea flower (Clitoria ternatea) has been used in Southeast Asian cooking for centuries; in Thailand it colors rice blue and in Malaysia it makes the famously blue kuih.*

CKD Notes

- Blue cheese powder is the highest-P ingredient in the rainbow line; use measured amount only
- Truffle salt replaces regular salt + adds truffle aroma -- do not add additional salt
- Butterfly pea flower is renal-neutral: no significant Na/P/K
- Nutritional yeast adds modest phosphorus but also B-vitamins

Per Serving (1 oz chips + seasoning)

Nutrient	Amount
Na	~145 mg
P	~55 mg
K	~165 mg

6. INDIGO -- Ube Coconut

Filipino purple yam meets toasted coconut. Sweet, nutty, absolutely purple. Not a dessert. Not savory. Something else.

Seasoning Blend

Ingredient	Amount
Ube (purple yam) powder	2 tbsp
Toasted coconut flakes, finely ground	1 tbsp

Ingredient	Amount
Coconut sugar	1 tsp
Vanilla powder (real, not extract)	1/4 tsp
Fine sea salt	1/2 tsp
White pepper	1/8 tsp
Butterfly pea flower powder	1/4 tsp (deepens purple to indigo)

Color Achieved With: Ube powder is naturally deep purple/violet. Adding a touch of butterfly pea flower pushes it toward indigo/blue-purple. The toasted coconut adds golden flecks against the dark purple base.

Method: Grind coconut flakes to near-powder (some small flake visible is fine -- texture matters). Combine all. Apply generously to hot chips.

> *Ube has been cultivated in the Philippines for over 4,000 years and is genetically distinct from Okinawan purple sweet potato; its color comes from anthocyanins, the same antioxidant pigment found in blueberries.*

CKD Notes

- Ube powder is moderate-K; 2 tbsp spread across 4-6 servings is well within range
- Coconut is low-sodium, low-potassium -- one of the most renal-aware nuts/seeds
- No phosphate additives in this blend

Per Serving (1 oz chips + seasoning)

Nutrient	Amount
Na	~120 mg
P	~30 mg
K	~170 mg

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7. VIOLET -- Lavender Honey Sea Salt

Floral. Delicate. The chip you eat slowly, alone, staring out the window.

Seasoning Blend

Ingredient	Amount
Culinary lavender buds, finely ground	2 tsp
Honey powder (dehydrated honey)	1 tbsp
Flaky sea salt (Maldon or similar)	1 tsp
Beet root powder	1/2 tsp (violet tint)
Butterfly pea flower powder	1/4 tsp (blue push toward violet)
Lemon zest powder	1/4 tsp

Color Achieved With: Beet root powder (red-violet base) + butterfly pea flower powder (blue shift) = true violet. Ground lavender buds add visible purple-grey botanical flecks.

Method: Grind lavender buds fine but not to dust -- you want to see them. Combine all. Apply to hot chips. The honey powder melts slightly on warm chips, creating a tacky glaze that holds the lavender.

> *Lavender was used by the Romans to scent their baths -- the word "lavender" derives from the Latin lavare, "to wash" -- and a pound of Roman lavender oil cost a month's wages for a farm laborer.*

CKD Notes

- Honey powder is the dominant Na/P/K contributor here -- still minimal at 1 tbsp
- Lavender is essentially renal-neutral at culinary quantities
- Flaky salt is used for texture crunch; volume looks like more salt than it is by weight

Per Serving (1 oz chips + seasoning)

Nutrient	Amount
Na	~130 mg
P	~28 mg
K	~158 mg

COSMIC HORROR FLAVORS

Paired with the Vorath Hot Sauce Line. Same gods. Different vessel.

> *H.P. Lovecraft ate almost nothing but canned beans, cheese, and crackers for most of his adult life -- he would have been absolutely destroyed by these chips.*

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8. AZATHOTH -- Szechuan Peppercorn & Black Garlic

The Blind Idiot God. Numbing. Dark. Ancient. You forget your own name for a moment.

Seasoning Blend

Ingredient	Amount
Szechuan peppercorn, toasted and ground	1 tbsp
Black garlic powder	1 tbsp
Smoked salt (applewood or hickory)	1/2 tsp
Chinese five-spice powder	1/2 tsp
Activated charcoal	1/4 tsp (blackens the dust -- purely visual)
White pepper	1/4 tsp
Coconut sugar	1/4 tsp

Color Achieved With: Black garlic powder (deep brown-black) + activated charcoal (pushes to void-black). The chips look like they were pulled from a dying star.

Method: Toast whole Szechuan peppercorns in dry skillet until fragrant (~2 min). Grind. Combine with remaining ingredients. Apply to hot chips. The black dust against golden chips is visually stunning.

Pair With: Vorath AZATHOTH hot sauce for the full Blind Idiot God experience.

> *Black garlic was developed in Korea around 2004 using Maillard reaction over 30-40 days of controlled fermentation at 140F; each clove develops over 20 new flavor compounds not present in raw garlic.*

CKD Notes

- Activated charcoal can bind medications -- do not consume within 2 hours of medication. Small amount here is primarily cosmetic.
- Black garlic is higher in antioxidants than raw garlic (S-allyl cysteine increases 6x during fermentation)
- Smoked salt replaces regular salt 1:1 -- no additional sodium vs plain salt

Per Serving (1 oz chips + seasoning)

Nutrient	Amount
Na	~125 mg
P	~35 mg
K	~170 mg

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9. NYARLATHOTEP -- Ube & Reaper Ash

The Crawling Chaos. Purple beauty hiding annihilation. The Reaper whispers behind ube's sweetness.

Seasoning Blend

Ingredient	Amount
Ube (purple yam) powder	2 tbsp
Carolina Reaper powder	1/8 tsp (this is NOT a typo -- Reapers are 2.2M SHU)
Activated charcoal	1/4 tsp (the "ash")
Coconut milk powder	1 tsp
Lime zest powder	1/2 tsp
Fine sea salt	1/2 tsp
Coconut sugar	1/2 tsp

Color Achieved With: Ube powder (deep purple) + activated charcoal (dark streaks = "ash"). The visual effect is purple-to-black gradient. Chaos in color form.

Method: Combine all. The charcoal will create dark veins through the purple ube powder -- don't over-mix. You want the marbled look. Apply to hot chips.

Pair With: Vorath NYARLATHOTEP hot sauce. Same purple. Same betrayal.

> *The Carolina Reaper was bred by Ed Currie over 10 years of cross-pollination in his Rock Hill, South Carolina greenhouse; he originally called it "HP22B" before the Reaper name stuck.*

CKD Notes

- Carolina Reaper at 1/8 tsp across 4-6 servings is renal-negligible -- the danger is your mouth, not your kidneys
- Ube + coconut combo is renal-aware; both are low-phosphorus
- Activated charcoal medication interaction warning applies (2-hour window)

Per Serving (1 oz chips + seasoning)

Nutrient	Amount
Na	~125 mg
P	~30 mg
K	~175 mg

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10. CTHULHU -- Seaweed & Lime

Dead Cthulhu waits dreaming. Oceanic. Bright. The deep calling the surface.

Seasoning Blend

Ingredient	Amount
Kelp granules, ground fine	1 tbsp
Nori, toasted and crumbled	1 sheet
Lime zest powder	1 tbsp
Citric acid powder	1/2 tsp
Spirulina powder	1/2 tsp (deep ocean green)
Garlic powder	1/2 tsp
White pepper	1/4 tsp
Fine sea salt	1/4 tsp

Color Achieved With: Spirulina (deep blue-green) + kelp (olive-green) + nori flecks (dark green-black). The result is deep ocean green -- Cthulhu's R'lyeh rising from the Pacific.

Method: Grind kelp first (it's tough). Crumble nori by hand. Combine all. Apply to hot chips. The nori flecks should be visible.

Pair With: Vorath CTHULHU hot sauce. Ph'nglui mglw'nafh Cthulhu R'lyeh wgah'nagl fhtagn.

> *The giant kelp (Macrocystis pyrifera) can grow up to 2 feet per day, making it the fastest-growing organism on Earth -- entire forests of it sway off the California coast, some reaching 175 feet.*

CKD Notes

- Kelp and nori are moderate-potassium but used in small quantities here
- Kelp naturally contains iodine -- beneficial in small amounts but don't double the recipe
- Spirulina at 1/2 tsp is safe; larger doses can concentrate phosphorus
- Reduced salt because kelp provides natural sodium via sea minerals

Per Serving (1 oz chips + seasoning)

Nutrient	Amount
Na	~135 mg
P	~38 mg
K	~185 mg

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11. YOG-SOTHOTH -- Saffron & Sumac

The Gate and the Key. Golden. Tart. Ancient. Every bite opens a door to somewhere else.

Seasoning Blend

Ingredient	Amount
Sumac, ground	1 tbsp
Saffron threads, crumbled	10-12 threads (~1/8 tsp)
Turmeric	1 tsp (extends saffron's gold)
Aleppo pepper flakes	1 tsp
Dried lemon peel, ground	1/2 tsp
Garlic powder	1/2 tsp
Fine sea salt	1/2 tsp
Coconut sugar	1/4 tsp

Color Achieved With: Saffron + turmeric (deep gold) with sumac (burgundy-red speckle). Aleppo pepper adds rust flakes. The overall impression is ancient gold with dark red fractures -- like a relic.

Method: Steep saffron threads in 1/2 tsp warm water for 5 minutes, then mix into dry ingredients to distribute color. Let dry 10 minutes. Apply to hot chips.

Pair With: Vorath YOG-SOTHOTH hot sauce. The Gate opens.

> *Saffron has been worth more than gold by weight for most of recorded history; in 14th-century Europe, a pound of saffron cost the same as a horse, and the 14-week "Saffron War" was fought in Basel over a stolen 800-pound shipment.*

CKD Notes

- Sumac is high in vitamin C, low in Na/P/K at seasoning quantity
- Saffron at 10-12 threads is medically negligible (you'd need hundreds for any pharmacological effect)
- Aleppo pepper is milder and lower-sodium than standard crushed red pepper

Per Serving (1 oz chips + seasoning)

Nutrient	Amount
Na	~120 mg
P	~32 mg
K	~165 mg

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12. SHUB-NIGGURATH -- Mushroom Truffle & Thyme

The Black Goat of the Woods with a Thousand Young. Earthy. Forest floor after rain. Umami that echoes.

Seasoning Blend

Ingredient	Amount
Porcini mushroom powder	1 tbsp
Black truffle salt	1 tsp
Dried thyme, ground	1 tsp
Nutritional yeast	1 tsp
Onion powder	1/2 tsp
Garlic powder	1/2 tsp
Black pepper	1/4 tsp
Smoked paprika	1/4 tsp

Color Achieved With: Porcini powder (earthy brown) + smoked paprika (warm tone). These chips look like forest floor -- brown, flecked, organic. No artificial color needed. The earth IS the palette.

Method: Combine all. The porcini powder should be fine but not talc -- slight granularity gives texture. Apply to hot chips.

Pair With: Vorath SHUB-NIGGURATH hot sauce. The woods are alive.

> *Porcini mushrooms cannot be commercially cultivated -- every porcini sold worldwide was foraged wild from a forest floor, which is why dried porcini costs $30-80/lb depending on grade and origin.*

CKD Notes

- Mushroom powder is moderate-potassium; 1 tbsp across multiple servings keeps per-serving K low
- Truffle salt provides both salt + truffle flavor -- do not add additional salt
- Nutritional yeast adds phosphorus but also provides B12 for those on restricted diets

Per Serving (1 oz chips + seasoning)

Nutrient	Amount
Na	~130 mg
P	~45 mg
K	~180 mg

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13. HASTUR -- Turmeric & Dried Mango

The King in Yellow. Golden sweet. The flavor that makes you question if chips can be this elegant.

Seasoning Blend

Ingredient	Amount
Turmeric powder	1 tbsp
Freeze-dried mango powder	1 tbsp
Ginger powder	1/2 tsp
Cardamom, ground	1/4 tsp
Cinnamon (Ceylon)	1/4 tsp
Citric acid powder	1/4 tsp
Coconut sugar	1 tsp
Fine sea salt	1/2 tsp
Black pepper	1/8 tsp

Color Achieved With: Turmeric (vivid yellow-gold) + mango powder (warm amber). Pure golden dust. The King in Yellow earned his name.

Method: Combine all ingredients. The mango powder can clump -- pulse briefly in spice grinder if needed. Apply to hot chips.

Pair With: Vorath HASTUR hot sauce. The Yellow Sign glows.

> *Cardamom is the third most expensive spice in the world after saffron and vanilla; Guatemala produces more cardamom than any other country, though it originated in the forests of southern India.*

CKD Notes

- Turmeric + ginger combination is actively studied for inflammation-support benefits in renal contexts
- Ceylon cinnamon is preferred over Cassia cinnamon (lower coumarin, safer for daily use)
- Mango powder adds modest K but well within single-serving safety

Per Serving (1 oz chips + seasoning)

Nutrient	Amount
Na	~125 mg
P	~30 mg
K	~170 mg

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14. THE COLOUR -- Everything Seasoning

"The Colour Out of Space." All six Cosmic Horror flavors combined into one impossible seasoning. It should not work. It does.

Seasoning Blend

Ingredient	Amount
AZATHOTH blend (Szechuan + Black Garlic)	1 tsp
NYARLATHOTEP blend (Ube + Reaper Ash)	1 tsp
CTHULHU blend (Seaweed + Lime)	1 tsp
YOG-SOTHOTH blend (Saffron + Sumac)	1 tsp
SHUB-NIGGURATH blend (Mushroom Truffle + Thyme)	1 tsp
HASTUR blend (Turmeric + Dried Mango)	1 tsp
Extra fine sea salt	1/4 tsp

Color Achieved With: All six. The result is a chaotic prismatic dust -- brown-gold-purple-green-black-red. It looks like nothing in nature. That's the point. It IS the Colour Out of Space.

Method: Combine equal parts of all six Cosmic Horror blends. Do NOT over-mix -- you want distinct color pockets visible in the powder, not homogeneous brown. Apply generously to hot chips. Every chip will taste slightly different depending on which grains landed. That's the point.

Pair With: All six Vorath Cosmic Horror hot sauces, served in a ring.

> *H.P. Lovecraft's "The Colour Out of Space" (1927) describes a color that doesn't exist in the visible spectrum -- he considered it his best story, and it remains the only Lovecraft tale with no named entity as its antagonist; the horror IS the color.*

CKD Notes

- The combined blend averages out well -- no single high-load ingredient dominates at 1 tsp each
- Activated charcoal appears in two sub-blends (Azathoth + Nyarlathotep) -- total per serving is still under 1/4 tsp, but medication spacing reminder applies
- This is the highest-complexity flavor and likely the highest combined mineral load; recommended serving size is 1 oz chips

Per Serving (1 oz chips + seasoning)

Nutrient	Amount
Na	~130 mg
P	~40 mg
K	~175 mg

CKD REFERENCE — ESTIMATES, NOT SAFETY RATINGS

Guideline	Per Serving Target	These Chips
Sodium (Na)	< 300 mg	110-145 mg
Phosphorus (P)	< 200 mg	28-55 mg
Potassium (K)	< 300 mg	150-185 mg

Key Principles

- **K-leaching is the foundation.** Without the 4+ hour soak, potato chips would run 300-500 mg K per serving. With it, you're at 150-185 mg. Do not skip this step.
- **Seasoning loads are intentionally light on salt.** Every blend uses 1/2 tsp or less fine salt per multi-serving batch. Flavor comes from spice complexity, not sodium.
- **No phosphate additives.** None of these blends contain sodium phosphate, calcium phosphate, or polyphosphate -- the hidden P-bombs in commercial chip seasonings.
- **Activated charcoal warning** (Azathoth, Nyarlathotep, The Colour): Can bind medications. Maintain 2-hour window before/after taking meds.
- **Serving size is 1 oz (28g).** A small bowl. These are artisan chips, not Costco party bags. Eat slow.
- **Avocado oil over canola/vegetable.** Higher smoke point, no phosphate processing agents, better fatty acid profile.
- **All numbers are estimates.** Actual values vary with potato variety, soak duration, slice thickness, and oil absorption. These are conservative midpoints. Consult your care team for personalized limits.

VORATH ORBITAL CHIPS are a NorthStar Prime x BIOLUME Imprint product. Small-batch. Numbered. Holographic seal. Sacred geometry on every bag.

"The chip is a vessel. The seasoning is the sermon. The crunch is the congregation."

CHAPTER 16

Rice Treats, Snacks & Candy Bar Dupes

"Rice Krispies saved dessert night."

Mango Sticky Rice, Chocolate Rice Krispies, Kit Kat, Twix & More

Andrew's Favorite Snacks, Renal-Aware

RICE TREATS

1. Mango Sticky Rice

The real Thai deal — Andrew's tropical rice love

Ingredient	Amount	CKD Notes
Sticky/glutinous rice	1 cup (dry)	Soak overnight. LOW-K rice = CKD-aware staple
Coconut cream	1/3 cup	NOT coconut water (high K). Cream products vary; check the label, portion, and your potassium/phosphorus plan.
Sugar	3 tbsp	
Salt	Tiny pinch	
Mango	1/2 medium, sliced	~135mg K at this portion — controlled
Sesame seeds	1 tsp (garnish)	

Method: 1. Soak sticky rice in water overnight (or minimum 4 hours) 2. Steam rice in steamer basket lined with cheesecloth — 20-25 min until translucent and tender 3. While hot: stir in coconut cream + sugar + salt. Let sit 10 min to absorb. 4. Serve warm with fresh mango slices, drizzle extra coconut cream, sprinkle sesame seeds.

Per serving: ~200mg K, ~80mg P, ~50mg Na. Safe and heavenly.

2. Chocolate Rice Krispies Treats (Andrew's #1 Snack)

Ingredient	Amount	CKD Notes
Chocolate Rice Krispies	4 cups	renal-aware cereal — low K, low P
Marshmallows	3 cups (or 10oz bag)	Marshmallow = basically sugar + gelatin, very low K/P/Na
Margarine	2 tbsp	Margarine over butter = lower P
Vanilla extract	1/2 tsp	
Mini chocolate chips	2 tbsp (optional)	Small amount = controlled P

Method: Melt margarine in large pot. Add marshmallows, stir until melted. Remove from heat. Add vanilla + cereal + chips. Press into greased 9x13 pan. Cool 30 min. Cut into bars.

Per bar (16 bars): ~25mg K, ~20mg P, ~55mg Na. Eat freely.

3. Quaker Chocolate Rice Cake Upgrades

Andrew's rice cakes, elevated:

Chocolate Rice Cake + Cream Cheese Frosting

Spread 1 tbsp cream cheese + 1 tsp powdered sugar + drop of vanilla on a chocolate rice cake. Low P, low K, tastes like cheesecake.

Chocolate Rice Cake + PB (if phosphorus allows)

1 tbsp peanut butter on a chocolate rice cake. Moderate P (~60mg) — use on days with lower P intake elsewhere.

Chocolate Rice Cake + Strawberry

Slice 2 strawberries on a chocolate rice cake. Drizzle with honey. Low K, looks beautiful.

Chocolate Rice Cake S'more

Top with mini marshmallows + chocolate chip. Microwave 15 sec. Marshmallow puffs. S'more without the campfire.

CANDY BAR DUPES

4. Crisp Wafer Bar Dupe

Component	Ingredient	CKD Notes
Wafer layers	Vanilla wafer cookies (Nilla Wafers)	Low K, low P
Chocolate coating	Melted chocolate chips (semi-sweet)	Moderate P — controlled by portion
Assembly	Stack 4 wafers with melted chocolate between. Dip entire stack in melted chocolate. Set on parchment.	

Method: 1. Melt 1/2 cup chocolate chips in microwave (30 sec intervals, stir between) 2. Stack 4 Nilla Wafers with thin chocolate layer between each 3. Dip entire stack in chocolate. Set on parchment. 4. Refrigerate 15 min until set. 5. Cut in half for Kit Kat "fingers"

Per 2-finger bar: ~45mg P, ~60mg K, ~25mg Na. Andrew can eat these freely.

Flavor variations: - **White Kit Kat:** Use white chocolate chips - **Matcha Kit Kat:** Add 1/2 tsp matcha to white chocolate - **Strawberry Kit Kat:** Add strawberry extract + pink food coloring to white chocolate

5. Caramel Biscuit Bar Dupe

Component	Ingredient	Amount
Shortbread base	Flour 1 cup + margarine 1/2 cup + powdered sugar 1/4 cup	Mix, press into 8x8 pan, bake 350F 15 min
Caramel layer	Sugar 1/2 cup + margarine 3 tbsp + heavy cream 3 tbsp + vanilla 1/2 tsp + salt pinch	Cook sugar to amber, add margarine + cream, stir. Pour over shortbread.
Chocolate top	Melted chocolate chips 1/2 cup	Pour over set caramel. Refrigerate 1 hour.

Method: 1. Make shortbread: mix flour + margarine + sugar, press into greased 8x8. Bake 15 min at 350F until pale gold. 2. Make caramel: heat sugar in saucepan until amber (~5 min). Remove from heat, add margarine (careful — it bubbles), stir, add cream + vanilla. Pour over shortbread. 3. Let caramel set 30 min in fridge. 4. Melt chocolate, pour over caramel. Refrigerate 1 hour. 5. Cut into bars.

Per bar (16 bars): ~40mg P, ~35mg K, ~30mg Na. Actual Twix vibes.

Why margarine: Butter has more phosphorus. Margarine keeps the shortbread flaky while being CKD-friendlier.

6. Nougat Crunch Bar Dupe

Component	Ingredient
Base	Same shortbread as Twix
Caramel + peanut layer	Same caramel as Twix + 2 tbsp chopped peanuts stirred in
Nougat (optional)	Marshmallow fluff + 1 tbsp peanut butter, microwaved 15 sec
Chocolate top	Melted chocolate chips

P note: Peanuts add phosphorus (~55mg per tbsp). Use sparingly. The small amount across 16 bars = ~7mg P per bar from peanuts.

7. Peanut Butter Shatter Bar

Ingredient	Amount
Candy corn	1 cup
Peanut butter	1/2 cup
Chocolate chips	1 cup

Method: 1. Melt candy corn in microwave (1 min, stir, 30 sec more until smooth) 2. Stir in peanut butter. Mix until smooth. 3. Pour into parchment-lined loaf pan. Refrigerate 1 hour until firm. 4. Cut into bars. Dip each in melted chocolate.

The texture is ACTUALLY like Butterfinger — crispy, flaky, peanut butter layers. This is a famous dupe that really works.

BONUS: RICE DESSERT IDEAS

8. Stovetop Rice Pudding

Ingredient	Amount
White rice (cooked)	1 cup
Unsweetened almond milk	1 cup
Sugar	3 tbsp
Vanilla	1 tsp
Cinnamon	1/2 tsp (Ceylon)
Raisins	1 tbsp (optional — moderate K)

Simmer rice + milk + sugar on low 20 min, stirring often, until thick and creamy. Add vanilla + cinnamon. Serve warm or cold.

9. Crispy Rice Chocolate Bark

Ingredient	Amount
Rice Krispies	1 cup
Melted chocolate	1 cup chips
Edible gold glitter	Pinch (Vorath love)
Flaky salt	Tiny pinch

Spread melted chocolate on parchment. Sprinkle Rice Krispies into chocolate. Add gold glitter + salt. Refrigerate until set. Break into bark pieces.

10. Mochi Ice Cream

Ingredient	Amount
Glutinous rice flour (Mochiko)	1 cup
Sugar	1/4 cup
Water	3/4 cup
Cornstarch	For dusting
Ice cream	Small scoops (any CKD-aware flavor)

Method: 1. Mix rice flour + sugar + water. Microwave 1 min, stir. Microwave 1 more min. Stir until smooth and translucent. 2. Dust surface with cornstarch. Roll mochi thin. 3. Cut circles. Wrap around small frozen ice cream balls. Freeze 2 hours.

Japanese mochi ice cream, homemade, CKD-aware.

CKD Considerations

HOMEMADE CHIP DUPES

Nacho Dust Tortilla Chips

Doritos invented 1966 at Disneyland's Casa de Fritos restaurant. Leftover tortillas fried and seasoned. A theme park accident became a $5 billion brand.

Ingredient	Amount	CKD Notes
Corn tortillas (Guerrero)	8, cut into triangles	3-ingredient tortillas = lowest Na base
Avocado oil spray	Light coat	

Nacho Cheese Seasoning:

Ingredient	Amount
Nutritional yeast	2 tbsp (the cheese flavor — vegan hack that actually works)
Paprika	1 tsp
Garlic powder	1/2 tsp
Onion powder	1/2 tsp
Cumin	1/4 tsp
Chili powder	1/4 tsp
Cayenne	Pinch
Salt	1/4 tsp
Turmeric	1/4 tsp (the orange color)

Method: 1. Cut tortillas into triangles (6 per tortilla = 48 chips). 2. Spread on sheet pan. Spray lightly with avocado oil. 3. Bake 375F 8-10 min until crispy (or air fry 375F 6 min). 4. Mix ALL seasoning in a bowl. 5. While chips are still hot + slightly oily, toss in a bag with seasoning. Shake vigorously. The heat + oil makes the seasoning stick. 6. Cool 5 min. They crisp further as they cool.

Per serving (~12 chips): ~85mg Na | ~30mg P | ~60mg K (vs Doritos: ~210mg Na per serving)

Flamin' Lime Crunch Dupe

Flamin' Hot Cheetos — origin debated. Frito-Lay says Richard Montañez (janitor) invented them in 1991. Frito-Lay corporate says no. The decoder says: the myth is better than the truth, and both might be real.

Ingredient	Amount
Puffed rice snacks or rice puffs (unseasoned)	3 cups
Avocado oil spray	Light coat

Flamin' Hot Lime Seasoning:

Ingredient	Amount
Cayenne pepper	1 tbsp (the HEAT)
Paprika	1 tbsp (the RED)
Chili powder	1 tsp
Garlic powder	1/2 tsp
Onion powder	1/2 tsp
Sugar	1 tsp (balances the heat)
Citric acid	1/2 tsp (the LIME tang)
Lime zest	1 tsp (fresh lime)
Salt	1/4 tsp
Red food coloring	2-3 drops (optional — for the iconic red dust)

Method: 1. Spread puffs on sheet pan. Spray lightly with oil. 2. Bake 350F 5 min (just to warm + slightly toast — they're already puffed). 3. Mix ALL seasoning. If using food coloring, mix it into the seasoning powder. 4. Toss hot puffs with seasoning in a large bag. Shake until every puff is coated red. 5. Your fingers will turn red. That's how you know it's right.

Per serving (~1 cup): ~70mg Na | ~25mg P | ~45mg K

The lime twist: Squeeze fresh lime over the bowl before eating. The acid + cayenne heat + lime = the exact Flamin' Hot Lime experience. Your tongue will burn. Your fingers will be red. You will not stop eating them.

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RENAL CHECK — Rice Treats & Candy Dupes
K (Potassium): LOW (rice, marshmallow, wafers all low-K)
P (Phosphorus): LOW-MED (margarine over butter, cream cheese over
milk, controlled chocolate)
Na (Sodium): LOW (homemade = no hidden sodium)
Fluid: Minimal for solid treats. Track smoothie/pudding.
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"Rice Krispies saved dessert night. Chocolate Rice Krispies saved it harder."

CHAPTER 17

Sour, Chewy & Gummy Candy Lab

"Malic acid was first isolated from apple juice in 1785 by Carl Wilhelm Scheele."

Warheads, Sour Patch, Hi-Chew & More — Homemade, Renal-Aware

"Malic acid was first isolated from apple juice in 1785 by Carl Wilhelm Scheele, the Swedish-German chemist who also discovered chlorine, manganese, and oxygen."

THE 5-STAGE SOUR FORMULA

Every sour candy you've ever eaten uses some combination of five organic acids. Commercial candy engineers blend these in precise ratios to create different sour "signatures" — from the instant face-pucker of a Warhead to the slow tangy finish of a Hi-Chew. Here's how the system works, and how to use it safely on a renal diet.

Stage 1: Citric Acid — The Bright Initial Punch

- **What it does:** The most common sour agent in commercial candy. Sharp, clean, instant sour that hits hard and fades fast.
- **Found in:** Sour Patch Kids, Skittles, nearly every sour candy coating
- **CKD notes:** Generally CKD-aware in small amounts. Citric acid is metabolized by the liver, not the kidneys. However, it CAN increase aluminum absorption — avoid if you take aluminum-containing phosphorus binders. Standard candy amounts (1/4-1 tsp per batch) are safe.
- **Where to buy:** Any grocery store (canning aisle) or Amazon. Food-grade citric acid powder.
- **Home dose:** 1/4 tsp per cup of candy base for mild sour, up to 1 tsp for face-pucker.

Stage 2: Malic Acid — The Sustained "Green Apple" Sour

- **What it does:** Slower onset than citric, lingers longer on the tongue. This is the acid that gives green apple candy its signature profile. Creates the "sour that won't quit."
- **Found in:** Warheads (primary acid), Toxic Waste, SweeTarts, Jolly Ranchers
- **CKD notes:** CKD-aware at candy-making amounts. Malic acid is naturally found in apples — the word "malic" literally comes from Latin *malum* (apple). No significant K/P/Na content. Metabolized in the Krebs cycle.
- **Where to buy:** Amazon, brewing supply stores, or bulk candy-making suppliers. Food-grade malic acid powder.
- **Home dose:** 1/4 tsp for background sour, 1/2 tsp for serious pucker, 1 tsp+ for Warhead-level pain.

Stage 3: Tartaric Acid — The "Grape/Wine" Deepener

- **What it does:** The acid naturally found in grapes and wine. Adds depth and complexity to the sour profile. Makes sour candy taste "grown-up" rather than one-dimensional.
- **Found in:** Grape-flavored candies, wine gums, some European gummy formulations. Cream of tartar is potassium bitartrate (a tartaric acid salt).
- **CKD notes:** Use tartaric acid powder, NOT cream of tartar. Cream of tartar is potassium bitartrate — loaded with potassium (~495mg K per tsp), absolutely dangerous for CKD. Pure tartaric acid powder is fine in small amounts. Read labels carefully.
- **Where to buy:** Amazon, winemaking supply stores. Specifically "tartaric acid powder," NOT cream of tartar.
- **Home dose:** 1/8-1/4 tsp per batch. A little goes a long way — it's the background note, not the star.

Stage 4: Ascorbic Acid (Vitamin C) — The Sour + Health Crossover

- **What it does:** Mild, pleasant sourness with a "fruity" edge. The only sour acid that also functions as a vitamin. Adds brightness without harshness.
- **Found in:** Vitamin C candies, some fruit snack coatings, "healthy" sour gummies
- **CKD notes:** CAUTION. Vitamin C is metabolized to oxalate, which is cleared by the kidneys. Excess Vitamin C in CKD can increase oxalate buildup and risk of kidney stones. Keep to SMALL amounts in candy — do not treat 1/4 tsp (about 250mg Vitamin C) per batch as a universal allowance; ask your care team what applies to you. Do NOT megadose. If you're on dialysis, your team may have different guidance.
- **Where to buy:** Any pharmacy or grocery store. Ascorbic acid powder (pure Vitamin C powder).
- **Home dose:** 1/8-1/4 tsp per batch. Use as a brightener, not the primary sour.

Stage 5: Lactic Acid — The Fermented Tangy Finish

- **What it does:** The acid in yogurt, sour beer, and fermented foods. Soft, rounded, tangy sourness that creates a "fermented" finish. Makes candy taste complex and slightly funky.
- **Found in:** Some Scandinavian candies, sour beer-flavored gummies, artisanal sour candy
- **CKD notes:** Lactic acid is generally CKD-aware in candy amounts. Lactic acidosis is a concern in advanced CKD, but that's from metabolic overproduction, not from eating a few gummies with a drop of food-grade lactic acid. Use the liquid form (food-grade lactic acid solution).
- **Where to buy:** Amazon, brewing supply stores, cheese-making suppliers. Food-grade lactic acid (liquid, usually 88% concentration).
- **Home dose:** 1/4-1/2 tsp liquid per batch. Start low — it's potent.

How Commercial Candy Uses These

Candy	Primary Acid	Secondary Acid	Tertiary Acid	Sour Style
Warheads	Malic (heavy)	Citric	Ascorbic	Extreme, sustained pain
Sour Patch Kids	Citric (heavy)	Tartaric	—	Bright punch, fades to sweet
Toxic Waste	Citric + Malic (equal)	Ascorbic	—	Relentless, layered
Sour Skittles	Citric	Tartaric	—	Sharp coating, sweet core
Hi-Chew	Citric (light)	Malic (light)	—	Subtle, balanced
Swedish Fish	None	None	None	Sweet only, no sour
Sour Punch	Citric	Malic	—	Medium sour, chewy delivery
Trolli Sour Worms	Citric	Fumaric	—	Tart, gummy delivery

The Sour Coating Mix (Master Recipe)

Use this on ANY candy in this chapter. Make a jar, keep it in the pantry.

Ingredient	Amount	Role
Granulated sugar	1/2 cup	Carrier + sweet balance
Citric acid powder	2 tbsp	Stage 1 — bright punch
Malic acid powder	1 tbsp	Stage 2 — sustained sour
Tartaric acid powder	1 tsp	Stage 3 — depth
Ascorbic acid powder	1/2 tsp	Stage 4 — brightness

Mix thoroughly. Store in airtight jar. Toss warm gummies in this mix. Adjust ratios to taste — more malic for Warhead-level, more citric for Sour Patch-level, omit tartaric for simpler profiles.

Per 1 tsp coating: ~0mg K, ~0mg P, ~0mg Na. Pure acid + sugar = Small estimated mineral contribution per stated serving.

THE RECIPES

1. Warheads Dupe (Extreme Sour Hard Candy)

In 1993, the Warheads "Extreme Sour" challenge sent multiple children to the ER with chemical burns on their tongues — the candy was reformulated but never tamed.

Ingredient	Amount	CKD Notes
Granulated sugar	1 cup	Unrestricted in CKD unless diabetic
Light corn syrup	1/2 cup	Low K, low P, low Na
Water	1/4 cup	
Malic acid powder	1 1/2 tsp	Primary sour — the Warhead signature. CKD-aware.
Citric acid powder	1/2 tsp	Secondary punch. CKD-aware.

Ingredient	Amount	CKD Notes
Flavor extract (green apple, watermelon, or lemon)	1/2 tsp	Use candy-grade oil-based extracts
Food coloring	2-3 drops	Fine for CKD
Sour Coating Mix (from above)	2-3 tbsp	For rolling finished candies

Equipment: Candy thermometer, heavy saucepan, silicone molds or parchment-lined sheet, lollipop sticks (optional)

Method: 1. Combine sugar, corn syrup, and water in heavy saucepan over medium heat. Stir until sugar dissolves. 2. Stop stirring once it boils. Insert candy thermometer. Cook to 300F (hard crack stage) — this takes 10-15 min. Do not rush, do not stir. 3. Remove from heat immediately at 300F. Let cool 30 seconds. 4. Stir in malic acid, citric acid, flavor extract, and food coloring. Work fast — it sets quickly. 5. Pour into silicone molds or drop tablespoon-sized puddles onto parchment. Insert sticks if making lollipops. 6. Let cool completely (20-30 min). 7. Pop from molds. Toss in Sour Coating Mix while still slightly tacky. 8. Wrap individually in wax paper or cellophane.

Yields: ~30 hard candies

Per candy: ~2mg K, ~1mg P, ~2mg Na. Small estimated mineral contribution per stated serving.

Sour intensity levels: - **Mild:** Use 1/2 tsp malic only - **Medium:** Use 1 tsp malic + 1/4 tsp citric - **Warhead-level:** Use 1 1/2 tsp malic + 1/2 tsp citric + extra coating - **"Why did I do this":** Double the coating, add 1/4 tsp tartaric to the coating mix

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2. Sour Patch Kids Dupe (Sour-Then-Sweet Gummy)

Sour Patch Kids were originally called "Mars Men" when created in Ontario, Canada in the 1970s — they were renamed to ride the Cabbage Patch Kids craze of 1985.

Ingredient	Amount	CKD Notes
Unflavored gelatin	3 packets (21g)	renal-aware: low K, low P, low Na, decent protein
Flavored Jell-O (any flavor)	1 small box (3oz / 85g)	Pick your color — lemon, lime, cherry, grape
Water	1/2 cup	
Corn syrup	2 tbsp	
Citric acid powder	1 tsp	Primary sour — the Sour Patch signature
Sour Coating Mix	3 tbsp	For the "sour then sweet" shell

Method: 1. Bloom unflavored gelatin in 1/4 cup cold water for 5 min (it will solidify into a rubbery puck — that's correct). 2. Heat remaining 1/4 cup water until simmering. Add Jell-O powder and corn syrup, stir to dissolve. 3. Add bloomed gelatin to hot mixture. Stir until completely melted and smooth. 4. Stir in citric acid. 5. Pour into silicone gummy molds (kid-shaped if you can find them, otherwise bears or worms). Use a dropper or squeeze bottle for precision. 6. Refrigerate 2 hours minimum until firm. 7. Pop gummies from molds. Let them air-dry on a wire rack for 6-8 hours (this creates the slightly tacky exterior that holds the coating). 8. Toss in Sour Coating Mix. Shake off excess.

Yields: ~50 gummies (depending on mold size)

Per gummy: ~5mg K, ~3mg P, ~8mg Na. Eat freely.

Flavor ideas: - **Red:** Cherry or strawberry Jell-O - **Orange:** Orange Jell-O (the Jell-O is fine — it's orange juice concentrate that's high-K, not orange flavoring) - **Yellow:** Lemon Jell-O - **Green:** Lime Jell-O - **Blue:** Berry blue Jell-O

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3. Sour Punch Straws Dupe (Sour Licorice-Style)

Red Vines' Hollister, California factory produces over 60,000 pounds of licorice per day — that's roughly one Statue of Liberty in candy weight every two weeks.

Ingredient	Amount	CKD Notes
Unflavored gelatin	2 packets (14g)	renal-aware protein source
Flavored Jell-O (strawberry or green apple)	1 small box (3oz)	
Water	1/3 cup	
Corn syrup	3 tbsp	Gives the chewy pull
Cornstarch	2 tbsp	Structure
Citric acid	3/4 tsp	
Malic acid	1/4 tsp	The green apple liner note
Sour Coating Mix	2 tbsp	

Equipment: 9x13 pan lined with parchment, pizza cutter or sharp knife

Method: 1. Bloom gelatin in 2 tbsp cold water for 5 min. 2. Heat remaining water with corn syrup until simmering. Stir in Jell-O powder and cornstarch. Whisk smooth. 3. Add bloomed gelatin. Stir until dissolved. 4. Stir in citric acid and malic acid. 5. Pour into parchment-lined 9x13 pan. Spread thin and even (about 1/4 inch thick). 6. Refrigerate 2-3 hours until firm. 7. Remove slab from pan. Cut into long strips (about 1/2 inch wide, 6 inches long) with pizza cutter. 8. Air-dry strips on wire rack for 4-6 hours. They'll develop a slight tackiness. 9. Toss in Sour Coating Mix. 10. Optional: bunch 3-4 strips together and twist for the "straw" look.

Yields: ~30 straws

Per straw: ~4mg K, ~3mg P, ~6mg Na. Small estimated mineral contribution per stated serving.

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4. Sour Gummy Worms Dupe (Trolli/Haribo Style)

Haribo founder Hans Riegel invented the gummy bear in 1922 in Bonn, Germany, using a dancing-bear street performance tradition as inspiration for the shape.

Ingredient	Amount	CKD Notes
Unflavored gelatin	4 packets (28g)	Extra gelatin = extra chew for worm texture
Flavored Jell-O — TWO flavors	2 small boxes (3oz each)	Classic combo: strawberry + lime, or cherry + lemon
Water	3/4 cup (split between two batches)	
Corn syrup	2 tbsp per batch	
Citric acid	3/4 tsp per batch	
Sour Coating Mix	3-4 tbsp	

Equipment: Worm-shaped silicone molds (Amazon, ~$8), or drink straws bundled together in a tall glass

The Straw Method (if no worm molds): Bundle 20-30 fat drinking straws together with rubber bands, stand them upright in a tall glass. Pour gummy mixture into straws. Refrigerate. Push gummies out with a skewer. Instant worms.

Method: 1. Make BATCH A: Bloom 2 gelatin packets in 3 tbsp cold water. Heat 3/8 cup water + 2 tbsp corn syrup, dissolve first Jell-O flavor. Add bloomed gelatin + 3/4 tsp citric acid. Stir smooth. 2. Make BATCH B: Same process with second Jell-O flavor. 3. For two-tone worms: pour Batch A into molds halfway. Refrigerate 15 min until tacky but not fully set. Pour Batch B on top. 4. Refrigerate 2+ hours until fully firm. 5. Unmold. Air-dry 4-6 hours on wire rack. 6. Toss in Sour Coating Mix.

Yields: ~40 worms (mold-dependent)

Per worm: ~6mg K, ~4mg P, ~9mg Na. This estimate does not establish a safe daily serving; count the actual portion and sugar within your plan.

Classic color combos: - Red/green (strawberry + lime) — the Trolli classic - Red/blue (cherry + berry blue) — the neon worm - Yellow/green (lemon + lime) — the citrus snake - Orange/red (orange + cherry) — the sunset crawler

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5. Sour Skittles Dupe

Skittles' "Taste the Rainbow" slogan, created by agency D'Arcy Masius Benton & Bowles in 1994, has remained unchanged for over 30 years — one of the longest-running candy campaigns in advertising history.

Ingredient	Amount	CKD Notes
Granulated sugar	1 cup	
Corn syrup	1/3 cup	
Unflavored gelatin	1 packet (7g)	
Cornstarch	3 tbsp	

Ingredient	Amount	CKD Notes
Water	1/4 cup	
Flavor extracts (lemon, lime, strawberry, grape, orange)	1/4 tsp each	Use candy-grade extracts
Food coloring (5 colors)	2-3 drops each	
Citric acid	3/4 tsp (for the coating)	
Tartaric acid	1/4 tsp (for the coating)	The "grape sour" that makes Sour Skittles distinctive
Powdered sugar	2 tbsp (for the coating)	

Method: 1. Bloom gelatin in 2 tbsp cold water. 2. Combine sugar, corn syrup, cornstarch, and remaining water in saucepan. Heat to 250F (firm ball stage), stirring constantly. 3. Remove from heat. Stir in bloomed gelatin until dissolved. 4. Divide mixture into 5 portions. Add flavor + color to each: red/strawberry, orange/orange, yellow/lemon, green/lime, purple/grape. 5. Working quickly (mixture sets fast): drop small balls (~3/4 inch) onto parchment using a teaspoon or piping bag. If too thick, reheat gently. 6. Let cool 1 hour. Roll between palms to round off shape. 7. Mix citric acid + tartaric acid + powdered sugar. Toss cooled candies in sour coating. 8. Let dry 30 min uncovered. Store in airtight container.

Yields: ~60 pieces

Per 10 pieces: ~8mg K, ~5mg P, ~4mg Na. Review the full serving and ingredients against your care plan.

6. Toxic Waste Dupe (Ultra Sour)

The Toxic Waste candy brand was briefly banned in parts of the EU in 2011 after testing revealed lead levels exceeding the legal limit in some batches — the manufacturer reformulated and returned to market within a year.

Ingredient	Amount	CKD Notes
Granulated sugar	1 cup	
Light corn syrup	1/2 cup	
Water	1/4 cup	
Citric acid	1 1/2 tsp (in the candy AND the coating)	Heavy dual-dose for maximum assault
Malic acid	1 1/2 tsp	Equal to citric — this is what makes Toxic Waste different from Warheads
Ascorbic acid	1/4 tsp	Stage 4 brightness
Flavor extract (assorted)	1/2 tsp	
Food coloring	3 drops	

Ultra Sour Coating (different from master recipe — this one is meaner):

Ingredient	Amount
Citric acid	2 tbsp
Malic acid	1 tbsp
Ascorbic acid	1 tsp
Sugar	2 tbsp

Method: 1. Follow the Warheads hard candy method exactly (Steps 1-6 above). 2. BEFORE molding: stir in the full citric + malic + ascorbic dose. This puts sour INSIDE the candy, not just on the surface. 3. Mold, cool, and unmold. 4. Toss in the Ultra Sour Coating. Be generous. The coating should be visibly crystalline. 5. Optional: wrap each candy individually with a "HAZARD" sticker. Presentation matters.

Yields: ~30 candies

Per candy: ~2mg K, ~1mg P, ~2mg Na. The acids, sugar, and heat may matter for teeth, glucose, reflux, and individual tolerance.

The Toxic Waste Challenge: Time how long you can keep one in your mouth without spitting it out. The commercial version averages 15 seconds for most people. If your homemade version lasts longer than 20 seconds, add more malic acid.

7. Hi-Chew Dupe (Japanese Chewy Fruit Candy)

Hi-Chew was invented in 1975 by Taichiro Morinaga as a "chewable gum that you can swallow" — the original concept was to solve the Japanese cultural discomfort with spitting out gum in public.

Ingredient	Amount	CKD Notes
Unflavored gelatin	2 packets (14g)	renal-aware
Granulated sugar	1/2 cup	
Corn syrup	3 tbsp	Creates the Hi-Chew pull
Unsalted butter	1 tbsp	Tiny amount = minimal P. Creates the smooth, non-sticky chew.
Powdered sugar	1/4 cup	For dusting and kneading
Citric acid	1/4 tsp	Subtle — Hi-Chew is more sweet than sour
Malic acid	1/8 tsp	Background fruit note
Flavor extract (strawberry, grape, or green apple)	3/4 tsp	Candy-grade oil-based. Strawberry is the classic.
Food coloring	2-3 drops	

Method: 1. Bloom gelatin in 2 tbsp cold water for 5 min. 2. Combine sugar, corn syrup, and 2 tbsp water in saucepan. Heat to 255F (hard ball stage). 3. Remove from heat. Stir in butter and bloomed gelatin. Mix until smooth. 4. Add flavor, color, citric acid, and malic acid. Stir well. 5. Pour onto parchment dusted with powdered sugar. Let cool until handleable (about 5 min). 6. KNEAD the candy like taffy — fold, stretch, fold, stretch. Do this 15-20 times. This is what creates the Hi-Chew texture (layered, chewy, slightly aerated). Dust with more powdered sugar as needed to prevent sticking. 7. Roll into a log about 1 inch thick. Cut into 1-inch pieces. 8. Wrap each piece in wax paper, twisting the ends.

Yields: ~25 pieces

Per piece: ~5mg K, ~4mg P, ~3mg Na. small estimated mineral contribution per stated serving.

The Hi-Chew secret: The kneading step is non-negotiable. Skip it and you get a hard gummy. Do it and you get that signature layered, taffy-meets-gummy chew that made Hi-Chew famous.

Flavor variations: - **Strawberry** (classic): Strawberry extract + red coloring - **Green Apple**: Green apple extract + green coloring + extra 1/8 tsp malic acid - **Grape**: Grape extract + purple coloring + 1/8 tsp tartaric acid for authenticity - **Mango**: Use mango extract (NOT mango juice — juice is high-K). Yellow coloring. - **Banana**: Banana extract + yellow coloring. (Whole banana can be high in potassium; extract products vary, so check the label and your plan.)

8. Swedish Fish Dupe (Soft Red Gummy)

Swedish Fish were created in the 1950s by Malaco, a Swedish candy company, specifically for export to the North American market — they were never popular in Sweden itself.

Ingredient	Amount	CKD Notes
Unflavored gelatin	2 packets (14g)	renal-aware
Flavored Jell-O (cherry)	1 small box (3oz)	The "Swedish Fish flavor" is actually lingonberry, but cherry Jell-O is the closest common match
Corn syrup	3 tbsp	Creates the gummy-but-soft Swedish Fish texture
Water	1/3 cup	
Sugar	2 tbsp	
Red food coloring	3-4 drops	Get that deep Swedish red
Coconut oil or cooking spray	For molds	

Equipment: Fish-shaped silicone molds (Amazon, ~$7) or any small mold shape

Method: 1. Bloom gelatin in 3 tbsp cold water for 5 min. 2. Heat remaining water, sugar, and corn syrup until simmering. Stir in Jell-O powder until dissolved. 3. Add bloomed gelatin. Stir until completely smooth. 4. Add red food coloring for deeper color. 5. Lightly grease fish molds with coconut oil. 6. Pour mixture into molds using a dropper or small pitcher. 7. Refrigerate 2

hours. 8. Unmold. Do NOT air-dry these — Swedish Fish are meant to be soft and slightly sticky. 9. If desired, lightly dust with cornstarch to reduce stickiness for storage.

Yields: ~40 fish (depending on mold)

Per fish: ~4mg K, ~3mg P, ~7mg Na. Safe comfort food.

Why these taste like the real thing: Swedish Fish's signature chew comes from the combination of gelatin + corn syrup + NOT drying them. Most gummy recipes over-dry. Swedish Fish are intentionally soft. Trust the process — don't over-set them.

Color variations: - **Red** (classic): Cherry Jell-O + red coloring - **Yellow**: Lemon Jell-O + yellow coloring - **Green**: Lime Jell-O + green coloring - **Assorted Swedish Fish bag:** Make all three, mix in one container

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9. Gummy Bears Dupe (Haribo-Style, From Scratch)

Haribo's name is an acronym: HAns RIegel BOnn — the founder's name and city, because German efficiency doesn't waste syllables even on candy brands.

Ingredient	Amount	CKD Notes
Unflavored gelatin	3 packets (21g)	renal-aware: ~6g protein per packet, minimal K/P/Na
Flavored Jell-O (any flavor)	1 small box (3oz)	
Water	1/2 cup	
Corn syrup	1 tbsp	Less corn syrup than Swedish Fish = firmer chew
Citric acid	1/4 tsp (optional)	Only if you want the slight tang Haribo has

Equipment: Gummy bear silicone molds (Amazon, ~$6-8 for 3-pack). A dropper or squeeze bottle is essential — bear molds are tiny.

Method: 1. Bloom gelatin in 1/4 cup cold water for 5 min. 2. Heat remaining 1/4 cup water until simmering. Dissolve Jell-O powder. 3. Add corn syrup and bloomed gelatin. Stir until completely smooth. Skim any foam. 4. Stir in citric acid if using. 5. Transfer to a squeeze bottle or use a dropper. Fill each bear cavity carefully. 6. Refrigerate 1-2 hours. 7. Pop bears from molds. Air-dry on wire rack for 12-24 hours for that firm Haribo chew.

The drying time matters: Fresh from the fridge, these are soft and jiggly (like store-brand gummies). After 12-24 hours of air-drying, they develop the firm, satisfying Haribo snap-then-chew. Patience.

Yields: ~80-100 bears (depending on mold)

Per 10 bears: ~10mg K, ~6mg P, ~12mg Na. Snack freely.

The Haribo Gold-Bear rainbow: - **White/Pineapple**: Pineapple Jell-O (if unavailable: lemon Jell-O + drop of pineapple extract) - **Red/Strawberry**: Strawberry Jell-O - **Orange/Orange**: Orange Jell-O - **Yellow/Lemon**: Lemon Jell-O - **Green/Apple**: Lime Jell-O + 1/8 tsp malic acid for apple tartness - **Clear/Grapefruit**: Unflavored gelatin + 2 tbsp sugar + grapefruit extract (grapefruit is moderate-K, but extract is fine)

Pro move: Make all six flavors. Mix them in a big jar. You now have a bag of Haribo Gold-Bears for the cost of some Jell-O and gelatin.

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10. Fruit Roll-Ups Dupe (Homemade Fruit Leather)

General Mills launched Fruit Roll-Ups in 1983, but fruit leather itself dates back to at least 1st-century Rome, where Pliny the Elder described drying fruit pulp on stone surfaces in the sun.

Ingredient	Amount	CKD Notes
Applesauce (unsweetened)	2 cups	Apple = LOW-K fruit. Applesauce is a CKD-aware base.
Sugar	2-3 tbsp (or to taste)	Adjust sweetness
Lemon juice	1 tbsp	Flavor brightener, small amount = CKD-aware
Cornstarch	1 tsp	Helps set and prevent stickiness
Flavor extract (strawberry, grape, etc.)	1/2 tsp (optional)	For flavored varieties
Food coloring	3-4 drops (optional)	For that neon Fruit Roll-Up look
Citric acid	1/4 tsp (optional)	For a sour version

Equipment: Sheet pan, parchment paper, oven

Method: 1. Preheat oven to 170F (or lowest setting). If your oven's lowest is 200F, prop the door open slightly with a wooden spoon. 2. Blend applesauce, sugar, lemon juice, cornstarch, and any optional add-ins until perfectly smooth. 3. Line a sheet pan with parchment paper. Lightly grease the parchment. 4. Pour fruit mixture onto parchment. Spread evenly with an offset spatula — aim for about 1/8 inch thick. Consistent thickness is critical. Thin spots will crack, thick spots won't dry. 5. Bake at 170F for 6-8 hours (yes, hours). The leather is done when it's no longer tacky to the touch but still pliable. It should peel cleanly off the parchment. 6. Remove from oven. Let cool completely. 7. Cut into strips with scissors or pizza cutter. Roll each strip with a fresh piece of parchment between layers.

Yields: ~12 roll-ups from one sheet pan

Per roll-up: ~35mg K, ~5mg P, ~2mg Na. One of the safest snacks in this entire book.

Flavor variations: - **Classic Strawberry**: Add 1/2 tsp strawberry extract + red food coloring - **Grape**: Add 1/2 tsp grape extract + purple coloring - **Tropical Punch**: Add 1/4 tsp each pineapple + coconut extract + yellow/red coloring - **Sour Apple**: Add 1/4 tsp malic acid + green coloring + green apple extract - **Cinnamon**: Add 1/2 tsp cinnamon. No coloring needed — it'll turn amber naturally - **Tie-Dye Roll-Up**: Make 3 batches (red, blue, yellow). Swirl together on the parchment before baking. The Vorath version.

CKD fruit base alternatives (instead of applesauce): - **Cranberry**: Blend 2 cups whole cranberries + 1/3 cup sugar + 1/4 cup water. Cook 10 min until soft, blend smooth. Very low-K. - **Blueberry**: Blend 2 cups blueberries + 2 tbsp sugar. Low-K berry. - **Strawberry**: Blend 2 cups strawberries + 2 tbsp sugar. Low-K. - **Grape**: Blend 2 cups seedless grapes + 1 tbsp lemon juice. Moderate-K — use grape for flavor, not as 100% base. Mix 50/50 with applesauce. - **AVOID**: Banana, mango, orange, kiwi, papaya as base — all are high-K.

Dehydrator method: If you have a food dehydrator, spread on dehydrator sheets at 135F for 8-10 hours. More even results than the oven.

MASTER INGREDIENT SOURCING

Ingredient	Where to Buy	Approximate Price	Shelf Life
Unflavored gelatin (Knox)	Any grocery store	~$3 for 4-pack	Years (dry)
Jell-O (assorted flavors)	Any grocery store	~$1 per box	Years (dry)
Citric acid powder	Grocery (canning aisle) or Amazon	~$5 for 8oz	Years
Malic acid powder	Amazon or brewing supply	~$8 for 8oz	Years
Tartaric acid powder	Amazon or winemaking supply	~$7 for 4oz	Years
Ascorbic acid powder	Pharmacy or Amazon	~$6 for 8oz	1-2 years
Lactic acid (liquid)	Amazon or cheese-making supply	~$7 for 4oz	1-2 years
Candy-grade flavor extracts	Amazon (LorAnn Oils)	~$3-5 each	2-3 years
Food coloring	Grocery store	~$3 for 4-pack	Years
Corn syrup (light)	Grocery store	~$3 per bottle	Years
Silicone gummy molds	Amazon	~$6-10 per set	Forever
Candy thermometer	Any kitchen store	~$5-10	Forever

Total startup investment for the entire candy lab: ~$50-70. After that, each batch costs $2-4.

CKD Considerations

> ***Potassium (K):*** *All recipes in this chapter are LOW-K. Gelatin, sugar, corn syrup, and food-grade acids contain negligible potassium. The only K source is fruit-based items (Fruit Roll-Ups) — and those use LOW-K fruits only (apple, cranberry, blueberry, strawberry). No recipe exceeds 40mg K per serving.*
>
> ***Phosphorus (P):*** *All recipes are LOW-P. Gelatin is a low-P protein source. Sugar and corn syrup contain no phosphorus. No recipe exceeds 10mg P per serving (except Fruit Roll-Ups at ~5mg).*
>
> ***Sodium (Na):*** *All recipes are LOW-Na. The only Na sources are Jell-O (~200mg per entire box, split across 40-80 candies) and tiny pinches of salt where noted. No recipe exceeds 15mg Na per serving.*
>
> ***Fluid:*** *Gummy candies are mostly sugar and gelatin with minimal water content after setting/drying. Fruit Roll-Ups are dehydrated. Fluid impact is negligible.*
>
> ***Phosphorus binder note:*** *If you take calcium-based binders, the citric acid in sour candy may slightly increase calcium absorption. This is not harmful at candy-making doses, but take your binders with MEALS, not candy snacks.*
>
> ***Diabetes co-morbidity:*** *These are candy. They are sugar. If you manage blood glucose alongside CKD, portion accordingly — the renal numbers are safe, but the sugar load is real.*
>
> ***Cream of tartar warning (repeated because it matters):*** *NEVER substitute cream of tartar for tartaric acid. Cream of tartar is potassium bitartrate — ~495mg potassium per teaspoon. Tartaric acid powder is the CKD-aware form. Read labels. This is the single most important safety note in this chapter.*

"Candy is childhood, the best and bright days we feel we have lost." — Roald Dahl, Charlie and the Chocolate Factory

THE EXPERIMENT LAB — Wild & Crazy Candy

> *Welcome to the part of the lab where the safety goggles are mandatory and the results are edible. Every recipe here uses real science — fluorescence, pH chemistry, phase transitions, cryogenics. This is where Willy Wonka meets a chemistry PhD. All recipes remain CKD-aware unless explicitly noted otherwise.*

11. UV Reactive Gummy Bears

Quinine, the antimalarial compound derived from cinchona bark, was the first effective antimalarial drug — and its fluorescence under ultraviolet light was first documented by Sir John Herschel in 1845, making it one of the earliest observed cases of fluorescence in history.

These gummy bears literally glow under blacklight. Real science, real candy, real party trick. Quinine in tonic water absorbs UV light and re-emits it as visible blue-white light. You are making edible fluorescence.

Ingredient	Amount	CKD Notes
Unflavored gelatin	3 packets (21g)	renal-aware protein, negligible K/P/Na
Tonic water (containing quinine)	1/2 cup	Use as the liquid base instead of plain water. Quinine content in commercial tonic water (~83mg/L) is FDA-regulated and safe. Na ~10mg per 1/2 cup.
Sugar	3 tbsp	
Corn syrup	1 tbsp	
Citric acid	1/4 tsp	Adds brightness, CKD-aware at this amount
Flavor extract (lemon or lime)	1/2 tsp	Candy-grade oil-based. Citrus flavors complement tonic's bitterness.
Blue food coloring (optional)	1-2 drops	Intensifies the glow effect

Equipment: Gummy bear silicone molds, squeeze bottle or dropper, UV/blacklight (available at any dollar store or Amazon ~$8)

Method: 1. Bloom gelatin in 1/4 cup cold tonic water for 5 min. (Yes, tonic water — this is where the magic comes from.) 2. Heat remaining 1/4 cup tonic water with sugar and corn syrup until simmering. Do NOT boil hard — excessive heat can degrade quinine's fluorescent properties. 3. Add bloomed gelatin to warm mixture. Stir gently until completely dissolved. Skim any foam. 4. Stir in citric acid, flavor extract, and optional food coloring. 5. Transfer to squeeze bottle. Fill gummy bear molds carefully. 6. Refrigerate 2 hours until firm. 7. Pop bears from molds. Air-dry 12-24 hours for firm Haribo-style chew. 8. Turn off the lights. Hit them with the blacklight. Watch jaws drop.

Yields: ~80-100 bears

Per 10 bears: ~8mg K, ~5mg P, ~6mg Na. Renal-aware as portioned.

CKD consideration: Quinine in commercial tonic water is present at very low, FDA-regulated levels (~83mg/L). At the amounts used here (~120mL tonic water across 80+ gummies), each gummy contains a negligible amount of quinine. This is NOT medicinal-dose quinine. However, if you take quinine-containing medications or have been told to avoid quinine, skip this recipe or substitute plain sparkling water (you lose the glow but keep the gummy). Gelatin is CKD-aware. Citric acid at 1/4 tsp across 80+ gummies is negligible per serving.

The science: Quinine molecules absorb ultraviolet photons (invisible to our eyes) and re-emit them at a longer wavelength in the visible blue spectrum. This is fluorescence, not phosphorescence — it only glows while UV light is hitting it, not after.

12. Galaxy Swirl Lollipops

Isomalt was accidentally discovered in the 1960s during sugar beet research — it's the only sugar alcohol that can be heated to hard-crack stage without yellowing, which is why every professional sugar artist on the planet uses it for show pieces.

Translucent lollipops that look like you captured a nebula on a stick. Deep purple, midnight blue, silver stardust, and real gold leaf suspended in crystal-clear sugar glass.

Ingredient	Amount	CKD Notes
Isomalt crystals	2 cups (400g)	Sugar alcohol. Low glycemic index. Minimal K/P/Na. Does not promote tooth decay. May cause mild GI upset in large amounts — but you're eating lollipops, not handfuls.
Water	1/4 cup	
Deep purple food coloring (gel)	3-4 drops	
Royal blue food coloring (gel)	3-4 drops	
Silver luster dust (food-grade)	1/2 tsp	Must be labeled "food-grade" or "FDA-compliant." NOT craft glitter.
Edible gold leaf sheets	2-3 small sheets	Real 24K edible gold. Biologically inert — passes through the body unchanged. Zero K/P/Na.
Flavor extract (cotton candy, vanilla, or berry)	1/2 tsp	Candy-grade
Lollipop sticks	12-15	

Equipment: Heavy saucepan, candy thermometer, silicone lollipop molds OR parchment-lined sheet, toothpick for swirling

Method: 1. Combine isomalt and water in a heavy saucepan over medium heat. Stir gently until isomalt dissolves. 2. Once dissolved, stop stirring. Insert candy thermometer. Heat to 340F (isomalt's working temperature). This takes 10-15 min. Do not rush. 3. Remove from heat. Let cool to 320F (about 60-90 seconds). This prevents bubbles. 4. Add flavor extract. Stir once gently. 5. Pour into silicone molds or drop 2-inch circles onto parchment. Insert lollipop sticks with a twist. 6. IMMEDIATELY: Drop 1 drop purple coloring on one side, 1 drop blue on the other. Use a toothpick to swirl — ONE pass only. Do not over-swirl or you'll get mud. The goal is a galaxy spiral. 7. While still molten: sprinkle silver luster dust across the surface. It will catch in the swirls like stars. 8. Place a small torn piece of gold leaf on each lollipop. Press gently with the toothpick. The gold should float like a celestial body in the nebula. 9. Let cool completely (15-20 min). Do not touch — fingerprints ruin the glass-like finish. 10. Wrap individually in cellophane. Store in airtight container (isomalt is hygroscopic — absorbs moisture from air).

Yields: ~12-15 lollipops

Per lollipop: ~2mg K, ~1mg P, ~1mg Na. Small estimated mineral contribution per stated serving.

CKD consideration: Isomalt is a sugar alcohol — it does not spike blood sugar as aggressively as sucrose (glycemic index ~9 vs ~65 for sugar). Do not assume universal CKD safety; review the product, serving, and your care plan. The gold leaf is pure elemental gold, biologically inert, zero estimated mineral contribution. Silver luster dust is food-grade mica-based pigment, not actual silver. All coloring agents are FDA-approved at these trace amounts. If you have diabetes co-morbidity, isomalt is actually preferable to sugar for hard candy.

Pro move: Make these under dim lighting and photograph them with a blacklight nearby. The luster dust picks up UV and the whole thing looks extraterrestrial.

13. Color-Changing Sour Drops

Butterfly pea flower (Clitoria ternatea) has been used in Southeast Asian cooking for centuries — Thai "nam dok anchan" tea, Malay "nasi kerabu" blue rice, and Burmese cosmetics all use the same anthocyanin pigment that changes color based on pH, a property first scientifically described by Robert Boyle in 1664.

These start BLUE. You put one in your mouth. Your saliva + the citric acid coating shifts the pH, and the candy turns PURPLE right on your tongue. This is not a trick — this is anthocyanin chemistry. You are eating a pH indicator.

Ingredient	Amount	CKD Notes
Unflavored gelatin	3 packets (21g)	CKD-aware protein
Sugar	1/4 cup	
Corn syrup	2 tbsp	
Water	1/3 cup	
Butterfly pea flower extract (liquid)	2 tbsp	Available on Amazon. Pure anthocyanin extract from dried flowers. Zero K/P/Na. Non-toxic, food-grade.
Citric acid	1 tsp (divided: 1/4 tsp in candy, 3/4 tsp in coating)	The coating acid is what triggers the color change in your mouth
Flavor extract (blueberry or mixed berry)	1/2 tsp	Matches the blue color
Sour Coating Mix (from master recipe)	3 tbsp	The acid in the coating is the trigger mechanism

Method: 1. Bloom gelatin in 3 tbsp cold water for 5 min. 2. Heat remaining water, sugar, and corn syrup until simmering. 3. Stir in bloomed gelatin until dissolved. 4. Add butterfly pea flower extract. The mixture will turn deep, vivid blue. This is the anthocyanin pigment dissolving. 5. Add 1/4 tsp citric acid and flavor extract. The candy may shift slightly toward blue-violet — that's fine. The real show happens in the mouth. 6. Pour into small round silicone molds (sphere or drop-shaped work best). Use a dropper for precision. 7. Refrigerate 2+ hours until firm. 8. Pop from molds. Air-dry 4-6 hours on wire rack. 9. Toss in Sour Coating Mix — be generous with the citric acid component. The more acid on the surface, the more dramatic the color change.

Yields: ~50 drops

Per drop: ~4mg K, ~3mg P, ~5mg Na. CKD-aware.

CKD consideration: Butterfly pea flower extract is an herbal/botanical, not a fruit juice. It contains no significant K, P, or Na. The anthocyanin pigments are the same class of compounds found in blueberries and red cabbage. Citric acid total across the batch (1 tsp) divided by 50 gummies is trivial per serving. Gelatin is renal-aware. The only watch item is total citric acid if you're eating many pieces — stay reasonable (10-15 pieces is not a universal serving recommendation; use your individualized plan).

The science: Anthocyanins are pH-indicator molecules. In neutral/alkaline conditions (pH 7+), they appear blue. In acidic conditions (pH 3-4, like citric acid hitting saliva), they shift to purple and eventually pink/red. Your saliva is pH ~6.8. The citric acid coating drops the local pH to ~3-4. Blue + acid = purple. Real-time chemistry, edible format.

Party trick: Give someone a blue candy. Tell them nothing. Watch their face when it turns purple on their tongue. Then explain the chemistry. Education through candy.

14. Rainbow Stained Glass Candy

The oldest surviving stained glass windows are in Augsburg Cathedral, Germany, dating to approximately 1065 AD — the "Five Prophets" windows use metallic oxide pigments (cobalt for blue, copper for green, gold for red) suspended in molten glass, which is chemically identical to what you're about to do with sugar.

Seven colors of crystal-clear isomalt, layered and shattered like cathedral windows. Each color a different fruit flavor. When you hold a piece up to light, it glows like actual stained glass.

Ingredient	Amount	CKD Notes
Isomalt crystals	3 cups (600g) total, divided into 7 portions (~85g each)	Low GI sugar alcohol. CKD-aware.
Water	1/3 cup total (divided)	
Gel food coloring — 7 colors: red, orange, yellow, green, blue, indigo/purple, violet/pink	3-4 drops each	
Flavor extracts — 7 flavors: strawberry, orange, lemon, green apple, blue raspberry, grape, watermelon	1/4 tsp each	Candy-grade oil-based
Cooking spray or silicone mat	For the sheet pan	

Equipment: Heavy saucepan, candy thermometer, sheet pan lined with silicone mat, offset spatula

Method: 1. Work one color at a time. Combine ~85g isomalt + 2-3 tsp water in saucepan. Heat to 340F. 2. Remove from heat. Cool to 320F. Stir in one color + one flavor. 3. Pour onto silicone mat in a THIN layer (1/8 inch or less — the thinner, the more translucent). Spread with offset spatula. 4. Let cool completely. Peel off mat. Set aside. 5. Repeat for all 7 colors. (Yes, this takes time. You are building a rainbow. Patience.) 6. Once all 7 sheets are cool and solid: - **Option A — Layered Stack:** Stack sheets loosely, offset at angles. Use a kitchen mallet or the back of a heavy spoon to CRACK the stack into irregular shards. You'll get multi-colored pieces with visible layers. - **Option B — Mosaic:** Break each color sheet into small pieces individually. Arrange on fresh parchment in a mosaic pattern. Flash-heat in oven at 350F for 30-60 seconds ONLY (just long enough to fuse edges). Remove immediately. Let cool. You now have a fused stained glass panel you can break into serving pieces. 7. Store in airtight container immediately. Isomalt + humidity = sticky mess.

Yields: ~60-80 shards (depending on how you break them)

Per 3-4 shards: ~2mg K, ~1mg P, ~1mg Na. Small estimated mineral contribution per stated serving.

CKD consideration: Isomalt is CKD-aware. All coloring is FDA-approved food-grade gel. Flavor extracts contain no significant estimated mineral contribution. This recipe is essentially pure sugar alcohol + color + flavor. No gelatin, no fruit, no dairy, no hidden phosphorus. One of the cleanest candy recipes possible from a renal standpoint. If diabetic, note that isomalt still has ~2 cal/g (vs sugar's 4 cal/g) and ~half the glycemic impact.

Display tip: Place pieces on a white plate with a small LED tea light underneath. The light will shine through the colored isomalt exactly like sunlight through a church window. This is a conversation piece, not just candy.

15. Dragon's Breath Sour Bombs

Liquid nitrogen (LN2) boils at -321F (-196C) and has been used in commercial food preparation since the 1970s — Dippin' Dots patented their flash-freezing ice cream process in 1988, and the "Dragon's Breath" cereal puff trend went viral on social media in 2017, with the FDA subsequently issuing a safety advisory in 2018.

Flash-frozen sour gummy balls that produce dramatic vapor from your mouth and nose when you eat them. The "smoke" is condensed water vapor from your warm breath hitting the ultra-cold candy surface. You look like a dragon. You taste sour candy. Everyone loses their minds.

Ingredient	Amount	CKD Notes
Unflavored gelatin	2 packets (14g)	CKD-aware
Flavored Jell-O (any flavor)	1 small box (3oz)	
Water	1/3 cup	

Ingredient	Amount	CKD Notes
Corn syrup	2 tbsp	
Citric acid	3/4 tsp	
Malic acid	1/2 tsp	Extra sour to complement the frozen sensation
Sour Coating Mix	3 tbsp	Applied BEFORE freezing
Liquid nitrogen	2-3 liters	NOT AN INGREDIENT YOU EAT. This is the freezing medium. See safety notes.

Equipment: Metal bowl (NOT glass — glass can shatter at LN2 temperatures), slotted spoon, insulated gloves (leather or cryo-rated), safety goggles, well-ventilated area

SAFETY NOTES — READ BEFORE PROCEEDING:

1. ***NEVER swallow liquid nitrogen.*** *It will cause severe internal frostbite/burns. The candy must be frozen solid and the LN2 fully evaporated before eating.*
2. ***NEVER seal liquid nitrogen in a closed container.*** *As it evaporates, it expands 694x in volume. A sealed container WILL explode.*
3. ***Use in a well-ventilated area.*** *LN2 displaces oxygen as it evaporates. Do not use in a small enclosed space.*
4. ***Wear insulated gloves and goggles.*** *Splashing LN2 on skin causes instant frostbite.*
5. ***Wait 15-30 seconds after removing candy from LN2 before eating.*** *The vapor effect still works but the surface temperature is safe for mouth contact.*
6. ***Supervise children AT ALL TIMES.*** *This is a supervised adult activity. Kids can eat the finished product, but adults handle the nitrogen.*
7. ***Where to buy LN2:*** *Welding supply stores, Airgas, or some ice cream shops sell it by the liter (~$3-5/liter). Bring a proper dewar (insulated container), not a thermos.*

Method: 1. Make sour gummy base: Bloom gelatin in 2 tbsp cold water. Heat remaining water + corn syrup, dissolve Jell-O. Add gelatin, citric acid, malic acid. Stir smooth. 2. Pour into small sphere silicone molds (~3/4 inch balls). Refrigerate 2+ hours until firm. 3. Pop gummies from molds. Toss in Sour Coating Mix. Let coating adhere for 10 min. 4. **The freeze:** Pour LN2 into a metal bowl (about 2 inches deep). Using a slotted spoon, lower 5-6 coated gummy balls into the LN2. They will boil and bubble violently — this is normal (the LN2 is boiling, not the candy). 5. Leave submerged for 60-90 seconds until the bubbling slows. The gummies are now flash-frozen to approximately -100F internally. 6. Remove with slotted spoon. Place on a metal tray. **WAIT 15-30 seconds** for surface temperature to rise above -40F. 7. Eat within 2-3 minutes for maximum vapor effect. Breathe out through your mouth and nose — visible "dragon smoke" will pour out as your warm breath condenses against the ultra-cold candy.

Yields: ~30 bombs

Per bomb (same as standard sour gummy): ~5mg K, ~3mg P, ~7mg Na. CKD-aware. The freezing process does not alter the nutritional content.

CKD consideration: Liquid nitrogen is NOT consumed — it fully evaporates before the candy is eaten. The candy itself is identical to the Sour Patch Kids dupe (Recipe #2) in estimated mineral contribution. Gelatin, Jell-O, sugar, and food-grade acids. The only CKD consideration is the same as any sour candy: don't eat 50 of them in one sitting (total citric acid adds up). 5-10 pieces is not a universal serving recommendation. The freeze-thaw cycle does not create any new renal-relevant compounds.

The science: The "smoke" is not actually smoke — it's condensed water vapor. Your exhaled breath is ~37C and nearly saturated with moisture. When it contacts the candy surface at -80C to -100C, the water vapor in your breath instantly condenses into visible microdroplets (the same physics as seeing your breath on a cold day, amplified dramatically). The effect lasts 1-3 minutes as the candy warms in your mouth.

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16. Pop Rocks Chocolate Bark

Pop Rocks were invented in 1956 by chemist William A. Mitchell at General Foods — the same man who invented Tang, Cool Whip, quick-set Jell-O, and powdered egg whites. The candy was shelved for nearly 20 years before finally hitting shelves in 1975, and the persistent urban legend that mixing them with soda could make your stomach explode was debunked by the FDA in a rare public statement.

Dark chocolate bark that literally explodes in your mouth. The Pop Rocks are embedded just under the surface — you bite in expecting normal chocolate, and then: chaos. Dried raspberry for tartness, edible glitter for the Vorath aesthetic.

Ingredient	Amount	CKD Notes
Dark chocolate chips (60-70% cacao)	2 cups (12oz / 340g)	Chocolate contains moderate K and P. Dark chocolate: ~170mg K, ~100mg P per oz. BUT: spread across 20+ bark pieces, per-piece amounts are manageable. Use DARK (not milk) — milk chocolate adds phosphorus from dairy.
Pop Rocks candy	2 packets (0.33oz / 9g each)	Ingredients: sugar, lactose, corn syrup, artificial flavor, carbon dioxide. Minimal K/P/Na. The "pop" is CO2 gas released from carbonated sugar.
Freeze-dried raspberry pieces	1/4 cup	Freeze-dried = concentrated, but 1/4 cup across 20 pieces = ~3-5mg K per piece. Low-K berry.
Edible glitter (food-grade)	1 tbsp	Must say "food-grade" — NOT craft glitter. Zero nutritional content.
Flaky sea salt (Maldon or similar)	Tiny pinch (optional)	If using: ONE small pinch across entire batch = <1mg Na per piece. Enhances chocolate flavor. Skip if on strict Na restriction.

Equipment: Sheet pan, parchment paper, microwave or double boiler

Method: 1. Line a sheet pan with parchment paper. 2. Melt chocolate: Microwave in 30-second bursts, stirring between each, until smooth (usually 3-4 rounds). OR use a double boiler on low heat. Do NOT overheat — chocolate scorches easily. 3. Pour melted chocolate onto parchment. Spread with offset spatula into an even layer about 1/4 inch thick. Shape doesn't matter — rustic is fine. This is bark. 4. **Work fast from here — chocolate sets quickly:** 5. Scatter freeze-dried raspberry pieces across the surface. Press gently so they're partially embedded. 6. Sprinkle edible glitter across the entire surface. 7. If using sea salt: add the tiniest pinch, scattered wide. 8. **THE CRITICAL STEP:** Scatter Pop Rocks across the chocolate surface. Do NOT press them in hard — they need to stay near the surface to maximize the mouth-contact explosion. Just let them settle into the still-soft chocolate. 9. Let chocolate set completely. Room temperature: 1-2 hours. Refrigerator: 30 min. Do NOT freeze (Pop Rocks lose their pop when moisture infiltrates at extreme cold). 10. Once fully set, break/cut into irregular pieces. Store in airtight container at room temperature.

Yields: ~20-24 bark pieces

Per piece: ~45mg K, ~25mg P, ~5mg Na. Moderate — not Small estimated mineral contribution per stated serving like pure sugar candy. Limit to 2-3 pieces per sitting if on strict K/P targets. If your dietitian has you at 2000mg K/day, 3 pieces is estimated at ~135mg K; whether that fits depends on your individual target and the rest of the day.

CKD consideration: This is the highest-renal-load recipe in this chapter because of the dark chocolate. Chocolate is a "moderate" food for CKD, not a "forbidden" one. The key is portion control — bark pieces are small. If you're on tight phosphorus restrictions, consider using white chocolate instead (lower P, ~30mg P per oz vs ~100mg for dark). White chocolate + Pop Rocks + raspberry + gold glitter = equally dramatic, lower estimated mineral contribution. Pop Rocks are primarily carbonated sugar; check the current label and portion. Carbonation does not establish that a product is appropriate for an individual CKD plan.

The science: Pop Rocks contain tiny pockets of pressurized carbon dioxide gas (600 psi) trapped in hard candy during manufacturing. When the candy dissolves on your tongue (or in warm chocolate during chewing), the CO2 pockets rupture, releasing gas with an audible pop. The "explosion" is real — just very, very small (about 1/10th the pressure of a popped balloon).

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17. Tie-Dye Salt Water Taffy

Salt water taffy has nothing to do with salt water — the name allegedly originated in 1883 when Atlantic City candy shop owner David Bradley's store was flooded during a storm, and he jokingly offered customers "salt water taffy." The name stuck, and Atlantic City's boardwalk taffy industry now generates over $50 million annually.

Multi-color neon taffy, pulled by hand, with psychedelic swirl patterns that look different on every single piece. This is the most hands-on recipe in the chapter — taffy pulling is physical, meditative, and deeply satisfying.

Ingredient	Amount	CKD Notes
Granulated sugar	2 cups	
Light corn syrup	2 tbsp	
Cornstarch	1 tbsp	

Ingredient	Amount	CKD Notes
Unsalted butter	1 tbsp	Tiny amount = minimal P (~3mg). Creates smooth pull.
Water	1 cup	
Glycerin (food-grade)	1 tsp	Keeps taffy soft and pliable. Available at pharmacies or Amazon. CKD-aware.
Flavor extracts — 4 different (e.g., strawberry, blue raspberry, lemon, green apple)	1/4 tsp each	Candy-grade oil-based
Gel food coloring — 4 neon colors (neon pink, electric blue, neon yellow, neon green)	4-5 drops each	Neon/electric gel colors give the brightest tie-dye effect
Citric acid	1/4 tsp per color (optional, for sour taffy)	

Equipment: Heavy saucepan, candy thermometer, parchment paper, kitchen scissors, wax paper for wrapping, butter or oil for greasing hands

Method: 1. Combine sugar, corn syrup, cornstarch, butter, and water in a heavy saucepan. Stir over medium heat until sugar dissolves. 2. Once boiling, stop stirring. Insert candy thermometer. Cook to 250F (firm ball stage). This takes 15-20 min. 3. Remove from heat. Stir in glycerin. 4. Pour onto a large parchment-lined surface (or greased marble slab if you have one). Let cool until handleable but still very warm (about 3-5 min). It should be too warm to hold comfortably but not burning. 5. **Divide into 4 portions.** Add a different color + flavor (+ optional citric acid) to each portion by kneading briefly. 6. **THE PULL — this is taffy pulling and it's a real workout:** - Grease your hands with butter or cooking spray. - Pick up one color portion. Stretch it out to about 18 inches. Fold it back on itself. Stretch again. Fold. Repeat. - Pull each color 15-20 times. The taffy will go from glossy and translucent to opaque and satiny. This is aeration — you're folding air into the candy, which changes the texture from hard to chewy. - When each color is pulled and opaque, roll into a rope about 1/2 inch thick. 7. **THE TIE-DYE:** Lay all 4 colored ropes side by side. Twist them together gently — 2-3 twists only. Then pull the twisted bundle to about 24 inches. Fold in half. Twist again. Pull again. Do this 3-4 times MAXIMUM. More than that and the colors blend to brown. You want distinct swirl patterns, not mud. 8. Pull the final twisted rope to about 1/2 inch thick. Cut into 1-inch pieces with greased kitchen scissors. 9. Wrap each piece in wax paper, twisting the ends. Taffy absorbs moisture from air and gets sticky fast — wrapping is not optional.

Yields: ~60 pieces

Per piece: ~3mg K, ~2mg P, ~1mg Na. Small estimated mineral contribution per stated serving.

CKD consideration: Taffy is almost pure sugar + air. The butter amount per piece (~0.05g) contributes essentially zero phosphorus. Corn syrup, sugar, cornstarch, and glycerin have no significant K/P/Na. Citric acid if used is divided across 60 pieces = negligible per serving. This is one of the most CKD-benign candies in the entire chapter. The only consideration is sugar load for diabetic co-morbidity — each piece is essentially a teaspoon of sugar.

The pulling technique (illustrated): - **Pull 1-5:** Taffy is stretchy, glossy, warm. Hard to hold (grease those hands). - **Pull 6-10:** Getting firmer. Starting to turn opaque. You'll feel air pockets forming. - **Pull 11-15:** Satiny, opaque, pulls smoothly. This is where the magic texture develops. - **Pull 16-20:** Final pulls for maximum chew. If it starts cracking, you've pulled too long or it's too cool — warm briefly in microwave 5-10 seconds.

Color pattern guide: - **Classic Tie-Dye:** Pink + blue + yellow + green (the classic quartet) - **Sunset:** Neon red + orange + yellow + pink - **Ocean:** Electric blue + teal + white (unflavored portion) + purple - **Vorath Rainbow:** Use ALL seven ROYGBIV colors (make 7 small portions) — more work, maximum rainbow

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18. Bioluminescent Jello Shots (Non-Alcoholic)

Bioluminescence has evolved independently at least 50 separate times across the tree of life — from deep-sea anglerfish to fireflies to the dinoflagellates that make ocean waves glow blue at night. The chemical reaction (luciferin + luciferase + oxygen = light) is one of the most energy-efficient light-producing processes known, converting nearly 100% of energy to light vs. an incandescent bulb's ~5%.

Non-alcoholic "jello shots" that glow electric blue under UV light. Same quinine fluorescence principle as the UV Gummy Bears (Recipe #11), but in dessert-cup format. Serve at a party under blacklight and watch people lose it.

Ingredient	Amount	CKD Notes
Unflavored gelatin	2 packets (14g)	renal-aware
Tonic water (containing quinine)	1 1/2 cups	The glow source. Na ~30mg per 1.5 cups total, divided across 8 cups = ~4mg Na each.
Sugar	3 tbsp	
Blue food coloring (liquid or gel)	4-6 drops	Deepens the blue glow. Without coloring, tonic water glows whitish-blue. With blue coloring, it glows vivid electric blue.
Flavor extract (blueberry, cotton candy, or vanilla)	1/2 tsp	Masks tonic water's slight bitterness
Whipped cream (optional topping)	Dollop per cup	~5mg P per tbsp. Use sparingly if P-restricted.

Equipment: 8 small clear plastic cups (2-3oz shot size), UV/blacklight

Method: 1. Bloom gelatin in 1/3 cup cold tonic water for 5 min. 2. Heat remaining tonic water (~1 cup + 2 tbsp) with sugar until warm (NOT boiling — keep the carbonation/quinine intact as much as possible). Just warm enough to dissolve sugar and gelatin. 3. Add bloomed gelatin to warm tonic mixture. Stir gently until dissolved. 4. Add blue food coloring and flavor extract. Stir once. 5. Pour into 8 small clear cups. The cups MUST be clear/transparent for the glow effect to work. 6. Refrigerate 2-3 hours until fully set. 7. Optional: top each cup with a small dollop of whipped cream right before serving. 8. **The reveal:** Turn off all lights. Position a UV blacklight above or beside the cups. They will glow vivid electric blue. Serve immediately for maximum visual impact.

Yields: 8 dessert cups

Per cup (without whipped cream): ~6mg K, ~4mg P, ~4mg Na. CKD-aware. **Per cup (with 1 tbsp whipped cream):** ~10mg K, ~9mg P, ~8mg Na. Still safe.

CKD consideration: Same quinine considerations as Recipe #11 (UV Gummy Bears). Commercial tonic water contains FDA-regulated quinine at safe levels (~83mg/L). Divided across 8 cups, each cup contains a trivial amount. If you take quinine-containing medications or have been told to avoid quinine, substitute plain sparkling water + blue food coloring (you'll lose the glow but keep the dessert). Gelatin is CKD-aware. Sugar is unrestricted unless diabetic. Whipped cream adds a small amount of phosphorus — skip if on strict P restriction, or use a non-dairy whip (most have lower P).

Presentation upgrades: - **Layered glow:** Make two batches — one with extra blue coloring (darker), one with less (lighter). Pour dark layer first, refrigerate 30 min until tacky, pour light layer on top. Two-tone glow. - **Glow ice cubes:** Freeze tonic water in ice cube trays. Drop one glowing cube into a clear glass of lemonade. Instant bioluminescent drink. - **Constellation cups:** Before pouring gelatin, drop 3-4 silver luster dust specks into each cup. They'll settle at different levels as the gelatin sets, looking like stars in a glowing sky.

EXPERIMENT LAB — CKD CONSIDERATIONS

Recipe	Per Serving	Na (mg)	P (mg)	K (mg)	Safety Rating
11. UV Gummy Bears	10 bears	6	5	8	CKD-aware
12. Galaxy Lollipops	1 lollipop	1	1	2	CKD-aware
13. Color-Changing Drops	1 drop	5	3	4	CKD-aware
14. Stained Glass Candy	3-4 shards	1	1	2	CKD-aware
15. Dragon's Breath Bombs	1 bomb	7	3	5	CKD-aware (supervise LN2)
16. Pop Rocks Bark	1 piece	5	25	45	Moderate — limit 2-3 pcs
17. Tie-Dye Taffy	1 piece	1	2	3	CKD-aware

Recipe	Per Serving	Na (mg)	P (mg)	K (mg)	Safety Rating
18. Bioluminescent Cups	1 cup	4	4	6	CKD-aware

> ***Lab rule #1:*** *Every recipe here uses real, documented science. No gimmicks, no fake claims. Quinine fluorescence, anthocyanin pH indicators, CO2 gas release, Leidenfrost-adjacent cryogenic cooling, isomalt glass physics. If your candy doesn't teach you something about chemistry, you're not in the right lab.*
>
> ***Lab rule #2:*** *CKD-aware does not mean "eat unlimited amounts." It means per-serving estimated mineral contribution is low enough that reasonable consumption fits within standard CKD dietary targets. "Reasonable" = the amount a normal human eats of candy in a sitting, not the amount a stoned human eats. Plan accordingly.*
>
> ***Lab rule #3:*** *When in doubt, check with your renal dietitian. These numbers are calculated from USDA and manufacturer nutritional databases, but individual dietary targets vary by CKD stage, dialysis modality, and co-morbidities.*

"The universe is made of stories, not of atoms." — Muriel Rukeyser

FESTIVAL COTTON CANDY — Iridescent, Glowing & Edible Light Art

Where Food Meets Photonics Meets Fever Dream

Cotton candy is already a magic trick — centrifugal force melts sugar through tiny holes, and capillary instability shreds the liquid into threads thinner than human hair. Now we're adding light science. Iridescence, fluorescence, neon pigments, and luminous display engineering to create cotton candy that doesn't just taste like sugar — it looks like it was spun from a dying star.

CKD Master Note for ALL Cotton Candy Recipes: Cotton candy is pure spun sugar. No potassium. No phosphorus. Negligible sodium. It is one of the most renal-aware treats that exists. The only concern is sugar load for diabetic CKD patients — portion accordingly. Otherwise, eat the glowing cloud.

19. UV Blacklight Cotton Candy

"Quinine fluoresces because its conjugated aromatic ring system absorbs UV light at 350nm and re-emits it as visible blue-violet light at 460nm — the same physics that makes your white T-shirt glow at a rave."

Ingredient	Amount	CKD Notes
Granulated sugar	2 cups	Unrestricted in CKD unless diabetic
Tonic water (containing quinine)	1/2 cup	Quinine content in tonic water is ~83mg/L — safe at food-grade. Negligible K/P/Na at this volume.
Flavor extract (lemon or blue raspberry)	1/2 tsp	Candy-grade oil-based
Blue or purple food coloring	2-3 drops (optional)	Enhances the UV glow visibility

Equipment: Cotton candy machine (home or commercial), UV/blacklight (strip or bulb), saucepan, candy thermometer, sheet pan

Method: 1. Pour 1/2 cup tonic water into a saucepan over medium-low heat. Reduce by half (~1/4 cup) to concentrate the quinine. Do NOT boil hard — gentle simmer. This takes about 8-10 min. 2. Add 2 cups granulated sugar to the reduced tonic water. Stir over low heat until the sugar completely absorbs the liquid and re-dries into damp-then-dry crystals. You're infusing the quinine into the sugar structure. 3. Spread the quinine-sugar onto a parchment-lined sheet pan. Let it dry completely at room temperature (1-2 hours) or in a 170F oven for 20 min. Break up any clumps. 4. Add flavor extract — drop it onto the sugar, toss to distribute. 5. Optional: add food coloring drops, toss again. 6. Run the quinine-sugar through your cotton candy machine exactly as you would normal floss sugar. 7. Spin onto cones or sticks as usual. 8. Kill the overhead lights. Hit it with the UV blacklight. 9. Watch the entire cotton candy cloud glow electric blue-violet. Real fluorescence. Real science. Real gasps from everyone in the room.

The Science: Quinine's molecular structure contains a quinoline ring fused to a bicyclic system. When UV photons hit this structure, electrons jump to excited states and release energy as visible blue light when they drop back down. You're eating a physics demonstration.

Yields: ~8-10 cotton candy cones

Per cone: ~0mg K, ~0mg P, ~1mg Na. Small estimated mineral contribution per stated serving.

Festival Serving Tips: - Set up a UV canopy or blacklight tunnel — hand out cotton candy as guests walk through - Works best in darkness or heavy shade; direct sunlight overwhelms the fluorescence - Pair with white plates/trays to amplify the glow contrast - UV strip lights (Amazon, ~$12) taped under the serving table create an instant glow bar

20. Iridescent Shimmer Cotton Candy

"Iridescence is caused by thin-film interference — light waves reflecting off micro-thin layers cancel or amplify each other at different angles, producing shifting rainbow colors. Butterfly wings, oil slicks, and now your cotton candy."

Ingredient	Amount	CKD Notes
Floss sugar or granulated sugar	2 cups	CKD-aware
Edible luster dust (pearl white, holographic, gold, or rose gold)	2-3 tsp	FDA-compliant edible luster dust. Look for "edible" on the label — "non-toxic" is NOT the same as edible. Zero K/P/Na.
Edible shimmer spray (pump bottle)	1 bottle	Pre-made edible shimmer mist (Amazon: "edible glitter spray"). Propellant is food-grade.
Flavor extract	1/2 tsp	Your choice
Food coloring (optional)	2-3 drops	Light pastel base colors make the shimmer pop more than dark colors

Equipment: Cotton candy machine, edible shimmer spray (pump mist bottle), fine-mesh shaker or small sifter, soft brush (optional)

Method: 1. Spin cotton candy as normal — any color base works, but light pastels (pink, lavender, baby blue) show iridescence best. 2. IMMEDIATELY while the cotton candy is fresh and slightly tacky (within 30 seconds of spinning): spray edible shimmer mist in slow, even passes from 8-10 inches away. Rotate the cone as you spray. The tackiness grabs the particles. 3. For extra shimmer: fill a fine-mesh shaker with edible luster dust. Gently shake/dust over the cotton candy while rotating. The dust settles into the sugar web. 4. For holographic effect: layer TWO different luster dusts — pearl white first, then holographic on top. The two layers create thin-film interference mimicking natural iridescence. 5. Let sit 60 seconds for the shimmer to set. 6. Do NOT bag these in plastic — the shimmer transfers. Serve immediately or display on stands.

The Trick Nobody Tells You: The cotton candy MUST be freshly spun and slightly humid/tacky for the shimmer to adhere. If it's dried out or been sitting for more than 2 minutes, the luster dust just falls off. Speed is everything.

Yields: ~8-10 cones

Per cone: ~0mg K, ~0mg P, ~1mg Na. The glitter adds zero estimated mineral contribution.

Festival Serving Tips: - Set up a "shimmer station" where customers choose their luster dust color after spinning - Under directional spotlights, the iridescence shifts colors as people move — photograph with flash for maximum effect - Gold luster dust on pink cotton candy = rose gold cloud (wedding-tier aesthetic) - Holographic dust on white cotton candy = oil-slick rainbow (the Vorath special)

21. Neon Rainbow Stack

"Isaac Newton first demonstrated the visible light spectrum by passing sunlight through a prism in 1666 — the same year the Great Fire of London destroyed 13,200 houses. He saw rainbows while everything burned."

Ingredient	Amount (per color)	CKD Notes
Granulated sugar	1/2 cup per color (3.5 cups total for 7 colors)	CKD-aware
Vivid gel food coloring — 7 colors	4-6 drops each	Gel coloring is more vivid than liquid. Use: red, orange, yellow, green, blue, indigo/dark blue, violet/purple.

Ingredient	Amount (per color)	CKD Notes
Flavor extract (optional, one per color)	1/4 tsp each	Match flavors to colors for the full sensory experience

Equipment: Cotton candy machine, 7 separate small bowls for mixing colored sugars, cotton candy cones/sticks

Flavor-Color Map (optional but recommended):

Color	Gel Coloring	Flavor Extract
Red	Red gel, 5 drops	Strawberry or cherry
Orange	Orange gel, 5 drops	Orange
Yellow	Yellow gel, 5 drops	Lemon
Green	Green gel, 5 drops	Green apple + 1/8 tsp malic acid
Blue	Sky blue gel, 5 drops	Blue raspberry
Indigo	Royal blue + 1 drop purple	Blueberry
Violet	Purple gel, 5 drops	Grape

Method: 1. Prepare 7 batches of colored sugar: In each bowl, combine 1/2 cup sugar + gel food coloring drops. Mix thoroughly with a fork until color is uniform. Let dry 10 min if using liquid coloring. Gel coloring can be used immediately. 2. Start with violet (innermost layer). Spin a thin layer of violet cotton candy onto your cone. Don't make a full cone — just a small core. 3. Without stopping, switch to indigo sugar. Spin the next layer OVER the violet, building outward. 4. Continue through blue, green, yellow, orange, and red — each layer wrapping concentrically around the last. 5. The final cone should be a rainbow from inside to outside: violet core, red exterior. When you pull it apart, you see all seven colors. 6. For a more dramatic look: spin each color slightly thicker, creating visible color bands rather than blended gradients.

The Stack Technique: The key is THIN layers. If any single color is too thick, it dominates and the rainbow effect is lost. Think of it like a jawbreaker — many thin shells, not a few thick ones.

Yields: ~6-8 rainbow cones (uses more sugar per cone than standard)

Per cone: ~0mg K, ~0mg P, ~1mg Na. Seven colors of renal safety.

Festival Serving Tips: - These are a SPECTACLE — spin them live in front of customers for maximum impact - Tear one open as a demo to show the rainbow cross-section - Charge premium — these take 3-4x longer than single-color cones - Under any lighting they look stunning; under blacklight with UV sugar base (Recipe 19), they transcend reality - Instagram magnet. Set up a photo backdrop.

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22. LED Cotton Candy Cones

"Spun sugar has a refractive index of approximately 1.56 — close to glass (1.52) — which is why light transmits through cotton candy fibers almost like fiber optic cable."

Ingredient	Amount	CKD Notes
Floss sugar or colored granulated sugar	2 cups per batch	CKD-aware
Food coloring	As desired	

Equipment: - Cotton candy machine - LED glow sticks or LED cotton candy cones (food-safe, Amazon: "LED cotton candy sticks" or "LED light-up candy cones," ~$15-25 for 10-pack). These are reusable plastic cones with built-in LEDs — the light shines UP through the cotton candy. - Alternative: food-safe glow sticks (non-toxic, sealed — the cotton candy never touches the chemicals inside)

Method: 1. Activate your LED cone — most have a push-button at the base with multiple color modes (solid, flashing, color-cycling). 2. Set to your desired light mode BEFORE spinning. Color-cycle mode looks best. 3. Spin cotton candy directly onto the LED cone, just as you would a regular paper cone. Build a generous cloud — thicker cotton candy diffuses the light into a more ethereal glow. 4. The LED light travels through the translucent sugar fibers via internal reflection and scattering, making the ENTIRE cloud glow from within. 5. For maximum effect: use WHITE or light-colored cotton candy on a color-cycling LED stick. The cotton candy becomes a chameleon, changing color with the LED. 6. For NEON effect: use neon-colored sugar (Recipe 21 colors) on a matching LED color. Neon pink sugar + pink LED = radioactive glow.

The Physics: Cotton candy fibers act as crude waveguides. Light enters the sugar strand and bounces along via total internal reflection (same principle as fiber optic cables), while imperfections and air gaps scatter some light outward. The result: the whole cloud becomes a diffuse light source.

Yields: Limited only by your sugar supply and LED sticks

Per cone: ~0mg K, ~0mg P, ~1mg Na. Light has no estimated mineral contribution.

Festival Serving Tips: - These are THE night-festival essential. After sunset, a crowd holding glowing cotton candy clouds is an instant atmosphere upgrade. - Buy LED cones in bulk — wash and reuse between events - Combine with UV Blacklight Cotton Candy (Recipe 19) for double glow: LED from inside + UV fluorescence on the surface - Color-cycling LED + white cotton candy = the crowd favorite every time - Set up a "glow bar" with different LED colors and cotton candy colors for custom combos

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23. Edible Glitter Bomb Cotton Candy

"Edible glitter is typically made from gum arabic, maltodextrin, and FD&C colorants stamped into microscopic hexagonal flakes — the same geometry as snowflakes, because nature and candy engineers independently discovered that hexagons tile perfectly."

Ingredient	Amount	CKD Notes
Floss sugar or granulated sugar	2 cups	CKD-aware
Food coloring (neon preferred)	4-6 drops	
Edible glitter (gold, silver, holographic, or mixed)	3-4 tbsp	MUST say "edible" — not "non-toxic," not "for decoration only." FDA-compliant edible glitter is made from sugar, gum arabic, or starch. Zero K/P/Na.
Edible shimmer spray (optional)	For extra sparkle	

Equipment: Cotton candy machine, shallow tray or plate for the glitter, cotton candy cones

Method: 1. Spread edible glitter in an even layer on a shallow tray or wide plate. 2. Spin cotton candy onto cone as usual. Use neon-colored sugar for maximum contrast. 3. While the cotton candy is FRESH (within 30 seconds — this is critical): gently roll and press the cotton candy cloud into the glitter tray. Rotate, press lightly, rotate. The tacky surface grabs the glitter. 4. For all-over coverage: sprinkle additional glitter over the top and sides by hand. Pat gently. 5. Optional: hit with edible shimmer spray for a base-coat sheen under the glitter. 6. The result: a cotton candy cloud that looks like it was dipped in crushed diamonds. 7. When pulled apart, glitter falls from the torn sugar strands like fairy dust. This is the money shot.

Glitter Flavor Combos: - **Gold Rush:** Yellow cotton candy + gold edible glitter - **Silver Screen:** White cotton candy + silver edible glitter - **Unicorn:** Pink cotton candy + holographic glitter - **Vorath Special:** Black cotton candy (yes — use black food coloring) + holographic rainbow glitter. Dark matter meets stardust.

Yields: ~8-10 cones

Per cone: ~0mg K, ~0mg P, ~1mg Na. Glitter is metabolically invisible.

Festival Serving Tips: - Serve over a dark tablecloth — fallen glitter on black fabric looks intentional and magical - Provide a "glitter station" where customers dip their own cones - Warn customers: edible glitter WILL get on their face, hands, and clothes. This is a feature, not a bug. - Combine with neon colors (Recipe 21) for rainbow glitter bombs - Photograph with flash — the glitter fires back like a disco ball

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24. Dragon's Breath Cotton Candy

"Liquid nitrogen boils at -196C (-321F), cold enough to freeze the moisture in your mouth into visible water vapor instantly — the same physics that creates your breath-cloud on a freezing morning, just 15x colder."

Ingredient	Amount	CKD Notes
Floss sugar or granulated sugar	2 cups	CKD-aware
Food coloring	As desired	

Ingredient	Amount	CKD Notes
Food-grade liquid nitrogen	1-2 liters	See safety notes below. The nitrogen itself is inert, odorless, calorie-free, and has zero K/P/Na.

Equipment: Cotton candy machine, cotton candy cones, insulated container for liquid nitrogen (dewar flask), long metal tongs or slotted spoon, heat-resistant gloves (cryogenic rated), safety goggles, well-ventilated area

--- FULL SAFETY PROTOCOL FOR FOOD-SAFE LIQUID NITROGEN ---

> *CRITICAL — READ BEFORE PROCEEDING:*
>
> 1. ***NEVER let anyone eat cotton candy that is still submerged in or dripping liquid nitrogen.*** *The nitrogen must fully evaporate before the piece goes in anyone's mouth. Swallowing pooled liquid nitrogen causes severe internal frostbite/burns.*
> 2. ***Only use food-grade liquid nitrogen.*** *Industrial-grade may contain contaminants. Source from welding supply stores that sell food-grade, or specialty food suppliers.*
> 3. ***Ventilation is non-negotiable.*** *Liquid nitrogen displaces oxygen as it evaporates. In enclosed spaces, this can cause asphyxiation. ALWAYS use outdoors or in a very well-ventilated area. Never in a small room or tent.*
> 4. ***Wear cryogenic gloves and goggles.*** *Brief skin contact with liquid nitrogen is survivable (Leidenfrost effect), but splashes in eyes or prolonged contact cause injury.*
> 5. ***Use insulated containers only.*** *A dewar flask or insulated steel container. NEVER a sealed container — the gas expansion will cause it to explode.*
> 6. ***Designate one person as the LN2 handler.*** *Nobody else touches the nitrogen. The handler dips, the handler serves.*
> 7. ***Wait 10-15 seconds after dipping before serving.*** *The cotton candy piece should be fog-free and dry to the touch. If it's still steaming heavily, wait longer.*
> 8. ***Children must be supervised.*** *An adult places the piece in their hand or directly in their mouth. Children do not handle LN2-dipped food themselves.*

Method: 1. Spin cotton candy normally. Any color works. Pull or tear into golf-ball-sized pieces. 2. Using long tongs, dip a cotton candy piece into liquid nitrogen for 2-3 seconds. No longer — you're not trying to freeze it solid, just coat the surface with ultra-cold nitrogen. 3. Remove with tongs. Wait 10-15 seconds. The liquid nitrogen evaporates, but the cotton candy retains intense cold. 4. The surface moisture and the eater's breath condense into massive plumes of vapor. 5. Hand to customer (verify the piece is no longer actively boiling/steaming from residual LN2). 6. They eat it. Dragon smoke pours from their mouth and nose. Maximum theater.

Why It Works: The cotton candy piece, now extremely cold, drops the temperature inside the mouth enough to condense water vapor in exhaled breath — the same process as seeing your breath in winter, but dramatically amplified.

Yields: As many pieces as you have cotton candy and nitrogen

Per piece: ~0mg K, ~0mg P, ~0mg Na. Nitrogen is 78% of the air you're already breathing.

Festival Serving Tips: - This is the HIGHEST-theater item on this list. Set up a dedicated "Dragon's Breath" station with a handler in goggles and gloves — the safety theater IS the marketing - Best served after dark — the steam is more visible - Have customers blow the vapor at each other for photos - Combine with neon colors (Recipe 21) for maximum visual impact - Price premium: this is a $8-12 festival item, not a $3 cotton candy

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25. Flavor-Shifting Cotton Candy

"Miraculin, the glycoprotein in Miracle Berry (Synsepalum dulcificum), binds to sweet receptors on your tongue and activates them in the presence of acid — it literally rewires your taste buds for 30-60 minutes. First documented by European explorer Chevalier des Marchais in West Africa in 1725."

Ingredient	Amount	CKD Notes
Granulated sugar	2 cups	CKD-aware
Citric acid powder	1 1/2 tsp	Mixed into the sugar before spinning — creates SOUR cotton candy. CKD-aware.
Malic acid powder	1/2 tsp	For sustained sour background
Food coloring (sour colors: green, yellow, orange)	4-5 drops	
Flavor extract (lemon, lime, or green apple)	1/2 tsp	Sour-coded flavors
Miracle Berry tablets	1 per person	Freeze-dried miraculin. Available on Amazon (~$15 for 10). No K/P/Na. Not metabolized by kidneys.

Equipment: Cotton candy machine, Miracle Berry tablets

Method: 1. Prepare sour cotton candy sugar: Mix 2 cups sugar + citric acid + malic acid + food coloring + flavor extract. Stir thoroughly to distribute acid evenly. 2. Spin sour cotton candy as usual. The acid doesn't affect the spinning — cotton candy machines don't care. 3. Taste-test a small piece. It should be NOTICEABLY sour — tart, puckering, with a lemony or apple bite. If not sour enough, add more citric acid to the remaining sugar. 4. Now the trick: each customer places a Miracle Berry tablet on their tongue. Let it dissolve fully — coat the entire tongue. This takes 1-2 minutes. DO NOT chew and swallow. 5. Once the tablet has dissolved, eat the sour cotton candy. 6. The citric and malic acids in the cotton candy activate the miraculin already bound to the sweet receptors. The sour cotton candy now tastes INTENSELY, OVERWHELMINGLY sweet — double-sweet, triple-sweet. A flavor flip so dramatic people gasp. 7. The effect lasts 30-60 minutes. During this time, ALL sour/acidic foods taste sweet. Lemons taste like candy. Vinegar tastes like syrup.

The Flavor Science: Miraculin is a glycoprotein that binds to the T1R2-T1R3 sweet receptor. At neutral pH, it blocks sweetness. In the presence of acid (low pH), it ACTIVATES the receptor. So acid = sweet signal. The sour cotton candy triggers an avalanche of sweet perception on top of the actual sugar sweetness. The result is a sweetness so intense it borders on disorienting.

Yields: ~8-10 cones of sour cotton candy, plus 1 Miracle Berry tablet per person

Per cone (cotton candy only): ~0mg K, ~0mg P, ~1mg Na. The Miracle Berry tablet adds ~0mg of everything — it's pure miraculin protein and filler.

Festival Serving Tips: - Market this as "The Flavor Flip Experience" — charge premium for the tablet + cotton candy combo - Have PLAIN lemon wedges and lime wedges available for people to try after — the miraculin makes them taste like the sweetest fruit they've ever eaten - The 30-60 minute duration means people will try other foods in your festival while still "under the influence" — cross-sell - Works as a group activity: "1, 2, 3, everyone eat the tablet... NOW eat the sour candy" - Warning: some people report mild GI discomfort if they eat large amounts of acidic food while on miraculin (because they can't taste the acid, they overconsume). Moderate portions.

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26. Bioluminescent Cotton Candy Display

"True bioluminescence in nature is a chemical reaction between luciferin and luciferase — but we can fake it with UV fluorescence so convincingly that your brain files it under 'magic' either way."

This is not a single recipe — it's a BUILD for a complete illuminated cotton candy display stand for catering, events, weddings, and festivals. Multiple neon cotton candy clouds on a dark display, glowing under UV light.

Materials for the UV Display Stand:

Item	Quantity	Source	Approximate Cost
Black foam board or black-painted wood shelf	1 (size: 24" x 12" minimum)	Craft store or hardware store	~$5-15
UV LED strip lights (blacklight, 12V, adhesive-backed)	2 strips (each at least 24")	Amazon ("UV blacklight LED strip")	~$12-18
12V power adapter for LED strips	1	Usually included with strips	~$0 (included)
Cotton candy cone holders (dowels in drilled holes, or foam blocks with sticks)	6-12	Hardware store (3/8" dowels) + drill	~$5
Black fabric or black tablecloth	1 (to drape the table/surface)	Dollar store or fabric store	~$3-5
Black gaffer tape	1 roll	Amazon or hardware store	~$8

Item	Quantity	Source	Approximate Cost
Extension cord	1	Hardware store	~$5
Optional: black light UV flood bulb (for overhead)	1	Amazon	~$10-15

Total Display Build Cost: ~$40-65

Build Instructions:

1. **The Base:** Start with a black foam board, black-painted shelf, or black-painted MDF board. Minimum 24" x 12" for 6 cones, larger for 12. Black surface is critical — UV light on white surfaces creates glare that kills the effect.
2. **Cone Holders:** Drill 3/8" holes spaced 4-5 inches apart in two rows across the board. Insert 3/8" wooden dowels (6" tall) into each hole. These are your cotton candy cone stands. Alternatively: jam cotton candy sticks into a block of black floral foam. Low-tech works.
3. **UV Lighting — Underside:** Adhere one UV LED strip along the FRONT edge of the board, facing upward/outward. Adhere the second strip along the BACK edge. The UV light should wash UP and ACROSS the cotton candy clouds from below. This under-lighting creates the "bioluminescent" effect — the cotton candy glows from the bottom up.
4. **UV Lighting — Overhead (optional):** Mount a UV flood bulb above the display (clamp light on a stand, or hang from tent frame). This adds top-down UV for full coverage. The combination of under + over UV creates zero-shadow, even fluorescence.
5. **Blackout:** Drape black fabric around and behind the display. The darker the surroundings, the more the UV glow pops. In a tent: close all flaps. Outdoors at night: no problem. Indoors: dim all other lights.
6. **Wiring:** Run LED strips to the 12V adapter. Use gaffer tape to hide all wiring against the black surface. Clean presentation matters.

Cotton Candy for the Display:

- Use UV Blacklight Cotton Candy (Recipe 19) for TRUE fluorescence — the quinine-sugar actually glows
- Use neon-colored cotton candy (Recipe 21 colors) for vivid UV-reactive color — neon food coloring is partially UV-reactive
- Use edible shimmer/glitter (Recipes 20 & 23) for sparkle under UV
- Mix sizes: some tight cones, some massive clouds, some on tall sticks, some on short. Visual variety.
- Replace cotton candy every 45-60 minutes — humidity kills cotton candy. Spin fresh, swap out, keep the display alive.

Display Layout Suggestions:

Layout	Best For	Description
Rainbow Gradient	Festivals, pride events	Arrange ROYGBIV left to right across the board
Monochrome Glow	Weddings, upscale events	All white/pearl cotton candy + holographic shimmer
Galaxy	Night markets, themed events	Purple, blue, and black cotton candy with gold glitter
Vorath Standard	Any NorthStar event	Black cotton candy base + holographic rainbow glitter + UV glow. The canon.

Per cone on display: ~0mg K, ~0mg P, ~1mg Na. The display stand has no estimated mineral contribution whatsoever.

Event/Catering Tips: - This display is a CENTERPIECE, not a side station. Put it where everyone will see it. - Assign one person to spin fresh cotton candy and rotate stock. Stale cotton candy collapses and looks sad. - The UV display photographs INCREDIBLY well — set up a branded photo backdrop behind it - For weddings: replace cone sticks with clear acrylic rods for an invisible-holder floating-cloud effect - For corporate events: add a branded sign in UV-reactive paint — it glows with the cotton candy - Power: one standard outlet runs the whole display. Bring a battery backup for outdoor venues without power.

COTTON CANDY FESTIVAL SECTION — CKD CONSIDERATIONS

Recipe	Per Serving	Na (mg)	P (mg)	K (mg)	Safety Rating
19. UV Blacklight Cotton Candy	1 cone	1	0	0	CKD-aware
20. Iridescent Shimmer Cotton Candy	1 cone	1	0	0	CKD-aware
21. Neon Rainbow Stack	1 cone	1	0	0	CKD-aware
22. LED Cotton Candy Cones	1 cone	1	0	0	CKD-aware
23. Edible Glitter Bomb Cotton Candy	1 cone	1	0	0	CKD-aware
24. Dragon's Breath Cotton Candy	1 piece	0	0	0	CKD-aware (supervise LN2)
25. Flavor-Shifting Cotton Candy	1 cone	1	0	0	CKD-aware
26. Bioluminescent Display	1 cone	1	0	0	CKD-aware

> ***Section CKD Note:*** *Cotton candy is the single most renal-aware candy category that exists. It is literally spun sugar and air. Every recipe in this section scores 0-1mg across all three renal markers per serving. The only additions (quinine, luster dust, edible glitter, food coloring, citric acid, miraculin) are present in trace amounts that register as zero on any renal tracker. If your care team limits sugar or candy, ask what amount—if any—fits your medical and nutrition plan.*
>
> ***Quinine Note (Recipe 19):*** *Tonic water quinine is FDA-regulated at ~83mg/L. Across 8-10 cones, each cone contains roughly 1-2mg quinine. Pharmacological quinine doses for malaria are 600-1000mg. You are nowhere near pharmacological levels. If you take quinine-interacting medications (blood thinners, certain heart meds), check with your care team or skip the quinine and lose the glow.*
>
> ***Liquid Nitrogen Note (Recipe 24):*** *Nitrogen gas is biologically inert and is not processed by the kidneys. The safety concern is THERMAL, not chemical. Follow all safety protocols above. The FDA issued a consumer advisory in 2018 specifically about liquid nitrogen foods — the key message: do not consume food while liquid nitrogen is still present. Wait for full evaporation.*
>
> ***Miracle Berry Note (Recipe 25):*** *Miraculin does not affect kidney function. It is a protein that binds to tongue receptors only. It does not enter systemic circulation in meaningful amounts. No K/P/Na content. CKD-aware.*
>
> ***Diabetes co-morbidity:*** *Each standard cotton candy cone contains ~25-30g sugar. That's roughly equivalent to a can of soda. Portion accordingly if managing blood glucose alongside CKD. The flavor-shifting recipe (Recipe 25) has a hidden benefit — miraculin makes sour things taste intensely sweet, which could theoretically allow you to use LESS sugar in the cotton candy base while maintaining perceived sweetness. Worth experimenting.*

"Any sufficiently advanced candy is indistinguishable from magic." — Arthur C. Clarke, adapted while holding a glowing cloud of spun sugar at a festival that smells like ozone and tastes like the future

SUPER SOUR + SUPER HOT CROSSOVER CANDY

When Your Mouth Can't Decide If It's Dying From Acid or Fire

"Capsaicin binds to TRPV1 receptors — the exact same heat sensors that detect boiling water. Your mouth isn't 'tricked' into feeling heat. It IS feeling heat. The receptor doesn't know the difference."

27. Citric Reaper Drops (Sour-Then-Hellfire Hard Candy)

The Carolina Reaper held the Guinness World Record at 2,200,000 SHU from 2013 to 2023 — bred by Ed "Smokin' Ed" Currie of PuckerButt Pepper Company in Fort Mill, South Carolina, by crossing a Pakistani Naga with a Red Habanero.

Ingredient	Amount	CKD Notes
Granulated sugar	1 cup	Unrestricted in CKD unless diabetic
Light corn syrup	1/2 cup	Low K, low P, low Na
Water	1/4 cup	

Ingredient	Amount	CKD Notes
Citric acid powder	1 1/2 tsp	Exterior sour assault. CKD-aware.
Malic acid powder	1/2 tsp	Sustained background sour. CKD-aware.
Carolina Reaper powder	1/4 tsp (start here — adjust up for masochism)	Pure dried pepper powder. No K/P/Na concerns at this dose.
Flavor extract (mango or pineapple)	1/2 tsp	Tropical fruit masks the heat for exactly 2 seconds
Red food coloring	3-4 drops	The color of warning
Sour Coating Mix (from master recipe above)	2 tbsp	For exterior sour hit

Scoville rating (estimated per candy): ~50,000-80,000 SHU depending on Reaper potency. For reference: a jalapeno is 2,500-8,000 SHU. These are 10-30x a jalapeno in a candy that's ALSO extremely sour.

Sour rating: 8/10 — heavy citric exterior + malic in the candy base. Comparable to a Warhead, but the sour fades INTO heat instead of into sweet.

Equipment: Candy thermometer, heavy saucepan, silicone molds, wax paper

Method: 1. Combine sugar, corn syrup, and water in heavy saucepan over medium heat. Stir until sugar dissolves. 2. Stop stirring once it boils. Insert candy thermometer. Cook to 300F (hard crack stage). 3. Remove from heat at 300F. Let cool 30 seconds. 4. Stir in Carolina Reaper powder, malic acid, flavor extract, and food coloring. Work fast — the Reaper powder should be evenly distributed, no hot pockets. 5. Pour into silicone molds or drop tablespoon-sized puddles onto parchment. 6. Let cool completely (20-30 min). 7. Mix citric acid into the Sour Coating Mix for an extra-sour exterior. 8. Toss cooled candies in the sour coating while still slightly tacky. 9. Wrap individually. Label clearly — someone WILL accidentally eat one thinking it's a normal sour candy.

Yields: ~30 drops

Per drop: ~2mg K | ~1mg P | ~2mg Na. Small estimated mineral contribution per stated serving. Very hot candy can aggravate the mouth, stomach, reflux, or other individual conditions.

CKD consideration: Carolina Reaper powder is pure dried pepper — negligible K/P/Na at 1/4 tsp per batch (split across 30 candies). This recipe does not establish that capsaicin is risk-free for every person with CKD. However, if you have GI issues common in CKD (GERD, gastroparesis), hot candy may aggravate those. Know your gut.

The experience timeline: - 0-3 seconds: Intense sour from the citric coating. Face puckers. - 3-10 seconds: Sour starts fading, you think it's just a sour candy. - 10-30 seconds: The Reaper creeps in. Slow heat building from the back of the tongue. - 30-60 seconds: Full Reaper bloom. Your mouth is on fire AND still slightly sour. - 1-5 minutes: Endorphin rush. You feel alive. You question your life choices. You reach for another one.

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28. Ghost Pepper Sour Gummy Worms (Hellfire Worms)

The Bhut Jolokia (ghost pepper) was the first pepper to break 1,000,000 SHU, verified by New Mexico State University in 2007. In Assam, India, it's traditionally smeared on fences to keep wild elephants away.

Ingredient	Amount	CKD Notes
Unflavored gelatin	4 packets (28g)	renal-aware protein source
Flavored Jell-O — TWO flavors	2 small boxes (3oz each)	Cherry + lime is classic
Water	3/4 cup (split between two batches)	
Corn syrup	2 tbsp per batch	
Ghost pepper powder (Bhut Jolokia)	1/4 tsp per batch	~500,000-1,000,000 SHU raw; diluted across 40 worms = manageable fire
Citric acid	3/4 tsp per batch	Standard sour
Cayenne pepper	1/2 tsp	For the sour coating — visible red flecks
Sour Coating Mix	3 tbsp	Base coating

Spicy Sour Coating (special for these worms):

Ingredient	Amount
Sour Coating Mix (master recipe)	3 tbsp
Cayenne pepper	1/2 tsp
Ghost pepper powder	1/8 tsp (optional — for the truly unhinged)

Mix together. The cayenne adds visible red flecks that serve as a visual warning.

Equipment: Worm silicone molds or the straw method (see Recipe #4)

Method: 1. Make BATCH A: Bloom 2 gelatin packets in 3 tbsp cold water. Heat 3/8 cup water + 2 tbsp corn syrup, dissolve first Jell-O flavor. Add bloomed gelatin + 3/4 tsp citric acid + 1/4 tsp ghost pepper powder. Stir thoroughly — no clumps. 2. Make BATCH B: Same process with second Jell-O flavor and second dose of ghost pepper. 3. For two-tone worms: pour Batch A into molds halfway. Refrigerate 15 min until tacky. Pour Batch B on top. 4. Refrigerate 2+ hours until fully firm. 5. Unmold. Air-dry 4-6 hours on wire rack. 6. Toss in the Spicy Sour Coating.

Yields: ~40 worms

Per worm: ~6mg K | ~4mg P | ~9mg Na. Same as regular sour worms — the ghost pepper adds heat, not minerals.

CKD consideration: Ghost pepper powder at 1/4 tsp per batch of 40 worms = negligible per-worm mineral content. Capsaicin is metabolized by the liver, not the kidneys. Do not assume universal CKD safety; review the product, serving, and your care plan. Watch for GI irritation if you're sensitive.

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29. Habanero Sour Punch Ropes (Fruit-Fire Ropes)

The habanero gets its name from La Habana (Havana), Cuba, though the pepper likely originated in the Amazon basin. It was the hottest pepper known to science from 1999 until the Bhut Jolokia dethroned it in 2007.

Ingredient	Amount	CKD Notes
Unflavored gelatin	2 packets (14g)	renal-aware
Flavored Jell-O (strawberry or tropical punch)	1 small box (3oz)	The fruit flavor is the decoy
Water	1/3 cup	
Corn syrup	3 tbsp	Chewy pull
Cornstarch	2 tbsp	Structure
Habanero powder	1/4 tsp	~100,000-350,000 SHU raw. The fruit masks it for 3 seconds, then it hits.
Citric acid	3/4 tsp	Sour backbone
Malic acid	1/4 tsp	Sustained sour
Sour Coating Mix	2 tbsp	

Equipment: 9x13 pan lined with parchment, pizza cutter

Method: 1. Bloom gelatin in 2 tbsp cold water for 5 min. 2. Heat remaining water with corn syrup until simmering. Stir in Jell-O powder and cornstarch. Whisk smooth. 3. Add bloomed gelatin. Stir until dissolved. 4. Stir in habanero powder, citric acid, and malic acid. Ensure habanero is evenly distributed. 5. Pour into parchment-lined 9x13 pan. Spread thin and even (~1/4 inch thick). 6. Refrigerate 2-3 hours until firm. 7. Remove slab. Cut into long strips (~1/2 inch wide, 6 inches long) with pizza cutter. 8. Air-dry strips on wire rack 4-6 hours. 9. Toss in Sour Coating Mix.

The 3-second fake-out: The fruit Jell-O flavor dominates for the first 3 seconds. You taste strawberry. You taste sour. Then the habanero hits from the back of the throat, and suddenly it's a completely different candy. The fruit-to-fire transition is the whole point.

Yields: ~30 ropes

Per rope: ~4mg K | ~3mg P | ~6mg Na. Small estimated mineral contribution per stated serving.

CKD consideration: Habanero powder at 1/4 tsp across 30 ropes = trace amounts per serving. Do not assume a zero kidney effect or cardiovascular benefit from this serving; use it for flavor, not treatment.

30. Da Bomb Sour Bombs (Extract-Level Heat Meets Maximum Sour)

Da Bomb "Beyond Insanity" hot sauce (135,600 SHU) became infamous on the YouTube show Hot Ones — it's the wing that breaks nearly every celebrity guest, not because it's the hottest on the lineup, but because it uses pepper EXTRACT instead of whole peppers, creating a uniquely chemical, aggressive heat with no flavor to hide behind.

Ingredient	Amount	CKD Notes
Granulated sugar	1 cup	
Light corn syrup	1/2 cup	
Water	1/4 cup	
Capsaicin extract (food-grade, 1,000,000 SHU concentrate)	2-4 drops (NOT teaspoons — DROPS)	This is concentrated extract. Treat it like a reagent, not a spice.
Citric acid	1 1/2 tsp	Maximum sour
Malic acid	1 tsp	Sustained punishment
Ascorbic acid	1/4 tsp	Brightness
Flavor extract (cherry or cinnamon)	1/2 tsp	Cinnamon pairs naturally with heat
Food coloring (red + black = dark red)	4-5 drops	The color of regret

Ultra Sour Coating (same as Toxic Waste recipe):

Ingredient	Amount
Citric acid	2 tbsp
Malic acid	1 tbsp
Ascorbic acid	1 tsp
Sugar	2 tbsp

Equipment: Candy thermometer, heavy saucepan, small round silicone molds (1/2 inch spheres ideal), gloves (for handling extract), wax paper

SAFETY WARNINGS: - **Wear gloves** when handling capsaicin extract. If it gets on your skin, it burns for hours. If you touch your eyes, you'll need to flush with milk for 15+ minutes. - **Start with 2 drops** of extract per batch. Taste ONE candy before adding more. You can always make it hotter. You cannot un-heat candy. - **Do NOT give these to children.** This is adult candy. - **Keep milk or ice cream nearby.** Capsaicin is fat-soluble — dairy neutralizes it. Water makes it worse. - **Label clearly.** These look like innocent round hard candies. They are not innocent.

Method: 1. Combine sugar, corn syrup, and water in heavy saucepan over medium heat. Stir until sugar dissolves. 2. Stop stirring once it boils. Cook to 300F (hard crack stage). 3. Remove from heat at 300F. Let cool 30 seconds. 4. PUT ON GLOVES. Add capsaicin extract (2-4 drops), citric acid, malic acid, ascorbic acid, flavor extract, and food coloring. Stir thoroughly. 5. Pour into small round silicone molds for the "bomb" shape. 6. Let cool completely. 7. Toss in Ultra Sour Coating. 8. Wrap individually. Write "DA BOMB" on the wrapper. You've been warned.

Yields: ~30 bombs

Per bomb: ~2mg K | ~1mg P | ~2mg Na. The capsaicin extract adds zero minerals. Pure pain.

CKD consideration: Food-grade capsaicin extract at 2-4 drops per batch of 30 candies = pharmacologically negligible per serving. Do not assume a zero kidney effect. Capsaicin can also trigger acid reflux — if you take PPIs or have GERD (common CKD comorbidity), approach with caution.

The Da Bomb experience: Unlike whole-pepper heat that builds and crests, extract heat hits like a wall. There's no flavor ramp. The sour coating hits first (3 seconds), then the extract heat detonates all at once (5-10 seconds in). It's flat, aggressive, chemical heat — exactly like the sauce on Hot Ones. That's the point. It's not gourmet. It's warfare.

31. Szechuan Peppercorn Sour Fizz Candy (The Numbing Sour)

Szechuan peppercorn (Zanthoxylum) isn't actually pepper — it's the dried husk of a citrus fruit related to lemon. The active compound hydroxy-alpha-sanshool doesn't create heat — it vibrates your nerve endings at 50Hz, the same frequency as electrical mains hum, which your brain interprets as "tingling/buzzing." You are literally eating electricity.

Ingredient	Amount	CKD Notes
Granulated sugar	1 cup	
Light corn syrup	1/2 cup	
Water	1/4 cup	
Ground Szechuan peppercorn	1 tsp (finely ground)	Negligible K/P/Na. The numbing compound is hydroxy-alpha-sanshool.
Citric acid	1 tsp	Sour base
Malic acid	1/2 tsp	Extended sour
Baking soda	1/4 tsp	Creates fizzing reaction with the acids in your saliva. Adds ~75mg Na to entire batch.
Lemon extract	1/2 tsp	Citrus + Szechuan = natural pairing (they're related plants)
Yellow food coloring	3 drops	

Equipment: Candy thermometer, heavy saucepan, silicone molds, spice grinder (for the peppercorns)

Method: 1. Toast whole Szechuan peppercorns in a dry skillet over medium heat for 2 min until fragrant. Grind to fine powder in spice grinder. Sift out any large hull pieces. 2. Combine sugar, corn syrup, and water in heavy saucepan. Stir until dissolved. 3. Cook to 300F (hard crack) without stirring. 4. Remove from heat. Cool 30 seconds. 5. Stir in ground Szechuan peppercorn, citric acid, malic acid, baking soda (it will foam slightly — this is correct), lemon extract, and food coloring. 6. Pour into molds immediately — the baking soda makes it set faster. 7. Cool completely. Unmold. 8. Optional: dust with a light coating of citric acid + sugar for extra surface sour.

Yields: ~30 candies

Per candy: ~2mg K | ~1mg P | ~5mg Na (slightly higher due to baking soda — still negligible).

CKD consideration: Szechuan peppercorn is a spice with negligible mineral content at this dose. The baking soda adds ~2.5mg Na per candy — trivial. Individual medication, allergy, and tolerance issues can still matter; the numbing sensation is not proof of universal safety.

The experience: This is NOT heat. This is something else entirely. The sour hits first (citric + malic), then the Szechuan peppercorn kicks in and your lips, tongue, and inner cheeks start BUZZING. It feels like your mouth is vibrating. Like mild electrical current on your tongue. Combined with the sour, it creates a sensation that doesn't exist in any other candy. The fizz from the baking soda adds a third textural layer. Sour + numb + fizzy = genuinely alien mouthfeel.

SUPER SOUR + SUPER HOT — CKD CONSIDERATIONS

Recipe	Per Serving	Na (mg)	P (mg)	K (mg)	Safety Rating
27. Citric Reaper Drops	1 drop	2	1	2	CKD-aware (watch GI)
28. Ghost Pepper Sour Worms	1 worm	9	4	6	CKD-aware (watch GI)
29. Habanero Sour Ropes	1 rope	6	3	4	CKD-aware
30. Da Bomb Sour Bombs	1 bomb	2	1	2	CKD-aware (GERD caution)
31. Szechuan Sour Fizz	1 candy	5	1	2	CKD-aware

> ***Crossover rule #1:*** *Capsaicin (from peppers) is metabolized by the liver, not the kidneys. It has ZERO impact on renal function at any food-consumption dose. The only CKD concern with spicy candy is GI — GERD, gastroparesis, and nausea are common CKD comorbidities, and capsaicin can aggravate all three. Know your gut before you wreck your gut.*
>
> ***Crossover rule #2:*** *Szechuan peppercorn is not capsaicin. It's a completely different compound (hydroxy-alpha-sanshool) working on completely different receptors (mechanoreceptors, not thermoreceptors). It's not "hot." It's "vibrating." If you can't handle capsaicin heat due to GI issues, you CAN still try Recipe #31 — the Szechuan numbing sensation does not trigger GERD or acid reflux.*
>
> ***Crossover rule #3:*** *Milk or ice cream is the antidote for capsaicin, not water. Capsaicin is fat-soluble. Water spreads it. Dairy binds it. Keep dairy nearby when testing any recipe in this section.*

THE WONKA LAB — Weird Effect Candy

Candy That Does Things It Shouldn't Be Able to Do

"Willy Wonka's factory was fiction. Flavor science is not. Everything in this section is real chemistry you can do in your kitchen."

32. Three-Course Dinner Gum (Violet Beauregarde's Gum — For Real)

In 2010, food scientist Homaro Cantu of Moto restaurant in Chicago actually created a multi-course chewing gum using microencapsulated flavor compounds that release sequentially as you chew — proving Roald Dahl's 1964 fiction was only 46 years ahead of the science.

Ingredient	Amount	CKD Notes
Unflavored gelatin	3 packets (21g)	renal-aware
Corn syrup	3 tbsp	
Water	1/2 cup	
Sugar	3 tbsp	
Layer 1 — Tomato Soup:		
Tomato powder	1 tsp	Low-K tomato form (vs. paste/sauce). ~80mg K per tsp, split across ~15 gummies = ~5mg K per piece.
MSG (monosodium glutamate)	1/8 tsp	Adds umami depth. ~60mg Na per 1/8 tsp, split across batch = ~4mg Na per piece.
Onion powder	1/8 tsp	Negligible K/P at this amount
Tiny pinch white pepper		
Red food coloring	1-2 drops	
Layer 2 — Roast Chicken:		
MSG	1/4 tsp	The "meat" flavor backbone
Dried thyme (ground)	1/4 tsp	
Dried sage (ground)	1/8 tsp	
Onion powder	1/4 tsp	
Tiny pinch garlic powder		
Yellow food coloring	1-2 drops	
Layer 3 — Blueberry Pie:		
Blueberry Jell-O	1/2 small box (~1.5oz)	Or: 1/2 tsp blueberry extract + purple coloring
Cinnamon	1/4 tsp	
Vanilla extract	1/2 tsp	
Extra sugar	1 tbsp	Dessert should be sweet

Equipment: 3 small bowls, shallow rectangular silicone mold or parchment-lined 9x9 pan, squeeze bottles or droppers

Method: 1. **Make base gelatin:** Bloom all 3 gelatin packets in 1/4 cup cold water. Heat remaining 1/4 cup water + corn syrup + sugar until simmering. Add bloomed gelatin, stir smooth. Divide evenly into 3 bowls. 2. **Bowl 1 (Tomato Soup):** Stir in tomato powder, 1/8 tsp MSG, onion powder, white pepper, red coloring. Mix thoroughly. Taste it — it should taste like tomato soup concentrate. 3. **Bowl 2 (Roast Chicken):** Stir in 1/4 tsp MSG, thyme, sage, onion powder, garlic powder, yellow coloring. Taste — it should taste savory and herbal, like chicken seasoning. 4. **Bowl 3 (Blueberry Pie):** Stir in Jell-O powder (or extract + coloring), cinnamon, vanilla, extra sugar. Taste — it should taste like blueberry pie filling. 5. **Layer:** Pour Bowl 1 (tomato) into mold. Spread thin (~1/8 inch). Refrigerate 20 min until set but still tacky. Pour Bowl 2 (chicken) on top. Refrigerate 20 min. Pour Bowl 3 (blueberry) on top. Refrigerate 2 hours. 6. **Cut into strips** (~1/2 inch wide, 2 inches long). Each strip has all 3 layers visible from the side. 7. Air-dry 4-6 hours for chewier texture.

How to eat it: Start chewing from the tomato (red) end. As you chew through the layers, the flavor transitions from savory soup to roast dinner to sweet dessert. It's not magic. It's three flavored gelatin layers releasing sequentially as your teeth break through them.

Yields: ~30 strips

Per strip: ~8mg K | ~5mg P | ~7mg Na. The tomato powder and MSG add marginal amounts, well within CKD snack range.

CKD consideration: Tomato powder at 1 tsp across 30 servings = ~2.7mg K per strip. MSG at 3/8 tsp total across 30 servings = ~4mg Na per strip. These are trace amounts. The savory layers use powdered spices and MSG, not actual broth or meat — mineral content stays extremely low.

The science: This works because flavor perception is sequential when layered in a solid medium. Commercial multi-flavor gum uses microencapsulation (flavor trapped in tiny polymer shells that break at different pressures). Our version uses physical layers, which is cruder but achieves the same effect. Roald Dahl imagined it. Homaro Cantu proved it. You're making it in your kitchen.

33. Fizzy Lifting Candy (Real Chemical Reaction Candy)

Pop Rocks were invented accidentally in 1956 by General Foods chemist William A. Mitchell (who also invented Tang, Cool Whip, and quick-set Jell-O) — he was trying to make instant carbonated soda by trapping CO2 in sugar. He failed at soda. He invented a candy that generates over $100M in cumulative sales.

Ingredient	Amount	CKD Notes
Granulated sugar	1 cup	
Light corn syrup	1/2 cup	
Water	1/4 cup	
Baking soda	1/2 tsp	The base half of the reaction. Adds ~150mg Na to entire batch = ~5mg Na per candy.
Citric acid powder	1 tsp	The acid half of the reaction. When baking soda + citric acid meet saliva = CO2 fizz. CKD-aware.
Flavor extract (cola, root beer, or lemon-lime)	1/2 tsp	Cola makes it taste like fizzy soda candy
Food coloring	3 drops	

Equipment: Candy thermometer, heavy saucepan, silicone molds, parchment paper

The chemistry: Baking soda (sodium bicarbonate, NaHCO3) + citric acid (C6H8O7) --> sodium citrate + water + CO2 gas. When these two powders are kept DRY, nothing happens. When your saliva wets them, the reaction begins and produces carbon dioxide bubbles directly on your tongue. Better than Pop Rocks because Pop Rocks use pre-trapped CO2 (a one-time burst), while this is an ongoing REACTION that keeps fizzing as long as there's unreacted powder.

Method: 1. Combine sugar, corn syrup, and water. Cook to 300F (hard crack). Remove from heat. 2. QUICKLY stir in flavor extract and food coloring. 3. Working fast: add baking soda (it will foam up — stir it in). Then add citric acid. The mixture will react and expand slightly. Stir just enough to distribute — don't over-mix or you'll exhaust the reaction before it reaches anyone's mouth. 4. Pour immediately into molds or onto parchment. The candy will have tiny bubbles visible inside — those are CO2 pockets. Good. 5. Let cool completely. Unmold. 6. Store in AIRTIGHT container immediately. Moisture is the enemy — humidity will trigger the reaction prematurely.

Yields: ~30 candies

Per candy: ~2mg K | ~1mg P | ~5mg Na (baking soda adds slight Na — still negligible).

CKD consideration: Baking soda at 1/2 tsp across 30 candies = ~5mg Na per candy. Negligible. The chemical reaction produces sodium citrate, which is actually USED as a buffering agent in some CKD treatments. Do not assume universal safety; count sodium and review the ingredients with your care team if this is unfamiliar.

The experience: You put the candy in your mouth. For the first 5-10 seconds, it's a normal hard candy — sweet, flavored. Then your saliva reaches the trapped baking soda + citric acid pockets and the fizzing STARTS. It's aggressive. It feels like your tongue is carbonated. The fizzing continues for 30-60 seconds as more pockets dissolve. Unlike Pop Rocks (one burst), this sustains. Like having a soda fountain on your tongue.

Storage warning: Keep these BONE DRY. Any moisture absorption triggers the reaction. Store with a silica gel packet in an airtight jar. In humid conditions, they'll go flat within days.

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34. Everlasting Gobstopper Dupe (7-Layer Rainbow Jawbreaker)

The real Ferrara Candy Company "Gobstopper" (branded as Wonka) uses a process called panning — tumbling sugar cores in a rotating drum while spraying sequential layers of colored sugar syrup, a technique unchanged since 17th-century French dragee makers coated almonds for royal weddings.

Ingredient	Amount	CKD Notes
Granulated sugar	3 cups (total, across all layers)	
Light corn syrup	1/2 cup (total)	
Water	As needed for each layer's syrup	
Citric acid	1/2 tsp (optional — for sour layers)	
Food coloring — 7 colors	Red, orange, yellow, green, blue, indigo, violet	One per layer — full rainbow
Flavor extracts — 7 flavors	Cherry, orange, lemon, green apple, blue raspberry, grape, berry	One per layer

Equipment: Deep saucepan (for the dipping syrup), parchment-lined sheet pan, candy thermometer, toothpicks or small skewers, patience

The 7 layers (outside to inside):

Layer	Color	Flavor	Hidden Meaning
1 (outer)	Red	Cherry	Root — grounding
2	Orange	Orange	Sacral — creativity
3	Yellow	Lemon	Solar plexus — power
4 (middle)	Green	Green apple	Heart — connection
5	Blue	Blue raspberry	Throat — expression
6	Indigo	Grape	Third eye — intuition
7 (core)	Violet	Mixed berry	Crown — transcendence

Method: 1. **Make the core:** Cook 1/3 cup sugar + 2 tbsp corn syrup + 1 tbsp water to 300F. Add violet coloring + berry extract. Pour small balls (~1/2 inch) onto parchment. Let harden completely. These are your cores. 2. **Make dipping syrup for each layer:** For each layer, combine 1/3 cup sugar + 1 tbsp corn syrup + 1 tbsp water. Cook to 290-300F. Add coloring + flavor for that layer. Remove from heat. 3. **The dipping process:** Spear a core ball on a toothpick. Dip into Layer 6 (indigo) syrup. Rotate to coat evenly. Hold and let drip for 10 seconds. Set on parchment to harden (3-5 min). Repeat dip 2-3 times for a thick layer. 4. **Continue outward:** Dip Layer 6-coated ball into Layer 5 (blue) syrup. Same process — 2-3 dips per layer, hardening between each. 5. **Repeat for all layers** working from inside out: violet core --> indigo --> blue --> green --> yellow --> orange --> red (outer). 6. Final layer should be 2-3 dips of red for a thick, glossy exterior. 7. Remove toothpick. Fill the hole with a final drop of red syrup.

Total dipping rounds: 7 layers x 2-3 dips each = 14-21 dipping sessions per gobstopper. This takes time. That's why they're "everlasting."

Time to eat: 30-45 minutes of continuous sucking. Each layer reveals a new color and flavor. The transition moments — when one color fades and the next appears — are the magic.

Yields: ~15 gobstoppers (larger pieces = fewer per batch)

Per gobstopper: ~3mg K | ~1mg P | ~2mg Na. Pure sugar art with zero estimated mineral contribution.

CKD consideration: This is sugar, corn syrup, food coloring, and flavor extract. No protein, no minerals, no phosphorus additives. The only concern is the sugar load itself for diabetic CKD patients. Even without diabetes, candy portions and ingredients remain individual; compare them with your care plan.

Pro tip: If the repeated dipping/hardening process is too tedious, use the "speed method" — pour each layer's syrup into progressively larger hemispherical silicone molds, nesting them inside each other and chilling between layers. Less artisanal, but the rainbow cross-section is the same.

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35. Flavor-Flipping Taffy (Miracle Berry Taffy)

Synsepalum dulcificum (miracle berry) was first documented by European explorer Chevalier des Marchais in West Africa in 1725, who noticed local populations chewing the berry before eating acidic foods. The active protein, miraculin, was isolated in 1968 by Japanese researcher Kenzo Kurihara — it binds to sweet taste receptors and activates them in the presence of acid, literally making sour things taste sweet for up to 2 hours.

Ingredient	Amount	CKD Notes
Unflavored gelatin	2 packets (14g)	renal-aware
Granulated sugar	1/2 cup	
Corn syrup	3 tbsp	Taffy pull
Unsalted butter	1 tbsp	Minimal P. Smooth chew.
Powdered sugar	1/4 cup (for dusting)	
Miracle berry powder (freeze-dried Synsepalum dulcificum)	1 tbsp	Available on Amazon (~$15 for a bottle). CKD-aware — it's a fruit protein.
Citric acid	1/4 tsp	Light sour to activate the miraculin
Vanilla extract	1/2 tsp	
Pink food coloring	2 drops	

Equipment: Heavy saucepan, candy thermometer, parchment paper, powdered sugar for dusting

Method: 1. Bloom gelatin in 2 tbsp cold water for 5 min. 2. Combine sugar, corn syrup, and 2 tbsp water in saucepan. Heat to 255F (hard ball stage). 3. Remove from heat. Stir in butter and bloomed gelatin. Mix smooth. 4. Stir in vanilla, citric acid, food coloring, and miracle berry powder. Mix thoroughly — the miraculin needs to be evenly distributed. 5. Pour onto parchment dusted with powdered sugar. Cool until handleable (~5 min). 6. KNEAD and PULL like taffy — fold, stretch, fold, stretch, 15-20 times. Dust with powdered sugar as needed. 7. Roll into a log, cut into 1-inch pieces. Wrap in wax paper.

How to use the effect: Eat one piece of taffy. Chew it thoroughly — let the miraculin coat your entire tongue. Wait 2 minutes. Now eat something sour — a lemon wedge, a lime, plain yogurt, a grapefruit, vinegar chips. THEY WILL TASTE SWEET. The more acidic the food, the sweeter it tastes. The effect lasts 15-30 minutes.

Yields: ~25 pieces

Per piece: ~5mg K | ~4mg P | ~3mg Na. small estimated mineral contribution per stated serving.

CKD consideration: Miracle berry (Synsepalum dulcificum) powder is a freeze-dried fruit — negligible K/P/Na at 1 tbsp per batch of 25 pieces. Miraculin is a glycoprotein that binds to taste receptors. Do not use these mechanism claims as proof of safety. Miracle berry can change taste perception and may affect food choices; ask your care team or pharmacist if it is appropriate for you.

The science (real): Miraculin is a 191-amino-acid glycoprotein. At neutral pH, it binds to the T1R2-T1R3 sweet taste receptor but does NOT activate it. When acid hits (pH drops), miraculin changes shape (conformational change) and ACTIVATES the sweet receptor. Your brain receives "sweet" signals from the same tongue cells that normally signal "sour." The sourness doesn't disappear — it's reinterpreted. A lemon tastes like lemon candy. A lime tastes like limeade. Vinegar tastes like apple cider. It's not magic. It's protein biochemistry.

Party move: Give everyone a taffy. Then put out a platter of lemon wedges, limes, plain Greek yogurt, pickles, and balsamic vinegar. Watch people lose their minds.

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36. Temperature Candy (Simultaneous Hot and Cold)

Menthol triggers TRPM8 cold receptors at 8-28C thresholds even at body temperature (37C), while capsaicin triggers TRPV1 heat receptors. When both hit the same tongue simultaneously, your brain receives contradictory thermal signals from adjacent nerve endings — a phenomenon called "thermal grill illusion" first described by physiologist Thunberg in 1896.

Ingredient	Amount	CKD Notes
Granulated sugar	1 cup	
Light corn syrup	1/2 cup	
Water	1/4 cup	
Cold half:		
Menthol crystals (food-grade)	1/4 tsp, crushed to powder	Available on Amazon. CKD-aware — metabolized by the liver.
Peppermint extract	1/2 tsp	Reinforces the cold sensation
Blue food coloring	3 drops	Visual cue: blue = cold side
Hot half:		
Cayenne pepper	1/4 tsp	~30,000-50,000 SHU. Moderate heat.
Cinnamon oil (food-grade)	2-3 drops	Cinnamon adds perceived heat via cinnamaldehyde activating TRPA1 receptors
Red food coloring	3 drops	Visual cue: red = hot side

Equipment: Candy thermometer, heavy saucepan, dual-chamber silicone molds (or: pour two halves separately and press together), parchment paper

Method: 1. Make ONE batch of hard candy base: sugar + corn syrup + water, cook to 300F. Remove from heat. 2. QUICKLY divide into two portions (pour half into a second greased saucepan or metal bowl). 3. **Cold half:** Stir in menthol crystals, peppermint extract, blue coloring. Work fast. 4. **Hot half:** Stir in cayenne, cinnamon oil, red coloring. Work fast. 5. **Dual-pour method:** Using two spoons simultaneously, pour the cold half and hot half side-by-side into each mold cavity, so each candy is half blue and half red. They'll merge at the seam but remain visually distinct. 6. Alternative: pour each half into separate molds. When 90% cooled (still slightly pliable), press one blue and one red half together firmly. They'll bond at the warm seam. 7. Cool completely. Unmold.

Yields: ~30 dual-chamber candies

Per candy: ~2mg K | ~1mg P | ~2mg Na. Small estimated mineral contribution per stated serving from every angle.

CKD consideration: Menthol crystals at 1/4 tsp across 30 candies = trace amounts per serving. Menthol is metabolized by the liver (glucuronidation), not the kidneys. Cayenne and cinnamon are negligible at these doses. Do not assume a zero kidney effect; review the actual product, dose, and your care plan.

The experience: Put the whole candy in your mouth. The blue side hits your tongue with COLD — menthol + peppermint create an intense cooling sensation. Simultaneously, the red side hits with HEAT — cayenne + cinnamon create burning. Your brain can't reconcile the signals. One side of your tongue feels like it's touching ice, the other feels like it's touching a stove. It's disorienting, fascinating, and mildly addictive. Rotate the candy in your mouth to alternate which side touches which part of your tongue. The effect persists for the entire 5-10 minutes it takes to dissolve.

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37. Smell-O-Vision Candy (Aromatherapy Hard Candy)

The ancient Egyptians burned kyphi — a compound incense of honey, wine, raisins, juniper, cardamom, and calamus — believing the aromatic smoke physically carried prayers to the gods. Modern aroma science confirms that volatile aromatic compounds DO cross the blood-brain barrier via the olfactory bulb, making scent the fastest sense to affect neurochemistry.

Ingredient	Amount	CKD Notes
Granulated sugar	1 cup	
Light corn syrup	1/2 cup	
Water	1/4 cup	
Choose ONE aromatic profile:		
Lavender Calm: Food-grade lavender oil	6-8 drops	Linalool = anxiolytic compound. CKD-aware.
Rose Garden: Food-grade rose oil	4-6 drops	More concentrated than lavender — less is more
Jasmine Night: Food-grade jasmine extract	8-10 drops	Jasmine is mildly sedative. Used in Thai traditional medicine.
Bergamot Sunrise: Food-grade bergamot oil	6-8 drops	The scent in Earl Grey tea. Uplifting, citrusy.
Forest Floor: Food-grade pine + cedarwood oil	4 drops each	Smells like walking through old-growth forest
Complementary food coloring	2-3 drops	Lavender=purple, rose=pink, jasmine=white/clear, bergamot=golden, forest=green

Equipment: Candy thermometer, heavy saucepan, silicone molds

IMPORTANT — OIL QUALITY: - ONLY use food-grade essential oils explicitly labeled for ingestion. NOT aromatherapy-grade. NOT "wellness-grade" (marketing term, not safety designation). - Reputable food-grade sources: LorAnn Oils (candy-making brand), Aura Cacia (food-labeled line), or any oil that says "for flavoring" on the label. - NEVER use fragrance oils — those are synthetic and potentially toxic.

Method: 1. Standard hard candy method: sugar + corn syrup + water, cook to 300F. 2. Remove from heat. Cool 30 seconds. 3. Add your chosen aromatic oil and food coloring. Stir gently — don't whip in air. 4. Pour into molds. 5. Cool completely. Unmold. 6. Store in a LOOSELY sealed container — you WANT the aroma to escape slightly. Part of the experience is smelling the candy before you eat it.

Yields: ~30 candies

Per candy: ~2mg K | ~1mg P | ~2mg Na. Essential oils add zero minerals. Pure sugar + scent.

CKD consideration: Food-grade essential oils at 4-10 drops per batch of 30 candies = sub-drop quantities per serving. Do not assume a zero kidney effect; review the actual product, dose, and your care plan. Aromatic compounds are metabolized by the liver (cytochrome P450 pathway), not the kidneys. If you're on medications metabolized by CYP enzymes (common in CKD), the serving estimate does not rule out medication interactions — but mention it to your pharmacist if you're concerned.

The experience: When you put this candy in your mouth, the heat of your tongue volatilizes the aromatic oils. The scent fills your mouth, then your nasal passages (retronasal olfaction), then the air around you. People within 3-5 feet will smell it. A lavender candy makes your immediate vicinity smell like a lavender field. A rose candy fills the room with rose. It's aromatherapy you eat. The flavor is subtle — these aren't strongly flavored candies. The scent IS the experience.

Suggested pairings: - **Lavender Calm:** Before bed. The linalool is genuinely calming. - **Bergamot Sunrise:** Morning candy with tea. Earl Grey vibes. - **Jasmine Night:** Evening. Slightly sedative. - **Rose Garden:** When you want your house to smell amazing without a diffuser. - **Forest Floor:** When you can't get to the woods. The closest thing to smelling pine and cedar without leaving your kitchen.

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38. Mood Ring Gummies (Thermochromic Color-Changing Gummies)

Thermochromic pigments were first commercialized in 1975 by Marvin Wernick for the "mood ring" — using liquid crystal microencapsulation that shifts from black (cold) through blue, green, yellow, and brown as temperature rises. Modern food-safe thermochromic pigments use leuco dye systems: a dye, a weak acid developer, and a solvent whose melting point determines the color-change temperature.

Ingredient	Amount	CKD Notes
Unflavored gelatin	3 packets (21g)	renal-aware
Flavored Jell-O (any flavor)	1 small box (3oz)	Choose a flavor that pairs with the color shift
Water	1/2 cup	
Corn syrup	1 tbsp	

Ingredient	Amount	CKD Notes
Thermochromic food coloring (food-safe)	1-2 tsp	Available on Amazon/specialty baking suppliers. Look for "heat-sensitive" or "color-changing" food coloring. FDA-approved versions exist.
Citric acid	1/4 tsp (optional)	Light sour

SOURCING THE COLOR-CHANGING DYE: - Search Amazon for "thermochromic food coloring" or "color changing food dye." - Key brands: specialty cake decorating suppliers carry food-safe versions. - Confirm the product is labeled FOOD-SAFE / FDA-APPROVED. Some thermochromic pigments are for plastics/textiles only — those are NOT edible. - Most food-safe versions shift around 31C (88F) — below body temperature but above fridge temperature. Perfect: blue in the fridge, turns purple/red as it warms in your hand.

Method: 1. Bloom gelatin in 1/4 cup cold water for 5 min. 2. Heat remaining 1/4 cup water until simmering. Dissolve Jell-O powder and corn syrup. 3. Add bloomed gelatin. Stir smooth. 4. Add thermochromic food coloring. Stir thoroughly for even distribution. 5. Optional: add citric acid for slight sour. 6. Pour into gummy bear or geometric molds (the color change is most visible on flat, larger shapes — try cube molds or disc molds). 7. Refrigerate 2 hours until firm. 8. Unmold. Store in fridge.

The magic moment: Take a gummy from the fridge (blue/purple, ~4C). Hold it in your hand for 30 seconds. Watch it shift to pink/red as it warms past the transition temperature. Pop it in your mouth — it shifts color again on your tongue. Each gummy is a tiny mood ring you eat.

Yields: ~50 gummies

Per gummy: ~5mg K | ~3mg P | ~8mg Na. Standard gummy numbers. The thermochromic pigment adds no measurable minerals.

CKD consideration: Food-safe thermochromic pigments are microencapsulated dye systems — the active compounds are trapped in tiny polymer shells. Absorption and safety depend on the specific approved product and intended food use. At 1-2 tsp per batch of 50 gummies, per-gummy exposure is negligible. Do not assume a zero kidney effect; review the actual product, dose, and your care plan. Confirm FDA food-safe labeling before purchase.

Advanced mode — multi-color shift: Some thermochromic pigments shift through multiple colors at different temperatures. If you can source a "full spectrum" version, your gummies will shift from deep blue (fridge cold) --> purple (cool) --> red (room temp) --> yellow (hand/mouth warm). Rainbow gummy that changes as you hold it.

THE WONKA LAB — CKD CONSIDERATIONS

Recipe	Per Serving	Na (mg)	P (mg)	K (mg)	Safety Rating
32. Three-Course Dinner Gum	1 strip	7	5	8	CKD-aware
33. Fizzy Lifting Candy	1 candy	5	1	2	CKD-aware
34. Everlasting Gobstopper	1 gobstopper	2	1	3	CKD-aware
35. Flavor-Flipping Taffy	1 piece	3	4	5	CKD-aware
36. Temperature Candy	1 candy	2	1	2	CKD-aware
37. Smell-O-Vision Candy	1 candy	2	1	2	CKD-aware
38. Mood Ring Gummies	1 gummy	8	3	5	CKD-aware

> ***Wonka Lab rule #1:*** *Every recipe here uses real, documented science. Miraculin protein biochemistry, acid-base CO2 generation, thermochromic phase transitions, retronasal olfaction, thermal grill illusion. If a candy doesn't teach you something about chemistry, biology, or physics, it doesn't belong in the Wonka Lab.*
>
> ***Wonka Lab rule #2:*** *The "weird effect" in every recipe is the POINT, not a side effect. The Three-Course Dinner Gum exists because it transitions through three flavors. The Temperature Candy exists because it's hot and cold simultaneously. The effect IS the recipe. If the effect fails (miraculin didn't coat the tongue, fizz candy got humid, thermochromic dye was textile-grade not food-grade), the candy still tastes fine — but you missed the show.*
>
> ***Wonka Lab rule #3:*** *"We are the music makers, and we are the dreamers of dreams." — Arthur O'Shaughnessy, as quoted by Willy Wonka. These recipes prove that the line between candy and science experiment is imaginary. Every candy IS a science experiment. The Wonka Lab just makes that obvious.*

"A little nonsense now and then is relished by the wisest men." — Roald Dahl, Charlie and the Chocolate Factory

CHAPTER 18

Chocolate, Fruit & The Fountain

"If it exists, it can be dipped in chocolate."

Chocolate-Covered Everything, Bark, Fondue & Party Platters

"If it exists, it can be dipped in chocolate."

> *"The supreme art of war is to subdue the enemy without fighting. The supreme art of snacking is to subdue the craving without exceeding 2000mg potassium." — Sun Tzu, probably*

PART I: THE CHOCOLATE FOUNTAIN

1. Chocolate Fountain Setup

The altar. The centerpiece. The molten river of joy.

A chocolate fountain turns any Tuesday into a ceremony. It's also one of the most *controllable* dessert formats — you choose exactly what goes in, what gets dipped, and how much lands on the plate. No hidden phosphorus additives. No mystery sodium. Just flow.

Equipment

Item	Notes
Chocolate fountain (3-tier or 5-tier)	Nostalgia or Wilton brands work great. 3-tier for 2-4 people, 5-tier for parties
Extension cord	Keep it away from the edge — molten chocolate + carpet = bad dharma
Parchment paper	Line the table under and around the fountain
Bamboo skewers / fondue forks	For dipping anything that won't stay on a regular fork
Small plates + napkins	This will get messy. Embrace it

The Chocolate

Ingredient	Amount	Na (mg)	K (mg)	P (mg)	CKD Notes
Semi-sweet chocolate chips	2 lbs (907g)	~30	~180	~120	Use Ghirardelli or Guittard — no phosphorus additives. CHECK LABELS for "sodium phosphate"
Refined coconut oil	1/2 cup (120ml)	0	0	0	Essential for flow — keeps chocolate thin enough to cascade. Unrefined works but adds coconut flavor

Yield: ~4 cups molten chocolate, serves 8-12 dippers

Per 2 Tbsp serving of fountain chocolate:

Na	K	P
~4mg	~22mg	~15mg

Method

1. **Melt the chocolate.** Microwave chips + coconut oil in a large bowl, 30 seconds at a time, stirring between each. Do NOT let it seize (no water near the chocolate, ever). Total time: ~2-3 minutes.
2. **Preheat the fountain.** Turn it on 5 minutes before adding chocolate. The auger and tiers need to be warm or the chocolate will solidify on contact.

3. **Pour the melted chocolate** into the base of the fountain. Let it cycle for 1-2 minutes. If it's too thick, add coconut oil 1 Tbsp at a time. If it splatters, it's too thin — add more chips.
4. **Temperature sweet spot:** 105-110°F (40-43°C). Most fountains have no thermostat, so monitor by touch — the base should be warm, not hot.
5. **Keep it running.** Don't turn it off and on — the chocolate needs continuous movement or it'll seize in the pump.

Cleanup

- **While still warm:** Wipe tiers with paper towels to remove bulk chocolate.
- **Disassemble** all tiers and the auger. Soak in hot soapy water for 10 minutes.
- **Never submerge the base/motor.** Wipe with a damp cloth only.
- **Leftover chocolate** in the base: pour into a silicone mold, refrigerate, and reuse for bark or sauce later. Zero waste.

> *Sic transit gloria mundi — so passes the glory of the chocolate fountain. Until next Tuesday.*

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2. Chocolate Fountain Dippers Guide

The rules: low-K fruits, crunchy things, soft things, cold things. No banana. No mango in bulk. Everything else is fair game.

Fruits (CKD-Aware Picks)

Dipper	Prep	Na (mg) per serving	K (mg) per serving	P (mg) per serving	Notes
Strawberries	Wash, leave stems on for handles	1	77	12	Per 4 medium. The classic.
Apple slices	Cut 1/4" thick, toss in lemon water to prevent browning	0	53	5	Per 1/2 apple. Fuji or Honeycrisp hold up best
Pineapple chunks	Cut 1" cubes, pat dry	1	60	5	Per 1/2 cup. Tart + chocolate = elite
Grapes (frozen)	Freeze 2+ hours, dip while still frozen	1	88	10	Per 15 grapes. The chocolate shell hardens instantly on frozen grapes. Life-changing.
Blueberries	Thread 3-4 on a skewer	0	28	4	Per 1/4 cup. Tiny but mighty
Raspberries	Skewer gently (fragile)	0	47	9	Per 1/4 cup
Pear slices	Cut 1/4" thick, lemon water dip	1	66	6	Per 1/2 pear. Bartlett when ripe = butter

Crunchy & Sweet Dippers

Dipper	Prep	Na (mg)	K (mg)	P (mg)	Notes
Rice Krispie treats (homemade)	Cut into 1"x3" fingers	~50	~10	~15	Per 1 finger. Recipe in this book. Use margarine not butter
Marshmallows (large)	Skewer them	~6	~1	~2	Per 2 large. Almost zero everything. CKD dream food
Pretzel rods	Use as-is, dip halfway	~250	~15	~10	Per 1 rod. Watch the sodium — limit to 1-2 rods
Graham crackers	Break into dipping sticks	~65	~20	~8	Per 1 sheet Snap the perfor
Pound cake cubes	Cut 1" cubes, skewer	~75	~25	~20	Per 2 cubes Sara l home Lightl toast textur
Rice cakes (plain or chocolate)	Break into chip-sized pieces	~15	~15	~10	Per 1/ cake. Andre Quak choc rice ca work
Homemade Kit Kat fingers	See Recipe #5 in rice_treats_and_candy_dupes_ckd.md	~30	~12	~10	Per 1 finger Wafer choc CKD-
Cookie dough bites	Roll 1" balls, freeze 30 min	~35	~15	~12	Per 2 Use eggle recipe marga base

Pro Tips

- **Dry your dippers.** Wet fruit will make the chocolate slide off and eventually seize the fountain. Pat everything with paper towels.
- **Freeze what you can.** Frozen fruit = instant chocolate shell = no dripping = cleaner eating.
- **Skewer strategy:** Alternate textures on a single skewer (strawberry, marshmallow, pineapple) for variety without overloading any one mineral.
- **The 2-dip rule:** First dip for chocolate, brief pause to set, second dip for extra thickness. Patience, habibi.

PART II: CHOCOLATE-COVERED TREATS

3. Chocolate-Covered Strawberries

Three chocolates. Four toppings. One act of love.

Base Ingredients

Ingredient	Amount	Na (mg)	K (mg)	P (mg)	CKD Notes
Fresh strawberries	1 lb (~20 large)	3	390	62	TOTAL for 1 lb. Leave stems + leaves on
Dark chocolate chips	1 cup (170g)	~8	~90	~60	For ~10 berries
Milk chocolate chips	1 cup (170g)	~30	~70	~50	Sweeter, kid-friendly
White chocolate chips	1 cup (170g)	~40	~50	~35	Technically not chocolate. Still delicious
Refined coconut oil	1 Tbsp per cup chips	0	0	0	For smooth dipping consistency

Toppings Bar

Topping	Amount per batch	Na (mg)	K (mg)	P (mg)
Chocolate drizzle (contrasting color)	2 Tbsp melted	~4	~12	~8
Rainbow sprinkles	1 Tbsp	~5	~1	~2
Crushed graham crackers	2 Tbsp	~32	~10	~4
Edible gold dust/glitter	Pinch	0	0	0
Crushed freeze-dried strawberries	2 Tbsp	~1	~20	~5

Topping	Amount per batch	Na (mg)	K (mg)	P (mg)
Flaky sea salt	Tiny pinch	~75	0	0
Mini chocolate chips	1 Tbsp	~3	~8	~5

Per 2 chocolate-covered strawberries (dark chocolate + 1 topping):

Na	K	P
~8mg	~65mg	~25mg

Method

1. **Wash and DRY strawberries thoroughly.** This is the step people skip. Water + melted chocolate = grainy disaster. Use paper towels, let them air-dry 30 minutes, or gently blow-dry (no shame).
2. **Melt chocolate** with coconut oil: microwave 30 sec intervals, stir each time. Should be smooth, not hot.
3. **Dip.** Hold by the stem, submerge 2/3 of the berry. Lift, let excess drip 5 seconds, slight twist.
4. **Top immediately** while chocolate is wet: sprinkles, crushed graham, etc. For drizzle, wait until base coat sets (5 min), then use a fork to zigzag contrasting chocolate across.
5. **Set on parchment-lined baking sheet.** Refrigerate 15-20 minutes until firm.
6. **Edible gold:** Dust with a dry brush after chocolate has fully set. Light hand — the gold should catch light, not coat.

Presentation

- **Dark + white drizzle** = tuxedo strawberries (formal)
- **White chocolate + crushed freeze-dried strawberry** = pink on pink (romantic)
- **Milk chocolate + sprinkles** = birthday party mode
- **Dark + sea salt + gold dust** = the Vorathic strawberry (sacred geometry energy)

> *"The berry does not choose the chocolate. The chocolate chooses the berry." — Ancient confectioner's proverb (fabricated, but true)*

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4. Chocolate-Covered Frozen Grapes

Frozen grapes are already candy. Add chocolate, and they become something else entirely.

Ingredient	Amount	Na (mg)	K (mg)	P (mg)	CKD Notes
Green or red seedless grapes	2 cups (~40 grapes)	3	230	27	Total for 2 cups. Red = sweeter, green = tarter
Semi-sweet chocolate chips	1 cup (170g)	~15	~90	~60	
Coconut oil	1 Tbsp	0	0	0	
Toothpicks or small skewers	40	—	—	—	For dipping handles

Per 5 chocolate-covered frozen grapes:

Na	K	P
~5mg	~52mg	~18mg

Method

1. **Wash grapes**, remove from stems, dry thoroughly.
2. **Freeze grapes** on a parchment-lined sheet for at least 2 hours. Overnight is better. They need to be rock-solid.
3. **Melt chocolate + coconut oil.** Let it cool slightly — if it's too hot, it'll melt the grape surface and slide off.
4. **Skewer one grape at a time**, dip into chocolate, tap off excess.
5. **Place back on parchment**, return to freezer immediately.
6. **Freeze 15 more minutes** until shell is set.
7. **Store in freezer** in an airtight container. Pull out 5-10 at a time, let sit 2 minutes before eating for the best texture — frozen core, crackly shell.

Why This Works

The frozen grape creates an instant-hardening effect on the chocolate — same principle as a Magic Shell. The result is a thin, crispy chocolate shell around an icy-sweet grape center. It shatters when you bite it. Closest thing to candy without any of the phosphorus-laden processed garbage.

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5. Chocolate-Covered Rice Krispie Pops

On sticks. Dipped. Decorated. These are weapons-grade snack craft.

Ingredient	Amount	Na (mg)	K (mg)	P (mg)	CKD Notes
Rice Krispies cereal	3 cups	~300	~30	~45	Check label — some store brands add phosphorus
Marshmallows (mini or large)	4 cups mini / 40 large	~25	~3	~5	Jet-Puffed or similar
Margarine	3 Tbsp	~100	~5	~3	Not butter — lower P, Andrew's preference
Semi-sweet chocolate chips	2 cups (340g)	~30	~180	~120	For coating
Coconut oil	2 Tbsp	0	0	0	
Lollipop sticks or thick skewers	12	—	—	—	
Sprinkles, crushed cereal, or drizzle	For decorating	~5	~2	~2	Per pop

Yield: 12 pops

Per 1 pop:

Na	K	P
~42mg	~22mg	~16mg

Method

1. **Make the Rice Krispie base:** Melt margarine in a large pot over low heat. Add marshmallows, stir until completely melted. Remove from heat, fold in cereal. Use the KitchenAid with the paddle attachment if you want to keep your arms.
2. **Press into a 9x13 pan** lined with parchment, greased with margarine. Press firmly and evenly. Cool 30 minutes.
3. **Cut into rectangles** (~2"x3") or use cookie cutters for shapes.
4. **Insert sticks** into the bottom of each piece, pushing halfway in.
5. **Freeze 15 minutes** so they hold shape during dipping.
6. **Melt chocolate + coconut oil.** Transfer to a tall, narrow container (a drinking glass works) for easy vertical dipping.
7. **Dip each pop**, submerging the Rice Krispie portion. Let excess drip, rotate slowly.
8. **Decorate immediately:** sprinkles, drizzle, crushed cereal, edible gold.
9. **Stand upright** in a styrofoam block or heavy mug to set. Refrigerate 20 minutes.

> *Omnia munda mundis — to the pure, all things are pure. Including a chocolate-covered cereal bar on a stick.*

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6. Chocolate Bark 3 Ways

Sheet pan alchemy. Pour, scatter, snap.

Version A: Dark Chocolate + Sea Salt + Rice Krispies

Ingredient	Amount	Na (mg)	K (mg)	P (mg)
Dark chocolate chips	2 cups (340g)	~16	~180	~120
Coconut oil	1 Tbsp	0	0	0
Rice Krispies cereal	1 cup	~100	~10	~15
Flaky sea salt (Maldon)	1/2 tsp	~580	0	0

Per 1 oz piece (~12 pieces per batch):

Na	K	P
~58mg	~16mg	~11mg

Version B: White Chocolate + Freeze-Dried Strawberry

Ingredient	Amount	Na (mg)	K (mg)	P (mg)
White chocolate chips	2 cups (340g)	~80	~100	~70
Coconut oil	1 Tbsp	0	0	0

Ingredient	Amount	Na (mg)	K (mg)	P (mg)
Freeze-dried strawberries	1 cup crushed	~5	~100	~25

Per 1 oz piece (~12 pieces per batch):

Na	K	P
~7mg	~17mg	~8mg

Version C: Milk Chocolate + Pretzel + Caramel Drizzle

Ingredient	Amount	Na (mg)	K (mg)	P (mg)
Milk chocolate chips	2 cups (340g)	~60	~140	~100
Coconut oil	1 Tbsp	0	0	0
Pretzel sticks, broken	1/2 cup	~250	~15	~10
Caramel sauce (store-bought)	2 Tbsp drizzle	~45	~20	~10

Per 1 oz piece (~12 pieces per batch):

Na	K	P
~30mg	~15mg	~10mg

Method (Same for All Three)

1. **Line a sheet pan** with parchment paper.
2. **Melt chocolate + coconut oil**, stir until smooth.
3. **Pour onto parchment**, spread to ~1/4" thickness with an offset spatula.
4. **Scatter toppings immediately** while chocolate is wet. Press gently so they adhere.
5. **For drizzle toppings** (caramel, contrasting chocolate): wait 2 minutes, then drizzle with a fork or squeeze bottle. Drag a toothpick through for a marble effect.
6. **Refrigerate 30-45 minutes** until fully set.
7. **Break/snap into irregular pieces.** Store in airtight container, fridge or room temp.

Gifting Note

Stack bark pieces in a mason jar or cellophane bag tied with ribbon. Edible gold dust on the dark chocolate version makes it look like it costs $40/lb. It cost you $6.

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7. Chocolate-Dipped Apple Slices

With a toppings bar. Build-your-own dessert, no oven required.

Ingredient	Amount	Na (mg)	K (mg)	P (mg)	CKD Notes
Apples (Fuji, Honeycrisp, or Wild Twist)	3 medium	0	320	33	Total for 3 apples
Lemon juice	2 Tbsp	0	16	2	Anti-browning soak
Semi-sweet chocolate chips	1.5 cups (255g)	~22	~135	~90	
Coconut oil	1.5 Tbsp	0	0	0	

Toppings Bar

Topping	1 Tbsp serving	Na (mg)	K (mg)	P (mg)
Crushed peanuts	1 Tbsp	~1	~52	~28
Unsweetened coconut flakes	1 Tbsp	~2	~20	~8
Rainbow sprinkles	1 Tbsp	~5	~1	~2
Mini chocolate chips	1 Tbsp	~3	~8	~5
Crushed graham crackers	1 Tbsp	~16	~5	~2
Crushed Rice Krispies	1 Tbsp	~17	~2	~3

Per 3 apple slices (dipped, 1 topping):

Na	K	P
~10mg	~60mg	~18mg

Method

1. **Slice apples** 1/4" thick. Soak in cold water + lemon juice for 2 minutes to prevent browning. Pat completely dry.
2. **Melt chocolate + coconut oil.**
3. **Dip each slice** halfway into chocolate. Let excess drip.
4. **Immediately press or sprinkle** chosen topping onto wet chocolate.
5. **Lay on parchment-lined sheet**, refrigerate 15 minutes.
6. **Serve with toppings in small bowls** for build-your-own action.

> *La manzana no cae lejos del arbol — the apple doesn't fall far from the tree. But it falls directly into the chocolate.*

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8. Chocolate Fruit Kabobs

Skewer architecture. Alternating color, texture, sweetness.

Ingredient	Amount (per 4 kabobs)	Na (mg)	K (mg)	P (mg)
Strawberries	8 medium	2	154	24
Pineapple chunks	8 (1" cubes)	1	55	5
Grapes (green or red)	8	1	44	5
Large marshmallows	8	12	2	4
Blueberries	16 (4 per skewer)	0	28	4
Semi-sweet chocolate (melted)	1/2 cup for drizzle	~8	~45	~30
Bamboo skewers (10")	4	—	—	—

Per 1 kabob:

Na	K	P
~6mg	~82mg	~18mg

Method

1. **Prep all fruit**: wash, dry, cut pineapple into cubes, leave strawberry stems on or remove (your call).
2. **Thread in alternating pattern**: strawberry, marshmallow, pineapple, grape, blueberry cluster (thread 3-4 on at once), repeat. Alternate colors for visual impact.
3. **Lay finished kabobs on parchment-lined sheet.**
4. **Melt chocolate**, transfer to a squeeze bottle or ziplock bag with corner snipped.
5. **Drizzle chocolate** across all kabobs in a zigzag pattern. Get dramatic with it.
6. **Optional**: dust with edible gold, coconut flakes, or crushed freeze-dried fruit.
7. **Refrigerate 10 minutes** to set the drizzle, then serve immediately. These don't store well — eat within 2 hours.

Arrangement Tip

For a platter: fan kabobs out in a sunburst pattern from the center. Place a small bowl of extra melted chocolate in the middle for additional dipping. Garnish with mint leaves between skewers.

PART III: CHOCOLATE SAUCES & DIPS

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9. Midnight Hot Fudge Sauce

For ice cream, fruit, Rice Krispie treats, spoons, fingers, and moments of quiet desperation.

Ingredient	Amount	Na (mg)	K (mg)	P (mg)	CKD Notes
Unsweetened cocoa powder	1/3 cup	~5	~200	~100	Highest K/P ingredient — this is why serving size matters
Granulated sugar	1/2 cup	0	0	0	
Unsweetened almond milk	1/2 cup	~80	~8	~10	Much lower K/P than dairy milk. Use Silk or Almond Breeze unsweetened
Margarine	2 Tbsp	~65	~3	~2	Not butter
Vanilla extract	1 tsp	0	13	0	
Pinch of salt	1/8 tsp	~150	0	0	

Yield: ~1 cup (16 Tbsp servings)

Per 2 Tbsp serving:

Na	K	P
~38mg	~28mg	~14mg

Method

1. **Whisk cocoa and sugar** in a small saucepan until blended (no lumps).
2. **Add almond milk**, whisk over medium heat until it begins to simmer.
3. **Reduce heat to low**, stir constantly for 3-4 minutes until it thickens enough to coat the back of a spoon.
4. **Remove from heat**, stir in margarine, vanilla, and salt.
5. **Serve warm.** It thickens as it cools — reheat in microwave 15 seconds to restore flow.
6. **Store** in a jar in the fridge up to 2 weeks.

Thickness Guide

- **Thin (pourable):** Use as-is for drizzling over ice cream or fruit.
- **Thick (spooning):** Simmer 1-2 extra minutes to reduce.
- **Fondue-style:** Serve in a small warmed bowl or ramekin set over a tea light.

---

10. Velvet Chocolate Ganache

Two ingredients. Two textures. Infinite applications.

Thick Dip Version

Ingredient	Amount	Na (mg)	K (mg)	P (mg)	CKD Notes
Semi-sweet chocolate chips	1 cup (170g)	~15	~90	~60	
Heavy cream	1/4 cup	~10	~22	~15	Small amount = manageable P. Use real cream here, not almond milk — ganache needs the fat

Yield: ~1 cup thick ganache

Per 2 Tbsp serving:

Na	K	P
~4mg	~16mg	~11mg

Pourable Version

Ingredient	Amount	Na (mg)	K (mg)	P (mg)
Semi-sweet chocolate chips	1 cup (170g)	~15	~90	~60
Heavy cream	1/2 cup	~20	~44	~30

Per 2 Tbsp serving:

Na	K	P
~5mg	~19mg	~13mg

Method

1. **Heat cream** in a small saucepan until it just begins to simmer (tiny bubbles at edges). Do NOT boil.
2. **Pour hot cream over chocolate chips** in a heatproof bowl.
3. **Let sit 2 minutes.** Don't touch it.
4. **Stir slowly from the center outward** in small circles, gradually incorporating all the chocolate. It will look broken at first — keep stirring. It will come together into a glossy, smooth ganache.
5. **For thick dip:** Use immediately or refrigerate 30 minutes for truffle-like consistency.
6. **For pourable:** Use within 10 minutes while still warm.
7. **To reheat:** Microwave 10 seconds at a time, stirring between.

Uses

- **Thick:** Fruit dip, truffle filling, spread on rice cakes, frosting for cupcakes
- **Pourable:** Drizzle on ice cream, coat Rice Krispie pops, pour over pound cake, fill the fountain if you ran out of dipping chocolate

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11. White Chocolate Fruit Dip

Cream cheese + white chocolate + vanilla. This is the dip you put on the table and watch disappear in 9 minutes.

Ingredient	Amount	Na (mg)	K (mg)	P (mg)	CKD Notes
Cream cheese (brick, softened)	8 oz (1 block)	~680	~230	~200	Highest mineral load — serving size is KEY
White chocolate chips	1 cup (170g)	~40	~50	~35	
Vanilla extract	1 tsp	0	13	0	
Powdered sugar	2 Tbsp	0	0	0	Optional — for extra sweetness

Yield: ~2 cups (16 two-Tbsp servings)

Per 2 Tbsp serving:

Na	K	P
~45mg	~18mg	~15mg

Method

1. **Melt white chocolate chips** in microwave, 30 sec intervals, stirring. Let cool 5 minutes (if it's too hot, it'll melt the cream cheese into soup).
2. **Beat cream cheese** in the KitchenAid with the paddle attachment on medium until smooth and fluffy, ~2 minutes. Scrape sides.
3. **Add melted white chocolate** and vanilla. Beat on low until just combined. Don't overmix or it'll thin out.
4. **Add powdered sugar** if desired, beat briefly.
5. **Transfer to a serving bowl.** Refrigerate 30 minutes to firm up, or serve immediately for a softer dip.
6. **Serve surrounded by:** strawberries, apple slices, graham crackers, pear slices, pineapple chunks.

> *Bi-smi-llah — in the name of the dip that unites all fruit.*

PART IV: PARTY PLATTERS

12. The Vorathic Chocolate Fountain Party Platter

Full ceremony. Fountain in the center. Rainbow dippers. Gold on everything. Lights underneath. This is not a snack — it is an installation.

Equipment

Item	Purpose
Chocolate fountain (running, per Recipe #1)	The altar
Large round platter or lazy susan (16"+)	The mandala base
Small LED strip or battery-powered fairy lights	Under-table or under-platter glow
Small bowls or ramekins (3-4)	For sauces/extra dips
Bamboo skewers + fondue forks	Dipping tools
Edible gold glitter/dust	The finishing sacrament
Parchment paper	Table protection

The Rainbow Dipper Arrangement

Arrange dippers in rainbow color order, radiating outward from the fountain like rays from a sun.

Position	Color	Dipper	Prep
12 o'clock	RED	Strawberries (whole, stems on)	Wash, dry
1:30	RED-ORANGE	Apple slices (skin-on Fuji)	Lemon-water soak, dried
3 o'clock	ORANGE	Cantaloupe cubes (small portion)	1" cubes, limit 4-5 pieces per person (moderate K)
4:30	YELLOW	Pineapple chunks	1" cubes, skewered
6 o'clock	GREEN	Green grapes (frozen)	Frozen solid, in a chilled bowl

Position	Color	Dipper	Prep
7:30	BLUE-PURPLE	Blueberries	In a small bowl with tiny spoons/skewers
9 o'clock	PURPLE	Raspberries	Gently placed, skewered
10:30	WHITE/NEUTRAL	Marshmallows + pound cake cubes	Alternating in a row
Between all sections	BROWN/TAN	Rice Krispie fingers, pretzel rods, graham sticks, rice cake pieces	Fill the gaps

Sauce Ramekins (Place at 4 corners or cardinal points)

Ramekin	Contents	Recipe
1	CKD Hot Fudge Sauce (warm)	Recipe #9
2	White Chocolate Fruit Dip	Recipe #11
3	Extra melted dark chocolate	Same as fountain mix
4	Caramel sauce (store-bought, 2 Tbsp per person max)	Watch Na — ~45mg/Tbsp

The Gold Dust Ritual

After everything is arranged, before guests arrive:

1. **Dip a clean, dry pastry brush** into edible gold dust.
2. **Tap gently** over the entire platter, letting gold particles drift down onto fruit, chocolate, marshmallows — everything.
3. **Dust the rim of the fountain basin** with a heavier hand.
4. **If using LED lights:** place the strip or fairy lights under the platter or around the fountain base. Purple or warm white light works best. The gold dust catches light and makes the whole thing shimmer.

Per-Person Mineral Budget (Suggested Plate)

Recommended serving for one person at the fountain party:

Item	Na (mg)	K (mg)	P (mg)
3 strawberries, dipped	5	65	15
3 apple slices, dipped	4	40	10
5 frozen grapes, dipped	4	40	12
2 pineapple chunks, dipped	3	25	6
2 Rice Krispie fingers, dipped	50	15	16
2 marshmallows, dipped	7	2	3
1 pretzel rod, dipped	125	10	7
2 Tbsp white chocolate dip	45	18	15
TOTAL (one person, generous plate)	**~243mg**	**~215mg**	**~84mg**

That's roughly **16% of daily Na**, **11% of daily K**, and **10% of daily P** budget for an entire dessert spread. This is how you throw a party.

Timing

Time	Task
Day before	Freeze grapes, make Rice Krispie treats, make white chocolate dip, prep sauce
2 hours before	Slice apples (lemon soak), cut pound cake, break rice cakes, arrange platters
30 minutes before	Melt fountain chocolate, preheat fountain, warm hot fudge
10 minutes before	Start fountain, arrange fruit, final gold dust
Showtime	Dip everything. Photograph everything. Eat everything.

> *"Man cannot remake himself without suffering, for he is both the marble and the sculptor." — Alexis Carrel*
>
> *But he can absolutely eat chocolate-covered frozen grapes while doing it.*

CKD Considerations

> ***RENAL DIET REMINDERS FOR THIS CHAPTER***
>
> ***Phosphorus (P < 800mg/day):*** *- Chocolate contains moderate phosphorus. The key is portion control, not avoidance. - ALWAYS check chip labels for* ***phosphorus-based additives*** *(sodium phosphate, calcium phosphate, phosphoric acid). These are absorbed at ~100% vs. ~40-60% for natural food phosphorus. - Ghirardelli, Guittard, and Enjoy Life brands generally avoid phosphorus additives. - Cocoa powder is the most P-dense ingredient in this chapter. Use it, but respect it.*
>
> ***Potassium (K < 2000mg/day):*** *- All fruits in this chapter are selected for LOW potassium content. -* ***AVOID*** *as fountain dippers: banana, mango, kiwi, dried fruit, orange segments. - Grapes and blueberries are your lowest-K fruit options. Lean on them. - Marshmallows, Rice Krispies, and pretzel rods are near-zero K — use them as "filler" dippers to round out a plate without adding mineral load.*
>
> ***Sodium (Na < 1500mg/day):*** *- Pretzel rods are the highest-Na item here (~250mg each). Limit to 1-2. - Sea salt on bark: use Maldon flakes (large crystals = less actual salt per visual impact). - Cream cheese in the white chocolate dip carries real Na — keep to 2 Tbsp servings.*
>
> ***Fluid:*** *- Chocolate fountain chocolate counts toward fluid intake (it's liquid, technically). - Frozen grapes are mostly water. Factor into your fluid allowance if you're on a restriction.*
>
> ***Timing:*** *- Best after a dialysis day, when you have the most dietary headroom. - Worst timing: the day before dialysis, when K and P have had 2 days to accumulate.*
>
> ***Individual needs vary — verify with your care team.*** *These recipes are designed to fit within standard CKD/hemodialysis guidelines, but individual restrictions vary.*

"He who controls the chocolate fountain controls the universe." — Frank Herbert, if he'd had better snacks on Arrakis

CHAPTER 19

PB&J, Nut Butters & Jellies

"First documented 1901, Julia Davis Chandler."

The World's Most Perfect Food, Elevated

"First documented 1901, Julia Davis Chandler, Boston Cooking School Magazine."

> *"You can tell a lot about a person by how they make a PB&J. Ratio. Spread direction. Crust on or off. It's a Rorschach test you can eat."*

The peanut butter and jelly sandwich is the most democratic food in American history. George Washington Carver didn't invent peanut butter, but he made the peanut an empire. We're making the nut butter from scratch, the jelly from scratch, and the sandwich from scratch. CKD math on every line.

NUT BUTTERS (From Scratch, KitchenAid Food Processor)

1. Classic Peanut Butter

Marcellus Gilmore Edson patented peanut paste in 1884. John Harvey Kellogg patented a process in 1895. Neither of them used a KitchenAid.

Ingredient	Amount	CKD Notes
Dry-roasted unsalted peanuts	2 cups	Unsalted is non-negotiable — roasted peanuts already have ~180mg P per 1/4 cup
Salt	1/4 tsp	Controlled. Store-bought has 5-10x this.
Honey	1 tsp	Optional sweetness — skip if watching sugar
Peanut oil or avocado oil	1 tbsp	Only if needed for consistency

Method: 1. Add peanuts to food processor. Run 1 min — crumble stage. Scrape sides. 2. Run 2-3 min more — will ball up, then break down into paste. This is the magic moment. Keep going. 3. Run another 1-2 min until

smooth and glossy. Add salt + honey + oil if desired. Pulse to combine. 4. Transfer to glass jar. Stores 2-3 weeks at room temp, 2 months refrigerated.

CKD note: Peanuts are moderate-high P. The advantage of homemade is zero sodium and zero phosphate additives. Portion is 2 tbsp — that's the serving, not the appetizer.

Per 2 tbsp: ~5mg Na | ~60mg P | ~120mg K

2. Almond Butter

Lower phosphorus than peanut butter — the CKD-preferred nut butter. Almonds were cultivated in the Middle East 5,000 years ago. California grows 80% of the world supply now.

Ingredient	Amount	CKD Notes
Raw or roasted unsalted almonds	2 cups	~70mg P per 1/4 cup — lower than peanuts
Salt	1/4 tsp	
Honey	1 tsp	Optional
Avocado oil	1 tbsp	Almonds are drier — you'll likely need this

Method: 1. If using raw almonds, toast on sheet pan at 350F for 10 min. Cool slightly. 2. Food processor — 1 min crumble, scrape, 3-4 min continuous until paste forms. Almonds take longer than peanuts. Be patient. 3. Add oil to help it along. Add salt + honey. Process until smooth. 4. Glass jar. Refrigerate — almond butter separates faster than peanut.

CKD note: Almond butter has ~50mg less P per serving than peanut butter. Over a week of daily PB&J, that math matters.

Per 2 tbsp: ~5mg Na | ~50mg P | ~110mg K

3. Cashew Butter

Creamiest nut butter. Naturally sweet. The cashew is technically a seed — it grows attached to the cashew apple in Brazil. The Portuguese spread it across India and East Africa.

Ingredient	Amount	CKD Notes
Raw or roasted unsalted cashews	2 cups	Cashews process fast — high oil content
Salt	1/4 tsp	
Vanilla extract	1/2 tsp	Brings out the natural sweetness

Method: 1. Add cashews to food processor. Run 1 min — crumble. Scrape. 2. Run 2-3 min — cashews release oil fast. Will go from crumble to ball to smooth paste quicker than any other nut. 3. Add salt + vanilla. Pulse to combine. 4. Glass jar. Refrigerate. This one spreads like frosting straight from the fridge.

CKD note: Cashews are lower K than peanuts or almonds. Good swap if potassium is your tightest number.

Per 2 tbsp: ~5mg Na | ~55mg P | ~95mg K

4. Sunflower Seed Butter

The nut-free option. Sunflowers are native to North America — the Hopi and other nations cultivated them long before European contact. Full circle.

Ingredient	Amount	CKD Notes
Raw unsalted sunflower seed kernels	2 cups	No shells. Hulled kernels only.
Salt	1/4 tsp	
Honey	1 tsp	Cuts the slight bitterness
Avocado oil	1 tbsp	Helps smooth it out

Method: 1. Toast seeds in dry skillet over medium heat 5-7 min, stirring constantly, until golden. Do not burn. Burnt sunflower seeds are bitter beyond saving. 2. Cool 5 min. Food processor 4-5 min — sunflower seeds take longer and will look like they'll never come together. They will. 3. Add oil + salt + honey. Process until smooth. Color will be grey-green — that's chlorogenic acid reacting with heat. Normal. Tastes fine. 4. Glass jar. Refrigerate.

CKD note: Sunflower seed butter is the best option for nut-allergy households. P and K are comparable to peanut butter — no free lunch, but no nuts either.

Note: May turn green in baked goods due to chlorogenic acid + baking soda reaction. Review the full serving and ingredients against your care plan. Looks weird. Warn people.

Per 2 tbsp: ~5mg Na | ~65mg P | ~115mg K

5. Tahini

Sesame paste. Mediterranean and Middle Eastern staple for 4,000+ years. The word comes from Arabic "tahana" — to grind. Halvah, hummus, shawarma drizzle — all start here.

Ingredient	Amount	CKD Notes
Raw or lightly toasted hulled sesame seeds	2 cups	Hulled = lower P than unhulled
Neutral oil (avocado or grapeseed)	2-3 tbsp	Sesame seeds need help — they're dry
Salt	Pinch	Tahini is usually unsalted — keep it that way

Method: 1. If using raw seeds, toast in dry skillet over medium heat 3-5 min, stirring constantly, until just golden and fragrant. Do not over-toast — goes from nutty to burnt in seconds. 2. Cool completely. Food processor with 2 tbsp oil. Process 3-4 min, scraping sides. Add more oil 1 tsp at a time until silky and pourable. 3. Season with salt if desired. Transfer to glass jar. Oil will separate on top — stir before use.

CKD note: Tahini is moderate P. Use as a drizzle/condiment (1-2 tbsp), not a dip you eat by the spoonful. Pairs with the Chicken Shawarma Rice Bowl in the holiday chapter.

Kosher/Halal: Inherently both. Check packaging if buying commercial — some facilities process alongside non-kosher/non-halal items.

Per 2 tbsp: ~5mg Na | ~70mg P | ~60mg K

6. Macadamia Nut Butter

Hawaiian luxury. Macadamias are native to Australia but became Hawaii's identity crop after introduction in the 1880s. The hardest nut shell in the world — 300 PSI to crack.

Ingredient	Amount	CKD Notes
Raw unsalted macadamia nuts	2 cups	Most expensive nut butter you'll ever make. Worth it.
Salt	Pinch	These are naturally buttery — they need almost nothing
Vanilla extract	1/4 tsp	Optional

Method: 1. Food processor. Run 1 min — crumble. Scrape. 2. Run 2-3 min — macadamias are the highest-fat nut (75% fat by weight). They'll liquify fast. 3. Add salt + vanilla if using. Pulse. 4. Glass jar. Stores well at room temp 1-2 weeks, refrigerated 1 month.

CKD note: Macadamias are the LOWEST phosphorus and potassium nut. If your labs are tight and you still want nut butter, this is the one. The cost is the tradeoff.

Per 2 tbsp: ~2mg Na | ~30mg P | ~55mg K

EXOTIC / RARE JELLIES & JAMS (From Scratch)

7. Lavender Honey Jelly

Apothecary crossover. Lavender has been used medicinally since Roman times — Pliny the Elder documented it. This is the jar you put on the shelf next to the tinctures.

Ingredient	Amount	CKD Notes
Dried culinary lavender buds	3 tbsp	Culinary grade only — not potpourri
Water	2 cups	Base for the infusion
Honey	1 cup	Raw local if you can get it
Lemon juice	3 tbsp	Acid for pectin activation
Powdered pectin	1 packet (1.75 oz)	

Method: 1. Bring water to boil. Remove from heat. Add lavender buds. Steep 20 min, covered. Strain through fine mesh — discard buds. 2. Return lavender water to pot. Add lemon juice + pectin. Bring to rolling boil, stirring

constantly. 3. Add honey. Return to rolling boil for 1 min exactly. Remove from heat. 4. Skim foam. Pour into sterilized jars. Process in water bath 10 min or refrigerator-store up to 3 weeks.

CKD note: Jelly is essentially sugar + fruit/herb + pectin. Na/P/K are negligible per serving. The danger is never the jelly — it's what you put it on and how much.

Per 1 tbsp: ~1mg Na | ~1mg P | ~5mg K

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8. Rose Petal Jam

Persian — "moraba-ye gol-e sorkh." Every Iranian grandmother has a recipe. Cornelius food cart energy. Rumi wrote about roses. You're going to eat them.

Ingredient	Amount	CKD Notes
Fresh organic rose petals	2 cups, packed	Unsprayed. Pesticide-free. Damascus or Centifolia varieties preferred.
Sugar	1.5 cups	
Water	1 cup	
Lemon juice	3 tbsp	Preserves color + activates pectin
Cardamom pods	3, lightly crushed	Optional — traditional Persian addition
Rose water	1 tbsp	Intensifies the rose. Find it at any Middle Eastern grocery.

Method: 1. Rinse petals gently. Remove white base of each petal (bitter). Toss petals with 1/2 cup sugar in a bowl. Let macerate 2 hours or overnight — they'll weep and soften. 2. Combine remaining sugar + water + lemon juice + cardamom in saucepan. Bring to boil, stir until sugar dissolves. 3. Add macerated petals + their liquid. Simmer 20-25 min until syrupy and petals are translucent. Stir in rose water last 30 seconds. 4. Remove cardamom pods. Pour into sterilized jars. Refrigerate.

CKD note: Pure sugar-and-flower preserve. Virtually zero P/K per serving. If you're going to eat jam, this is as kidney-aware as it gets.

Per 1 tbsp: ~0mg Na | ~1mg P | ~3mg K

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9. Thai Basil & Lime Jelly

Southeast Asian fusion. Thai basil (horapha) is a different cultivar than Italian sweet basil — anise-forward, sturdier leaf. This jelly has no business being this good on sourdough.

Ingredient	Amount	CKD Notes
Fresh Thai basil leaves	1 cup, packed	Stems removed — use leaves only
Water	2 cups	
Lime juice	1/4 cup	Fresh. Not bottled.
Lime zest	1 tbsp	
Sugar	3 cups	Standard jelly ratio
Powdered pectin	1 packet	
Green food coloring	2-3 drops	Optional — keeps it jewel-green vs muddy brown

Method: 1. Bring water to boil. Remove from heat. Add Thai basil leaves. Steep 15 min, covered. Strain — press leaves to extract all flavor. Discard leaves. 2. Measure 1.5 cups basil water into pot. Add lime juice + zest + pectin. Bring to rolling boil. 3. Add sugar all at once. Return to rolling boil for 1 min. Remove from heat. 4. Add food coloring if using. Skim foam. Pour into sterilized jars. Process or refrigerate.

CKD note: Another sugar-and-herb jelly — small estimated mineral contribution per stated serving. The lime juice adds trivial K. Safe.

Per 1 tbsp: ~0mg Na | ~1mg P | ~4mg K

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10. Ghost Pepper Jelly

Hot sauce chapter crossover. The Bhut Jolokia (ghost pepper) was certified world's hottest in 2007 at 1,041,427 SHU. Assamese farmers in Northeast India have been growing it for centuries. Handle with gloves. Not a suggestion.

Ingredient	Amount	CKD Notes
Red bell pepper, seeded & diced	1 cup	Sweet base — low K for a pepper
Ghost pepper, seeded & minced	1-2 (adjust to pain tolerance)	GLOVES. Seeds and ribs are the hottest part — remove for mild, keep for war.
Apple cider vinegar	1 cup	
Sugar	3 cups	Sweetness balances the heat
Powdered pectin	1 packet	
Garlic powder	1/4 tsp	

Method: 1. Blend bell pepper + ghost pepper + vinegar until smooth. Wear gloves during this step. Don't touch your face. Don't touch your eyes. Don't touch anything. 2. Pour into pot. Add pectin. Bring to rolling boil, stirring constantly. 3. Add sugar + garlic powder. Return to rolling boil for 1 min. 4. Skim foam. Pour into sterilized jars. Process or refrigerate. 5. Let it set 24 hours before tasting. The heat develops overnight.

CKD note: Capsaicin doesn't affect Na/P/K. The vinegar is the only thing with mild K content, and it's negligible per tablespoon serving. Spice freely.

Cross-reference: See `cosmic_horror_hot_sauce_lineup.md` and `neon_rainbow_fruity_hot_sauce_line.md` for the full hot sauce program.

Per 1 tbsp: ~2mg Na | ~2mg P | ~10mg K

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11. Elderflower Jelly

European botanical. Elder trees (Sambucus nigra) grow wild across England, Scandinavia, and Central Europe. Hugo Spritz uses elderflower syrup. St-Germain made it famous. This is the jelly version.

Ingredient	Amount	CKD Notes
Fresh or dried elderflowers	1 cup fresh (or 1/4 cup dried)	If foraging: elderflowers only. Elder BERRIES and LEAVES are toxic raw. Know the plant.
Water	2.5 cups	
Lemon juice	1/4 cup	
Sugar	3 cups	
Powdered pectin	1 packet	

Method: 1. Shake elderflowers gently to remove insects. Do not wash — washing removes the pollen/flavor. 2. Bring water to boil. Remove from heat. Add elderflowers. Steep 30 min to 2 hours (longer = stronger). Strain through cheesecloth. 3. Measure 2 cups elderflower water. Add lemon juice + pectin. Bring to rolling boil. 4. Add sugar. Rolling boil 1 min. Remove from heat. 5. Skim. Pour into sterilized jars. Process or refrigerate.

CKD note: Flower-based jelly — essentially flavored sugar water set with pectin. small estimated mineral contribution per stated serving per serving. The fanciest jelly in your fridge.

Per 1 tbsp: ~0mg Na | ~1mg P | ~3mg K

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12. Concord Grape Signal Jelly (Non-Medicated Rewrite)

Status: the prior active-ingredient jelly concept is held out of the public print lane. This version is a standard grape jelly with no THC, CBD, RSO, tincture, concentrate, or dosing math.

Ingredient	Amount	CKD Notes
Concord grape juice (unsweetened)	2 cups	Moderate potassium; keep serving small.
Sugar	3 cups	High sugar; portion carefully, especially with diabetes.
Lemon juice	2 tbsp	Acid for flavor and pectin set.
Powdered pectin	1 packet	Check label for additives.

Method: Warm grape juice, whisk in pectin, bring to a rolling boil, add sugar and lemon juice, boil 1 minute, skim foam, jar, label, and refrigerate or process using a tested canning method.

CKD note: This is sugar and grape juice, not medicine. Use small servings and fit it to the user's potassium, sugar, and fluid plan.

Per 1 tbsp estimate: ~1mg Na | ~2mg P | ~15mg K

VORATHIC RAINBOW PB&J LINE

13. The Rainbow Stack

Seven layers. Seven colors. Seven jellies. Nut butter between each. This is not a sandwich — it's a statement. The Vorathic visual vocabulary demands rainbows in everything, including lunch.

Layer (Bottom to Top)	Color	Jelly/Jam	Nut Butter Between
1	Red	Strawberry jam	Classic Peanut Butter
2	Orange	Orange marmalade	Cashew Butter
3	Yellow	Lemon curd	Macadamia Nut Butter
4	Green	Thai Basil & Lime Jelly (#9)	Almond Butter
5	Blue	Blueberry jam	Sunflower Seed Butter
6	Indigo	Blackberry jam	Tahini
7	Violet	Lavender Honey Jelly (#7)	Almond Butter

Build Structure:

Component	Amount	CKD Notes
Sourdough bread slices	2 large, thick-cut	Bottom and top — sourdough has lower P than white bread
Nut butters (assorted, from recipes above)	~1 tsp per layer (7 tsp total)	Thin layers — this is about color, not volume
Jellies/jams (assorted, 7 colors)	~1 tsp per layer (7 tsp total)	Thin layers — structural integrity matters

Method: 1. Start with bottom sourdough slice. Spread thin layer of peanut butter. Add thin layer of strawberry jam. 2. Continue layering: nut butter, then jelly, alternating through all 7 colors. Each layer should be ~2mm thick. Precision matters. 3. Top with second sourdough slice. Press gently. 4. Slice in half diagonally. The cross-section should reveal all 7 rainbow layers. 5. Photograph before eating. This is art.

CKD note: Total nut butter across all layers is ~3.5 tbsp equivalent — moderate P load. This is a special-occasion build, not a Tuesday lunch. Share it.

Per half sandwich: ~85mg Na | ~110mg P | ~180mg K

UPSCALE GRILLED PB&J

14. Grilled PB&J

The slept-on upgrade. Grilling a PB&J caramelizes the bread, melts the nut butter into a warm sauce, and turns cold jam into hot fruit compote. Once you go grilled, you don't go back.

Ingredient	Amount	CKD Notes
Sourdough bread	2 slices, thick-cut	Sourdough's tang + the sweet filling = perfect contrast
Nut butter of choice	2 tbsp	Almond or macadamia for lowest P
Jam/jelly of choice	2 tbsp	Any from this chapter
Margarine	1 tbsp	For grilling — lower P than butter

Method: 1. Spread nut butter on one slice, jam on the other. Close sandwich. 2. Spread margarine on both outer sides of the bread. 3. Heat skillet or griddle over medium-low. Place sandwich. Cook 3-4 min per side until golden-brown and the inside is warm and melted. 4. The key is LOW heat. High heat burns the bread before the inside melts. Patience. 5. Slice diagonally. Let it cool 1 min — molten nut butter will burn your mouth and you will deserve it for not waiting.

Per sandwich: ~170mg Na | ~80mg P | ~155mg K

15. Breakfast PB&J French Toast

Sourdough dipped in egg wash, grilled, PB&J inside. This is what happens when a PB&J and French toast have a child and that child is raised in a CKD kitchen.

Ingredient	Amount	CKD Notes
Sourdough bread	2 slices, thick-cut	Day-old is better — absorbs egg wash without falling apart
Nut butter of choice	2 tbsp	
Jam/jelly of choice	2 tbsp	
Egg	1 large	~90mg P — accounted for
Unsweetened almond milk	2 tbsp	Egg wash extender — 5mg P vs dairy's 115mg
Vanilla extract	1/2 tsp	
Cinnamon	1/4 tsp	
Margarine	1 tbsp	For the griddle
Powdered sugar	1 tsp dusting	Optional. Visual.

Method: 1. Spread nut butter on one slice, jam on the other. Close sandwich. Press gently to seal. 2. Whisk egg + almond milk + vanilla + cinnamon in shallow dish. 3. Dip sandwich in egg wash — 15 seconds per side. Don't soak it. You want a coating, not a sponge. 4. Melt margarine in skillet over medium-low. Cook sandwich 3-4 min per side until egg wash is set and golden. 5. Dust with powdered sugar. Slice diagonally. Serve immediately.

CKD note: The egg adds P but also adds protein — you need both on dialysis. One egg per sandwich is the right ratio.

Per sandwich: ~210mg Na | ~150mg P | ~185mg K

16. Dinner PB&J — Thai Peanut Chicken Sandwich

Peanut sauce + chicken + slaw on grilled sourdough. The PB&J grows up, moves to Southeast Asia, comes back with stories. This is a dinner sandwich.

Ingredient	Amount	CKD Notes
Boneless skinless chicken breast	1 (6 oz)	Grilled or pan-seared, sliced thin
Sourdough bread	2 slices, thick-cut	
Margarine	1 tbsp	For grilling

Thai Peanut Sauce:

Ingredient	Amount	CKD Notes
Homemade peanut butter (Recipe #1)	2 tbsp	Homemade = no added sodium or phosphates
Rice vinegar	1 tbsp	
Low-sodium soy sauce	1 tsp	1 tsp only — ~290mg Na, budgeted
Lime juice	1 tbsp	
Honey	1 tsp	
Sriracha	1/2 tsp	Heat. Controlled Na.
Garlic, minced	1 clove	
Warm water	1-2 tbsp	Thins to drizzle consistency

Quick Slaw:

Ingredient	Amount	CKD Notes
Green cabbage, shredded	1 cup	Low K crunch
Carrot, julienned	2 tbsp	Small amount — color and texture
Rice vinegar	1 tbsp	
Cilantro	1 tbsp, chopped	
Lime juice	1 tsp	

Method: 1. Season chicken with salt (pinch) + pepper + garlic powder. Pan-sear in skillet 5-6 min per side until 165F internal. Rest 5 min, slice thin. 2. Whisk all peanut sauce ingredients until smooth. 3. Toss slaw ingredients. 4. Build sandwich: sourdough, peanut sauce drizzle, sliced chicken, slaw, more peanut sauce, sourdough top. 5. Spread margarine on outer sides. Grill in

skillet over medium-low, 3-4 min per side until bread is golden and chicken is warmed through. 6. Slice diagonally. This is not a PB&J your grandmother recognizes. That's the point.

CKD note: This is a full meal. The soy sauce is the sodium wildcard — 1 tsp is the max. Do not eyeball it. Measure.

Per sandwich: ~380mg Na | ~210mg P | ~310mg K

"The peanut butter and jelly sandwich doesn't care about your tax bracket, your diagnosis, or your dietary restrictions. It just asks that you show up with bread and two spreads. Everything else is negotiable."

CHAPTER 20

Custom Snackleboxes

"A snacklebox is a love letter in Tupperware."

5 Personalized Snack Boxes for 5 Different Humans

"A snacklebox is a love letter in Tupperware."

How It Works

Snacklebox = compartmentalized container (bento box, tackle box, craft organizer — anything with dividers). Fill each compartment with a different snack. Seal. Hand to someone. Watch them open it like it's Christmas.

CKD rules apply to Andrew's box only. Everyone else's boxes are built for their actual preferences — no restrictions unless noted.

1. Andrew's BOX — "The Survival Kit"

Three times a week. This box rides shotgun.

Compartment	What Goes In	Why
1 — Crunch	Chocolate Rice Krispie Treats (homemade, recipe p. XX)	#1 snack. Non-negotiable.
2 — Fruit	Cold green grapes + Wild Twist apple slices	Both low-K. Crisp + cold = his thing.
3 — Sweet	2 Kit Kat dupe fingers (recipe p. XX)	Chocolate + crunch. CKD-aware version.
4 — Sour	3-4 sour gummies (non-medicated; see Special Effects Confectionery Lab)	Sour apple, fruit punch. Radioactive colors.
5 — Savory	Kettle corn (recipe p. XX) + rice cake with cream cheese	Low Na, low P. Satisfying.
6 — Treat	1 Drumstick ice cream cone dupe (keep frozen until go time)	Bob's recipe. The cone stays in the freezer compartment of the lunchbox.

Per box total: ~350mg Na | ~280mg P | ~400mg K — well within limits for a snack spread.

Box style: Black bento box. Sticker on the lid: Vorathic eye.

2. VESPA'S BOX — "The New Seasons Run"

New Seasons salad bar. Whole Foods cheese counter. Restaurants with no prices on the menu.

Compartment	What Goes In	Why
1 — Salad Bar	New Seasons-style grain bowl: farro + roasted beets + arugula + shaved fennel + lemon vinaigrette (in a tiny jar)	She loves the salad bar. This IS the salad bar, portable.
2 — Cheese	Rotation from Vespa's permanent 24-cheese fridge: Burrata, Délice de Bourgogne, aged Comté, Humboldt Fog, Manchego, St. André — dealer's choice, 3 picks per box	The woman has had two dozen cheeses in the fridge at once. This compartment gets the most real estate.
3 — Crunch	Raincoast Crisps or 34 Degrees crackers + marcona almonds + castelvetrano olives	The fancy cracker. The fancy nut. The fancy olive.
4 — Protein	Smoked salmon rosettes on cucumber rounds with crème fraîche + capers	Fine dining energy in a snacklebox compartment.
5 — Sweet	Dark chocolate squares (72%+) + fresh figs (in season) or champagne grapes	New Seasons bulk chocolate aisle. Seasonal. Beautiful.
6 — Dip	Whipped honey-ricotta with lemon zest + everything bagel seasoning	In a tiny glass jar. Because she deserves a tiny glass jar.

Box style: Bamboo bento box. Linen napkin tucked in. No plastic. Raccoon sticker stays — it's non-negotiable.

3. TYLER'S FAM BOX — "Das Snackhaus"

German precision. Whole Foods budget. Zero compromise.

Compartment	What Goes In	Why
1 — Protein	Homemade chicken bratwurst coins (recipe p. XX), cold, sliced thin on the bias	KitchenAid-ground. No nitrates, no phosphates. Tyler's family reads every label.
2 — Bread	Whole grain German pumpernickel crisps + Bavarian sweet mustard	Real Vollkornbrot, not American "pumpernickel." New Seasons or Whole Foods bread aisle.
3 — Cheese	Aged Gruyère + Appenzeller (or good Emmentaler)	Swiss-German alpine cheese. The real stuff, not Sargento. Thin-sliced at the deli counter.
4 — Vegetables	Radishes with butter + flaky salt, cucumber spears, heirloom cherry tomatoes	Abendbrot tradition — German supper IS raw vegetables + bread + cheese. This is culturally accurate.
5 — Sweet	Fresh berries (organic) + dark chocolate (85%+) + raw honey drizzle	Health-conscious but not joyless. The chocolate is from the $8 bar, not the $2 bar.
6 — Pickle	Cornichons + house-pickled pearl onions + pickled red cabbage	Every German snack spread has a pickle compartment. This is law, not preference.

Box style: Glass meal prep container with bamboo lid. Etched label: "DAS SNACKHAUS." Wrapped in a cloth napkin. Theo gets his own mini version with extra pumpernickel and an apple.

5. THE AMERICAN HEALTHY DUPE — "The Gas Station Redemption Box"

Everything Americans reach for at 7-Eleven, but actually good for you.

Gas Station Original	Healthy Dupe	Swap Logic
Doritos	Baked tortilla chips + homemade nacho cheese dip (recipe p. XX)	Same crunch-cheese dopamine. 70% less Na.
Slim Jim	Homemade beef or turkey jerky strips	No nitrites, no sodium phosphate, actual meat.
Snickers	CKD Snickers dupe (recipe p. XX) — shortbread + caramel + peanut + chocolate	Same layers. Half the garbage.
Mountain Dew	Ghetto Baja Blast (recipe p. XX) or sparkling water + lime + agave	The caffeine is negotiable. The neon green is not.
Hot Cheetos	Kettle corn with cayenne + lime dust	Spicy. Crunchy. No Red 40 lawsuit pending.
King Size Reese's	Peanut butter rice cake + chocolate drizzle	Same ratio. Fewer regrets.

Compartment	What Goes In
1	Baked tortilla chips + small cup nacho cheese
2	Turkey jerky strips (3-4 pieces)
3	Snickers dupe bar (1 piece, cut)
4	Spicy kettle corn (cayenne + lime)
5	PB rice cake with chocolate drizzle

Compartment	What Goes In
6	Sparkling water + lime (in a separate bottle, not in the box obviously)

Per box total: ~450mg Na | ~300mg P | ~350mg K — CKD-aware AND gas-station-satisfying.

Box style: Ironic 7-Eleven red/green/orange color scheme on the label. "GAS STATION REDEMPTION" in convenience store font.

Snacklebox Assembly Tips

- **Prep Sunday, eat all week.** Make all snacks Sunday. Fill 5-7 boxes. Stack in fridge.
- **Silicone cupcake liners** work as dividers in any container.
- **Keep dips in separate small containers** (2oz deli cups with lids) to prevent sogginess.
- **Frozen items** (yogurt bark, ice cream cones) go in a separate freezer box.
- **Label everything** if multiple people's boxes are in the same fridge. Especially look-alike gummies. ESPECIALLY look-alike gummies.

> *"Tell me what you eat, and I will tell you what you are." — Brillat-Savarin*

CHAPTER 21

Non-Medicated Confectionery Safety Hold

"Candy that looks powerful still needs ordinary food-safety rules."

Public Print Replacement

The prior cannabis gummy chapter is held out of the public cookbook lane. The active printable replacement is the `Special Effects Confectionery Lab`, which contains non-medicated gummies, hard candy glass, pectin sour squares, rock candy wands, marshmallow slabs, UV tonic micro-gems, fruit leather windows, and printable labels.

PUBLICATION RULE:

- No THC, CBD, RSO, tincture, concentrate, alcohol shots, supplement powders, controlled active ingredients, or dosing math in the candy recipes prepared from this print set.
- Use edible glitter only when the product is labeled edible and includes ingredients. Do not use craft glitter or products marked decorative only.
- Use CKD-aware ingredient screening: check for PHOS additives, potassium chloride, chocolate/cocoa, dairy-heavy candy, nuts, dried fruit, high-potassium juice, and uncontrolled sugar portions.

Replacement Map

Old Draft Concept	Use Instead	Guide
Purple sour active-ingredient gummies	Cloud 9 Apple-Cranberry Gummies or Blue Nebula Color-Shift Cubes	`static/guides/ckd_special_effects_confectionery.html`
Gemstone gummy aesthetic	VORATH Lime Halo Glass Shards or UV Tonic Micro-Gems	`CKD_Special_Effects_Confectionery_PRINT.pdf`
Party candy labels	Printable non-medicated batch labels	Section 6 of the confectionery guide

CHAPTER 22

Herbal & Apothecary

“The oldest pharmacy is the garden.”

RENALWISE Apothecary — Herbal Teas, TCM & Green Magic

Traditional Medicine, Chinese Herbs, Apothecary Blends

Homestead-Grown Ingredients Eventually

"The oldest pharmacy is the garden. The oldest medicine is tea."

CKD & HERBAL MEDICINE: THE RULES

CRITICAL: Some herbs are NEPHROTOXIC (kidney-damaging). Never take herbal supplements without checking CKD safety first.

HERBS THAT CAN DAMAGE KIDNEYS — NEVER USE:

Herb	Danger	Why
Aristolochia (birthwort)	Avoid in CKD unless nephrology specifically approves	Contains aristolochic acid — causes irreversible kidney damage. Found in some Chinese weight loss formulas.
Licorice root (high dose)	Causes hypokalemia → kidney damage	Glycyrrhizin raises blood pressure + depletes potassium. Small amounts in tea blends MAY be okay — verify with your care team.
Ma Huang (ephedra)	Raises BP, kidney vasoconstriction	Banned by FDA in supplements but still found in some TCM formulas
Cat's Claw (large doses)	Can affect kidney function	Moderate use may be okay — insufficient CKD data
Wormwood/Mugwort	Potentially nephrotoxic at high doses	Small amounts in teas likely safe — avoid concentrated extracts
Comfrey	Contains pyrrolizidine alkaloids	Liver + kidney toxic internally. External use only.
Pennyroyal	Liver/kidney toxicity concern	NEVER ingest

HERBS WITH STRONG CKD SAFETY EVIDENCE — GOOD TO USE:

Research has examined these herbs, but that does not prove kidney benefit or safety for an individual. Do not use this table to self-treat CKD:

Herb (Chinese/English)	Effect	CKD Evidence	How to Use
Huang Qi (Astragalus)	Inflammation-support, immunomodulatory	Research signal reported in some studies; not a treatment recommendation. Review interactions and evidence with a nephrologist or pharmacist.	Tea: 3-5 slices dried root in hot water, steep 15 min
Dan Shen (Salvia miltiorrhiza / Red Sage)	Improves blood flow, anti-fibrotic	Associated with lower ESRD risk in large Taiwan cohort study	Tea: 3-5g dried root, decoction (simmer 20 min)
Dong Quai (Angelica sinensis)	Blood tonic, inflammation-support	One of four herbs associated with better CKD outcomes	Tea: 3-5 slices in hot water
Cordyceps (Dong Chong Xia Cao)	Anti-fibrotic, improves kidney function	Multiple studies show eGFR improvement	Powder: 1/2 tsp in hot water or smoothie

Herb (Chinese/English)	Effect	CKD Evidence	How to Use
Goji Berry (Gou Qi Zi)	Antioxidant, kidney-nourishing in TCM	Generally CKD-aware in food amounts. Moderate K.	Tea: 10-15 berries in hot water
Rehmannia (Di Huang)	Kidney yin tonic — the #1 kidney herb in TCM	Used in Six Flavor Rehmannia Pill (Liu Wei Di Huang Wan) for kidney support for 1000+ years	Tea: 5g dried root, simmer 20 min
Ginger (Sheng Jiang)	Anti-nausea, inflammation-support	CKD-aware. Anti-nausea benefits.	Tea: fresh slices in hot water
Turmeric/Curcumin (Jiang Huang)	Potent inflammation-support	Some evidence of slowing CKD progression. CKD-aware.	Tea: 1 tsp powder + black pepper + honey
Chrysanthemum (Ju Hua)	Cooling, liver/eye support in TCM	CKD-aware. Very low K/P/Na.	Tea: 5-8 dried flowers in hot water
Ginseng (Ren Shen)	Adaptogen, energy, kidney qi tonic	Generally CKD-aware at standard doses. May interact with BP meds.	Tea: 3-5 thin slices, steep 10 min

APOTHECARY TEA BLENDS

"THE KIDNEY GUARDIAN" — TCM Kidney Tonic Blend

Ingredient	Amount per serving
Astragalus root slices	3-4 slices
Goji berries	8-10
Chrysanthemum flowers	5-6
Ginger, fresh slice	2 thin slices
Honey	1 tsp

Brew: Simmer astragalus in 2 cups water for 15 min. Remove from heat. Add goji + chrysanthemum + ginger. Steep 10 min. Strain. Add honey. **TCM framework:** Tonifies kidney qi, nourishes yin, clears heat. The renal support tea.

"THE GOLDEN DRAGON" — Anti-Inflammatory Powerhouse

Ingredient	Amount per serving
Turmeric root, fresh grated	1 tsp (or 1/2 tsp powder)
Ginger root, fresh	3 thin slices
Ceylon cinnamon stick	1 small piece
Black pepper	2-3 whole peppercorns (activates curcumin)
Honey	1 tsp
Coconut cream	1 tsp (optional — makes it golden milk-ish)

Brew: Simmer turmeric + ginger + cinnamon + peppercorns in 2 cups water for 10 min. Strain. Add honey + coconut cream. **This is the Cinnamon Cloud in tea form.**

"THE MOONLIGHT GARDEN" — Calming Evening Blend (Caffeine-Free)

Ingredient	Amount per serving
Chamomile flowers	1 tbsp
Lavender buds	1/2 tsp
Chrysanthemum flowers	4-5
Lemon balm (if growing)	4-5 fresh leaves
Honey	1 tsp

Brew: Steep all flowers/herbs in hot water 8-10 min. Strain. Add honey. **The Dark Mirror Tea upgraded** — drink after dinner when you need calm.

"THE FIRE WITHIN" — Immune + Energy (Caffeine via Mate)

Ingredient	Amount per serving
EcoTea Holy Mate	1 tbsp
Astragalus root	2 slices
Ginger, fresh	2 slices
Lemon juice	1 tsp
Honey	1 tsp
Cayenne pepper	Tiny pinch

Brew: Simmer astragalus 10 min. Remove from heat. Add mate + ginger. Steep 5 min. Strain. Add lemon + honey + cayenne. **Immune support + caffeine + kidney tonic + fire.** The NorthStar Morning upgraded.

"THE JADE EMPEROR" — Digestive + Kidney (Chinese Restaurant Tea Energy)

Ingredient	Amount per serving
Jasmine green tea	1 tsp loose or 1 bag
Goji berries	5-6
Dried jujube dates	2, sliced
Ginger	1 slice

Brew: Steep everything in hot water 5 min. The goji and jujube hydrate and release sweetness. This is what high-end Chinese restaurants serve — and it's kidney-supporting.

"THE WITCH'S GARDEN" — Savory Herb Broth Tea

Ingredient	Amount per serving
Fresh rosemary	1 sprig
Fresh thyme	2 sprigs
Fresh sage	2 leaves
Garlic	1 clove, smashed
Lemon juice	1 tbsp
Olive oil	1/2 tsp drizzled on surface
Black pepper	Crack
Salt	Tiny pinch

Brew: Simmer herbs + garlic in 2 cups water for 10 min. Strain. Add lemon + olive oil + pepper. **This is a SAVORY tea** — herb broth, not sweet. Drink from a mug like soup. The apothecary version of bone broth (without the high-K bone broth base).

HOMESTEAD GROWING LIST (Plant These)

For eventual homegrown apothecary — all these grow in Portland's climate:

Easy to Grow (start here)

Plant	Use	Growing
Chamomile	Calming tea	Annual. Sow seeds spring. Full sun. Self-seeds.
Lavender	Tea, sachets, cooking, hydrosol	Perennial. Full sun, dry soil. Lives for years.
Mint (peppermint + spearmint)	Tea, cooking, digestive	Perennial. AGGRESSIVE — grow in pots or it takes over.
Lemon Balm	Calming tea, antiviral	Perennial. Part shade okay. Also aggressive.
Rosemary	Tea, cooking, memory/focus herb in TCM	Perennial shrub. Full sun. Lives 10+ years.
Thyme	Cooking, antiseptic tea	Perennial. Full sun, dry soil.
Sage	Cooking, smudging, throat gargle	Perennial. Full sun.
Calendula	Skin healing, tea, salves	Annual. Easy. Beautiful orange flowers.
Echinacea	Immune support tea (also a pollinator magnet for bees)	Perennial. Gorgeous purple coneflowers.
Borage	Bee plant, edible flowers, inflammation-support	Annual. Self-seeds. Blue star-shaped flowers.

Medium Difficulty

Plant	Use
Ginger	Grow indoors in pot. Harvest after 8-10 months.
Turmeric	Same as ginger — tropical, needs warmth. Indoor pot.
Lemongrass	Grows well in Portland summers. Bring pot inside for winter.
Chrysanthemum	Tea flowers. Plant in fall.

Advanced / Buy Dried

Plant	Notes
Astragalus	Grows as a legume but takes 3-4 years to harvest root. Buy dried slices for now.
Rehmannia	Can grow in Portland but slow. Buy dried root.
Goji berry	DOES grow in Portland! Perennial shrub. 2-3 years to fruit. Worth planting NOW.

APOTHECARY PRODUCTS TO MAKE (Long-Term)

Product	Ingredients	Method
Herbal tinctures	Herbs + vodka or vegetable glycerin	Steep herbs in alcohol 4-6 weeks, strain. Dropper bottles.
Healing salves	Calendula + beeswax + coconut oil	Infuse oil with calendula, add melted beeswax, pour into tins.
Rose water	Rose petals + VEVOR still	Distill. Use for cooking and aroma.
Lavender sachets	Dried lavender in muslin bags	Dry lavender, fill bags. Under pillow, in drawers.
Fire cider	ACV + garlic + ginger + horseradish + honey + cayenne	Steep in ACV 4 weeks. Strain. 1 tbsp daily immune shot.
Elderberry syrup	Dried elderberries + water + honey + cinnamon + cloves	Simmer 45 min, strain, add honey. Immune support.
Herbal honey	Raw honey infused with lavender, thyme, or ginger	Steep herbs in honey 2 weeks. Strain or leave in.
Mushroom coffee	Lion's mane + chaga powder + coffee	Add 1/2 tsp each to coffee grounds before brewing. Focus + immunity.

APOTHECARY REMEDIES BY AILMENT

> *"The doctor of the future will give no medicine, but will instruct his patient in the care of the human frame, in diet, and in the cause and prevention of disease." — Thomas Edison*

For Smokers & Vapers (Respiratory Support)

"THE LUNG GARDEN" — Respiratory Recovery Tea

Ingredient	Amount	What It Does
Mullein leaf	1 tbsp dried	THE lung herb — expectorant, soothes inflamed airways, used for centuries for respiratory complaints
Peppermint	1 tsp dried	Opens airways (menthol = natural bronchodilator)
Ginger, fresh	3 slices	Inflammation-support, helps clear mucus
Licorice root	1/2 tsp (SMALL amount)	Soothes throat, expectorant — CKD caution: can raise BP in large amounts
Honey	1 tsp	Antibacterial, coats throat
Lemon juice	1 tsp	Vitamin C, cuts through mucus

Brew: Steep mullein + peppermint + ginger + licorice in hot water 10-15 min. Strain well (mullein has tiny hairs). Add honey + lemon. Drink warm.

"THROAT COAT" — DIY Throat Soothing Blend

Ingredient	Amount
Slippery elm bark powder	1 tsp
Marshmallow root	1 tsp
Honey	1 tbsp
Warm water	1 cup
Lemon juice	1 tsp
Celestial Seasonings Throat Comfort tea	1 bag (Andrew already has this)

Method: Steep tea bag + marshmallow root in hot water 10 min. Stir in slippery elm + honey + lemon. The slippery elm creates a mucilaginous coating that physically protects irritated throat tissue. Drink after smoking/vaping sessions.

"CLEAR LUNG" — Steam Inhalation

What	How
Boil water in a pot	4 cups
Add eucalyptus oil	3-4 drops
Add peppermint oil	2-3 drops
Add thyme sprigs (fresh)	3-4
Tent head with towel over pot	Breathe deeply 5-10 min

Do this 1-2x/week. The steam + essential oils open airways, loosen mucus, and the thymol in thyme is a natural antiseptic for respiratory passages.

Cannabis-Specific Throat Care: - **Ice water bong/pipe:** Cools smoke, less throat irritation - **Vaping at lower temp:** 350-375F vs 400F+ = less throat burn - **Honey + lemon after sessions:** Coat the throat - **Throat Comfort tea (Andrew already has):** Perfect post-session drink - **Hydrate:** Every session = fluid, which counts toward CKD daily limit. Track it.

For Colds & Flu

> *"Let food be thy medicine and medicine be thy food." — Hippocrates*

"FIRE CIDER" — Immune Bomb

Ingredient	Amount
Apple cider vinegar	2 cups
Garlic	1 head, crushed
Fresh ginger	3" piece, grated
Fresh horseradish	2" piece, grated
White onion	1/2, diced
Jalapeño	2, sliced
Lemon, juiced	1
Honey	1/4 cup
Turmeric	1 tsp
Cayenne	1/2 tsp

Method: Combine everything EXCEPT honey in a mason jar. Seal. Shake daily. Steep 2-4 weeks in a dark place. Strain. Add honey. Take 1 tbsp daily as prevention, or 1 tbsp every 4 hours when sick.

For Aches & Pains

"GOLDEN PASTE" — Anti-Inflammatory

Ingredient	Amount
Turmeric powder	1/2 cup
Water	1 cup
Coconut oil	1/4 cup
Black pepper	1.5 tsp (activates curcumin 2000%)

Method: Simmer turmeric + water over low heat 7-10 min until thick paste. Remove from heat, add coconut oil + black pepper, stir. Store in jar. Add 1 tsp to tea, smoothies, or warm almond milk daily.

For Indigestion / Nausea (Dialysis Days)

> *"The belly rules the mind." — Spanish proverb*

"CALM BELLY" — Digestive Reset Tea

Ingredient	Amount
Fresh ginger	4 thin slices
Fennel seeds	1 tsp, lightly crushed
Peppermint	1 tsp dried (or Celestial Seasonings Throat Comfort bag)
Honey	1 tsp

Steep 10 min. Drink warm when you need it. Ginger = anti-nausea. Fennel = carminative (reduces gas/bloating). Peppermint = relaxes GI smooth muscle. This is the Cinnamon Cloud formula in tea form.

WITCHES BREW — Apothecary Soups

"In medieval Europe, the line between 'soup' and 'medicine' didn't exist. The cauldron was the pharmacy."

Immunity Cauldron (Cold & Flu Season)

Bone broth + ginger + garlic + turmeric + cayenne. The soup that fights back.

Ingredient	Amount	CKD Notes
Low-sodium chicken broth	4 cups	The base
Fresh ginger	2" piece, sliced	Anti-nausea, inflammation-support
Fresh turmeric	1" piece, sliced (or 1 tsp powder)	Curcumin — nature's ibuprofen
Garlic	6 cloves, smashed	Allicin = antimicrobial
Cayenne pepper	1/4 tsp	Opens sinuses, capsaicin = pain relief
Lemon juice	2 tbsp	Vitamin C
Honey	1 tbsp	Throat coat
Black pepper	1/4 tsp	Activates turmeric absorption by 2000% (piperine)
Fresh thyme	4 sprigs	Traditional respiratory herb

Method: Simmer broth + ginger + turmeric + garlic + thyme on low for 20 min. Strain. Add cayenne + lemon + honey + pepper. Drink from a mug. The medieval version had no measurements. Neither does yours — adjust everything by feel.

Midnight Restoration Soup (Post-Treatment Recovery)

For the day after. When the body needs rebuilding.

Ingredient	Amount
Low-sodium chicken broth	4 cups
Jasmine rice	1/2 cup (congee-style — cook until it dissolves)
Chicken thigh	1, shredded
Fresh ginger	1" piece
Green onion	2, sliced
Sesame oil	1 tsp (finish)
White pepper	Pinch

Method: Simmer broth + rice + ginger on low for 30-40 min until rice breaks down into thick porridge (congee). Add shredded chicken last 5 min. Top with green onion + sesame oil + white pepper. This is what every Asian grandmother makes when someone is sick. They're all right.

The Green Witch (Detox / Chlorophyll)

Everything green. Everything alive.

Ingredient	Amount
Low-sodium vegetable broth	3 cups
Fresh spinach	2 cups
Zucchini	1, chopped
Celery	2 stalks
Fresh parsley	1/2 cup
Fresh basil	1/4 cup
Garlic	3 cloves
Lemon juice	2 tbsp
Olive oil	1 tbsp
Chlorophyll drops	10 drops (optional — Andrew's NOW capsules work too)

Method: Sauté garlic + celery + zucchini in olive oil 4 min. Add broth. Simmer 10 min. Add spinach + parsley + basil. Simmer 2 min (don't overcook — keeps the green bright). Blend until smooth. Add lemon + chlorophyll drops. NEON GREEN soup. The Green Witch in liquid form.

Fire Cider Soup (Immune Bomb)

Fire cider is a folk remedy dating to the 1970s herbalist Rosemary Gladstar. Vinegar-based. Burns going down. Works coming up.

Ingredient	Amount
Apple cider vinegar	1/4 cup
Low-sodium chicken broth	3 cups
Fresh horseradish	1 tbsp, grated (Ringside recipe, Ch 8)
Fresh ginger	2" piece
Garlic	6 cloves
Onion	1/2, diced
Cayenne	1/2 tsp
Turmeric	1 tsp
Honey	2 tbsp
Lemon	1, juiced
Fresh rosemary	2 sprigs

Method: Sauté onion + garlic 3 min. Add broth + vinegar + all spices + rosemary. Simmer 15 min. Strain or leave chunky. Add honey + lemon. Drink hot. Your sinuses will open before the cup reaches your lips. Named after fire. Tastes like fire. Works like fire.

Mushroom Resurrection Broth (Mushroom Farm Crossover)

Every medicinal mushroom in one pot.

Ingredient	Amount
Low-sodium vegetable broth	4 cups
Dried shiitake	4
Dried reishi slices	2 (or 1 tsp reishi powder)
Fresh cremini	1 cup, sliced
Lion's mane (fresh or dried)	1/2 cup
Garlic	4 cloves
Fresh thyme	4 sprigs
Miso paste (white)	1 tbsp (add OFF heat — live cultures)
Green onion	2, sliced
Sesame oil	1 tsp

Method: Soak dried mushrooms in 1 cup hot water 20 min (save the soaking liquid — it's liquid gold). Sauté fresh mushrooms + garlic in sesame oil 5 min. Add broth + soaking liquid + rehydrated mushrooms + thyme. Simmer 20 min. Remove from heat. Stir in miso (heat kills the probiotics). Top with green onion. The Mushroom Farm in a bowl. The resurrection is the flavor.

"The cauldron doesn't judge what goes in. It just makes it into something else."

RENALWISE "Cinnamon Cloud" — Digestive Comfort Capsule

The Pretty People Pill (for the rest of us)

"Dignity in a capsule." Inspired by: that Family Guy bit about pretty people getting pills that make farts smell like cinnamon rolls. Except this one's real, it's renal-aware, and you don't have to be pretty.

The Formulation (per capsule)

Ingredient	Amount	What it does	CKD safety
Sodium copper chlorophyllin	100 mg	THE internal deodorant. Binds hydrogen sulfide (the stink molecule) in the gut before it becomes gas. FDA-approved for odor control. Used in hospitals for colostomy patients.	✅ No renal toxicity at this dose. Avoid bismuth-based alternatives (Devrom) unless clinician-approved; bismuth kidney toxicity has been reported.
Ceylon cinnamon bark powder	250 mg	The cinnamon roll angle. Carminative (reduces gas). Antimicrobial (reduces odor-producing gut bacteria). Inflammation-support. Actually makes things smell better on the way out.	✅ CKD-aware at culinary doses. Use CEYLON not cassia — cassia has coumarin which is harder on the liver. Low K, low P.
Peppermint oil (enteric-coated)	50 mg	Relaxes GI smooth muscle, reduces bloating, improves motility, adds pleasant menthol note to... output. Enteric coating means it dissolves in the intestine not the stomach (no reflux).	✅ CKD-aware. Enteric coating is key — without it, can cause heartburn.
Fennel seed powder	150 mg	Traditional carminative. Reduces gas production at the source. Mild pleasant anise/licorice scent. Used for centuries across cultures for digestive comfort.	✅ Low-K, low-P. One of the safest herbs for renal patients.
Ginger root powder	100 mg	Anti-nausea, carminative, improves motility. The "warm" note in the blend.	✅ CKD-aware in small amounts. Low-K at 100mg dose.
Lactobacillus rhamnosus GG	1 billion CFU	The specific probiotic strain with the most evidence for reducing hydrogen sulfide production in the gut. Shifts the microbiome toward less-stinky bacteria.	✅ Generally CKD-aware. Often recommended. Verify with your care team.
Zinc gluconate	5 mg	Binds sulfur compounds in the gut. Low dose = safe. The "secret weapon" in many internal deodorant formulations.	⚠️ CKD-caution: zinc can accumulate in renal patients. 5mg is well below the 40mg upper limit. Monitor with labs. Verify with your care team.

Total per capsule: ~655 mg + probiotic **Capsule type:** Vegetarian (HPMC), size 0 or 00 **Color:** Green (from the chlorophyllin — it literally turns the capsule green, which is on-brand for BIOLUME)

The Protocol

Daily dose: 2 capsules - **Capsule 1:** With your largest meal (when the most "material" is entering the system) - **Capsule 2:** 2 hours BEFORE dialysis (so the deodorizing compounds are active during the session when GI distress peaks)

Timing around meds: Take AT LEAST 2 hours apart from phosphorus binders (sevelamer, lanthanum, calcium acetate) — the chlorophyllin and charcoal can theoretically bind to binders and reduce their effectiveness. Same window as most supplement-drug interactions.

What to expect: - **Day 1-3:** Possibly green-tinted stool (the chlorophyllin — totally normal, actually kind of cool) - **Day 3-7:** Reduced gas odor noticeable. Not zero — reduced. - **Week 2+:** Steady state. The probiotic colony establishes. Gas volume may decrease. Stool consistency may improve. - **The cinnamon:** Subtle. Not "my farts smell like Cinnabon." More like "my farts no longer clear the room and there's a faint warm spice note instead of sulfur death." That's the realistic promise.

DIY Version (buy the ingredients separately — cheaper)

If you don't want to wait for capsules, buy these at any health food store and take them individually:

Product	Where to buy	Cost	Dose
NOW Chlorophyllin 100mg caps	Amazon / Whole Foods	~$10/90 caps	1 cap with meal
Ceylon cinnamon capsules 500mg	Amazon	~$12/120 caps	1 cap with meal (or just add cinnamon to food — the Chobani recipes already use it)
Heather's Tummy Tamers (peppermint + ginger + fennel combo)	Amazon	~$12/90 caps	1 cap with meal — this single product covers 3 of the 7 ingredients
Culturelle (L. rhamnosus GG)	Any pharmacy	~$15/30 caps	1 cap daily

Total DIY cost: ~$49 for a 30-day supply using 4 separate products. **Optimized cost: ~$22/month** if you skip the standalone cinnamon (use kitchen cinnamon on food instead) and the zinc (zinc gets checked in routine labs anyway).

IMPORTANT: Clinical Review Recommended

Before taking ANY of this: - [ ] Review this formulation with your care team at next appointment - [ ] Get her sign-off on each ingredient at the listed dose - [ ] Specifically ask about: zinc accumulation risk, chlorophyllin + phosphorus binder interaction timing, probiotic strain approval - [ ] Get baseline labs BEFORE starting so you can track any changes - [ ] If your care team flags anything, pull that ingredient and reformulate

This is NOT medical advice. This is a recipe.

CHAPTER 23

Stephanie's Classics

"Tell me what you eat, and I will tell you what you are. — Brillat-Savarin"

Moved to Chapter 2, Family Favorites.

CHAPTER 24

The Mushroom Farm

"One cannot think well, love well, sleep well, if one has not dined well. — Virginia Woolf"

Chanterelles, Morels, Cream of Mushroom & Midwest Comfort

Small-Scale Legal Mushroom Lab: Visual, Functional, Economic, Bioluminescent

Evidence-clean scope: legal culinary, functional, ornamental, and bioluminescent species. No psilocybin cultivation instructions. Oregon psilocybin manufacturing is a licensed Oregon Psilocybin Services activity, not a casual home grow project.

Best First Projects

Species	Why It Is Interesting	Small-Scale Method	Difficulty	Notes
Oyster mushrooms: blue, pink, golden, pearl	Fast, visual, forgiving, good economics, many colors.	Ready-to-fruit block first; then bucket straw, cardboard, or hardwood pellet experiments.	Easy	Best first grow. High spore load can bother sensitive lungs; harvest before heavy sporulation.
Lion's mane	Functional/culinary, dramatic white fruiting bodies, good value.	Hardwood sawdust block or kit.	Medium	Needs humidity and fresh air; great photo species.
Shiitake	Reliable culinary demand, strong flavor, outdoor long game.	Hardwood logs outdoors or sawdust blocks indoors.	Medium/slow	Logs take patience but can produce for years.
Wine cap / garden giant	Cheap outdoor bed, soil-building, low equipment.	Hardwood chips or straw bed in shade.	Easy outdoor	Cornell calls wine cap one of the easiest beginning mushrooms; fruiting can begin within months when conditions fit.
Chestnut, pioppino, nameko, enoki	Visually distinctive specialty culinary mushrooms.	Prepared blocks first; dial in humidity and fresh air.	Medium	Good second-wave projects after oyster/lion's mane.
Reishi	Ornamental antlers/conks, functional market interest.	Hardwood block; grow for display/drying, not as dinner mushroom.	Medium	Use care with health claims and medication interactions.
Cordyceps militaris	High-value, orange, visually wild.	Prepared kit first; sterile rice/broth jars only after sterile workflow is proven.	Advanced	Economically interesting but contamination-prone.
Panellus stipticus	Bioluminescent mycelium/display species.	Educational culture or kit in humid display jar.	Experimental	Not a food project. Glow is dim and strain-dependent; oxygen and temperature matter.
Mycena chlorophos	Brighter luminous fruiting bodies in the literature.	Research/display only; tropical parameters and sterile technique.	Advanced/research	Literature reports fruiting under controlled humidity, temperature, casing, and light; not a casual kitchen grow.

Cheap Material Tiers

Tier	Materials	Best Species	Why
1. Ready block	Purchased fruiting block, spray bottle, humidity tent/tote.	Oyster, lion's mane, chestnut.	Fastest learning loop; no substrate prep.
2. Bucket grow	Food-safe bucket with holes, pasteurized straw or hardwood pellets, oyster spawn.	Oyster.	Cheap, scalable, visually rewarding.
3. Outdoor bed	Hardwood chips, cardboard, shade, water, wine-cap spawn.	Wine cap.	Low-tech and garden-compatible.
4. Log/totem	Fresh hardwood log, drill, spawn plugs/sawdust spawn, wax.	Shiitake, oyster, lion's mane.	Slow but durable outdoor production.
5. Sterile lab	Pressure cooker, still-air box, jars/bags, hardwood pellets, bran, agar.	Lion's mane, cordyceps, bioluminescent cultures.	Most control, highest contamination discipline.

Starter Shopping List

- 5-gallon food-safe bucket, drill, spray bottle, thermometer/hygrometer, clear storage tote or humidity tent.
- Hardwood fuel pellets with no additives, straw, cardboard, hardwood chips, or fresh hardwood logs depending on species.
- Spawn from a reputable supplier: oyster first, lion's mane second, wine cap for outdoor bed.
- 70% isopropyl alcohol, nitrile gloves, labels, permanent marker, clean scissors/knife.
- Optional advanced: pressure cooker, still-air box, filter patch bags, agar plates.

Safety Rules

- Never eat a mushroom unless the species and source are known. Grown blocks should stay labeled from spawn to harvest.
- Discard contaminated grows outdoors or sealed in trash; do not sniff moldy bags.
- Use ventilation and consider a mask around heavy oyster spore loads, especially with asthma or transplant/immune concerns.
- Do not make medical claims for functional mushrooms. Treat them as food/projects unless a clinician reviews supplements/extracts.
- No psilocybin instructions, spores-to-fruit workflow, or psychoactive mushroom cultivation in this cookbook.

Source Notes

- **Cornell Small Farms:** specialty mushrooms can be grown in outdoor log/stump/bed systems and indoor systems; Cornell lists shiitake, oyster, lion's mane, wine cap, almond agaricus, and nameko as cultivable decomposers. https://smallfarms.cornell.edu/projects/mushrooms/outdoor-production/
- **Cornell beginner guidance:** oyster, shiitake, and red wine cap are described as some of the easiest mushrooms to grow for home or sale. https://smallfarms.cornell.edu/2017/05/16-mushrooms/
- **Penn State Extension:** mushroom production depends on substrate preparation, spawning, pinning, cropping, sanitary conditions, and environmental control. https://extension.psu.edu/forage-and-food-crops/mushrooms
- **Oregon Psilocybin Services:** psilocybin product manufacturing/cultivation is tied to licensed manufacturer premises and endorsements. https://www.oregon.gov/oha/ph/preventionwellness/pages/psilocybin-license-manufacturer.aspx
- **Bioluminescent fungi:** Weitz et al. found temperature and pH affected mycelial growth and luminescence of naturally bioluminescent fungi, with optimum luminescence/growth for several species around 22C and acidic pH. https://pubmed.ncbi.nlm.nih.gov/11520609/
- **Mycena chlorophos:** published culture work reports fruit-body production under controlled jar, humidity, temperature, casing, and light conditions; this is a research/display species, not a beginner food crop. https://doi.org/10.1007/BF02460921

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EVIDENCE STATUS - Mushroom Lab
SUPPORTED: legal edible/functional/ornamental species list, small-
scale material tiers, Cornell/Penn State cultivation framing.
LEGAL BOUNDARY: psilocybin production in Oregon requires regulated
licensing; no home cultivation instructions here.
EXPERIMENTAL: bioluminescent species are display/research projects,
not food or medicine.
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"One cannot think well, love well, sleep well, if one has not dined well." — Virginia Woolf

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THE MUSHROOM FARM

> *"To plant a garden is to believe in tomorrow." — Audrey Hepburn*

1. Pan-Seared Chanterelles with Thyme & Garlic

The one that tastes like the forest floor smells.

Ingredient	Amount	CKD Notes
Fresh chanterelles	8 oz, cleaned (brush, don't wash — they're sponges)	Low K, low P. The king of mushrooms.
Margarine	2 tbsp	
Garlic	3 cloves, sliced thin	
Fresh thyme	4 sprigs	
Black pepper	1/4 tsp	
Salt	Pinch	
Splash of dry white wine (optional)	2 tbsp	Cooks off. Deglazes the pan.

Method: Heat margarine in cast iron until foaming stops. Add chanterelles in single layer — DON'T CROWD (they steam instead of sear). Cook undisturbed 3 min until golden. Flip. Add garlic + thyme. Cook 2 min more. Deglaze with wine if using. Season. Serve on sourdough toast or alongside steak.

Per serving: ~60mg Na | ~45mg P | ~180mg K

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2. Cream of Mushroom Soup (From Scratch — Not the Can)

The real version of the thing Susan put in everything.

Ingredient	Amount	CKD Notes
Mixed mushrooms (cremini, shiitake, button)	1 lb, sliced	
Margarine	3 tbsp	
Onion	1 medium, diced	
Garlic	4 cloves, minced	
All-purpose flour	3 tbsp	The roux
Unsweetened almond milk	2 cups	Lower P than cream-based
Low-sodium chicken broth	1 cup	
Fresh thyme	1 tsp, chopped	
Black pepper	1/2 tsp	
Salt	1/4 tsp	
Splash of sherry or white wine	1 tbsp (optional)	

Method: 1. Sauté mushrooms in margarine over high heat 6-8 min until dark golden and all moisture is gone. Remove half (these go back in at the end for texture). 2. Add onion to remaining mushrooms. Cook 4 min. Add garlic 1 min. 3. Sprinkle flour over everything. Stir 1 min (cooking the roux). 4. Slowly add broth, then almond milk, whisking constantly. Simmer until thick, 5-6 min. 5. Blend with immersion blender until smooth (or leave chunky — your call). 6. Add reserved sautéed mushrooms back in. Season with thyme, pepper, salt, sherry. 7. This is what cream of mushroom soup was always supposed to taste like.

Per serving (4 servings): ~140mg Na | ~110mg P | ~350mg K

Use this in place of canned cream of mushroom EVERYWHERE. Green bean casserole. Chicken bake. Rice. Toast. A spoon and nothing else at 11 PM.

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3. Stuffed Portobello Mushrooms

A mushroom big enough to be the main course.

Ingredient	Amount	CKD Notes
Large portobello caps	4, stems removed, gills scraped	
Cream cheese	4 oz, softened	Lower P than ricotta
Sharp cheddar, shredded	1/2 cup	Andrew's cheese
Garlic	3 cloves, minced	
Fresh spinach	1 cup, wilted and chopped	Small amount = controlled K
Panko breadcrumbs	1/3 cup	
Olive oil	1 tbsp	
Italian seasoning	1 tsp	
Salt	1/4 tsp	
Black pepper	1/4 tsp	

Method: Brush caps with olive oil, season with salt + pepper. Roast gill-side down on sheet pan 400F 5 min (releases moisture). Flip. Mix cream cheese + cheddar + garlic + spinach + seasoning. Fill caps. Top with panko. Bake 15 min until golden bubbling.

Per mushroom: ~160mg Na | ~120mg P | ~340mg K

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4. Mushroom Risotto (Vespa's Favorite)

> *"Life is too short for fake butter, cheese, or people." — Unknown*

Ingredient	Amount	CKD Notes
Arborio rice	1.5 cups	
Mixed mushrooms (chanterelle, shiitake, cremini)	12 oz, sliced	
Low-sodium chicken broth	4 cups, warm	Keep simmering on the side
Dry white wine	1/2 cup	Cooks off
Onion	1 small, finely diced	
Garlic	3 cloves, minced	
Margarine	3 tbsp	
Olive oil	1 tbsp	
Fresh thyme	1 tsp	
Black pepper	1/2 tsp	
Salt	1/4 tsp	
Fresh mozzarella	2 oz, torn (stir in at end)	Vespa's preferred cheese. Melts into the risotto.

Method: 1. Sauté mushrooms in olive oil over high heat until deeply golden. Set aside. 2. Same pan: melt margarine, cook onion 4 min, garlic 1 min. 3. Add rice. Stir 2 min until edges go translucent. 4. Add wine. Stir until absorbed. 5. Add broth ONE LADLE AT A TIME. Stir after each. Wait until absorbed before adding next. This takes 18-22 min. Don't rush it. The stirring is the recipe. 6. When rice is creamy and al dente: fold in mushrooms, thyme, pepper, salt, torn mozzarella. 7. Serve immediately. Risotto waits for no one.

Per serving (4 servings): ~180mg Na | ~160mg P | ~380mg K

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5. Morel & Chicken Thigh Skillet

Morels only appear for a few weeks in spring. When they show up, drop everything.

Ingredient	Amount	CKD Notes
Fresh morels	6 oz, halved lengthwise, soaked + rinsed	Check for bugs. Always check for bugs.
Chicken thighs, boneless	1 lb, cut into pieces	
Margarine	2 tbsp	
Garlic	3 cloves, sliced	
Fresh thyme	4 sprigs	
Dry sherry or white wine	2 tbsp	
Black pepper	1/4 tsp	
Salt	1/4 tsp	

Method: Season chicken, sear in margarine 4 min per side. Remove. Add morels to pan, cook 3 min until they release liquid and it evaporates. Add garlic + thyme. Deglaze with sherry. Return chicken. Cover, low heat 10 min. The morels + thyme + pan fond create a sauce that doesn't need anything else.

Per serving (3 servings): ~170mg Na | ~200mg P | ~320mg K

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6. The Mushroom Farm Breakfast

Mushrooms for breakfast is normal when you grow them.

Component	What
Eggs	2, scrambled in margarine with sliced mushrooms folded in
Toast	Sourdough, toasted, with sautéed mushrooms + garlic on top (mushroom toast)
Sausage	Chicken breakfast sausage (recipe in Ch 3)

Component	What
Side	Sautéed mixed mushrooms with thyme (recipe #1 above)

The whole plate is mushrooms. Mushrooms in the eggs. Mushrooms on the toast. Mushrooms next to the sausage. The farm kid's breakfast.

CHAPTER 25

Date Night & Recommended Favorites

"The best meals are the ones nobody had to leave the house for."

12 Dishes Andrew & Vespa Will Actually Fight Over

"The best meals are the ones nobody had to leave the house for."

Why These 12

#	Dish	Why It Made the Cut
1	**Surf & Turf**	The canonical date night. Ribeye + garlic shrimp. No explanation needed.
2	**Mushroom & Gouda Risotto**	Vespa's chanterelle obsession meets Andrew's smoked gouda addiction. Overlap zone.
3	**Honey-Garlic Chicken Thighs**	Both love thighs. Jasmine rice keeps P low. Sweet-savory hits every receptor.
4	**Cast Iron Steak**	Andrew's desert-island meal. Compound herb butter makes it date-worthy.
5	**Thai Basil Chicken**	Shared Thai love. Fresh basil + chili = zero blandness, CKD-aware with lime swap for fish sauce volume.
6	**Lemon Herb Salmon**	Wild salmon only. For the nights Andrew wants fish that doesn't taste like a can.
7	**Chicken Alfredo**	Vespa's #1 comfort food. Cauliflower cream sauce drops P by ~60% vs traditional.
8	**Loaded Nachos**	Game night fuel. Homemade CKD nacho cheese controls Na without killing flavor.
9	**Breakfast for Dinner**	Country fried steak + eggs + biscuits. Soul food. Period.
10	**Chocolate Lava Mug Cake**	8-minute dessert for two. Andrew's chocolate fixation, quick prep time.
11	**Strawberry Cheesecake Bites**	No-bake. Sweet, tart, cold. Late-night snack that doubles as dessert.
12	**Late Night Quesadilla**	Smoked gouda + chicken at midnight. For the raccoon-feeding hour.

Recipe 1: Surf & Turf — Mini Ribeye & Garlic Butter Shrimp

THE date night. Period.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
Ribeye steak (boneless)	8 oz total (4 oz/serving)	Keep portion to 4 oz cooked — controls P
Large shrimp, peeled & deveined	8 (about 4 oz)	Low-P protein, rinse well
Unsalted margarine	3 Tbsp	No dairy P load
Garlic, minced	4 cloves	Flavor base, negligible K
Fresh lemon juice	2 Tbsp	Sour punch Andrew loves, replaces salt need
Fresh parsley, chopped	2 Tbsp	Garnish
Avocado oil	1 Tbsp	High smoke point for sear
Black pepper	1 tsp	—
Garlic powder	1/2 tsp	—
Paprika	1/2 tsp	Color + warmth
Jasmine rice	1 cup dry	Low-K grain, rinse before cooking

Method

1. Pat steak dry. Season both sides with pepper, garlic powder, paprika.
2. Heat cast iron to smoking with avocado oil. Sear steak 3-4 min/side for medium-rare. Rest 5 min on cutting board.
3. Same pan, reduce heat to medium. Add 2 Tbsp margarine + garlic. Cook 30 seconds until fragrant.
4. Add shrimp in single layer. Cook 2 min/side until pink and curled. Squeeze lemon over top, toss with parsley.
5. Slice steak against the grain. Fan on plate beside shrimp. Spoon garlic butter from pan over everything.
6. Serve with jasmine rice.

Per Serving (estimated)

Na	K	P
~280 mg	~420 mg	~250 mg

Recipe 2: Mushroom & Gouda Risotto

Vespa's mushrooms. Andrew's cheese. Neutral territory.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
Arborio rice	1 cup	Low-K starch base
Mixed mushrooms (chanterelles, shiitake)	6 oz, sliced	Leach in water 10 min if K-concerned; shiitake are naturally lower-K
Smoked gouda, shredded	1/3 cup (~1.5 oz)	Portion-controlled — lower Na than parmesan
Low-sodium chicken broth	3 cups	Use low-sodium only, add broth 1/2 cup at a time
Shallot, diced	1 medium	Milder than onion
Garlic, minced	2 cloves	—
Unsalted margarine	2 Tbsp	—
Avocado oil	1 Tbsp	—
White wine (dry)	1/4 cup	Alcohol cooks off, adds acid
Fresh thyme	1 tsp	—
Black pepper	to taste	—
Fresh lemon juice	1 Tbsp	Brightness at the end

Method

1. Heat broth in a saucepan, keep warm on low.
2. In a wide pan, heat avocado oil over medium-high. Saute mushrooms until golden, ~5 min. Remove, set aside.
3. Same pan, add 1 Tbsp margarine. Saute shallot + garlic 2 min.
4. Add rice, stir 1 min to toast. Add wine, stir until absorbed.
5. Add warm broth 1/2 cup at a time, stirring frequently. Wait until mostly absorbed before adding more. ~18-20 min total.
6. When rice is creamy and al dente, fold in mushrooms, gouda, remaining margarine, thyme, lemon juice. Pepper to taste.

Per Serving (estimated)

Na	K	P
~310 mg	~380 mg	~220 mg

Recipe 3: Honey-Garlic Chicken Thighs with Jasmine Rice

Sweet. Sticky. Zero blandness.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
Bone-in chicken thighs	2 large (~12 oz total)	Skin-on for flavor, portion = ~4 oz meat each
Honey	3 Tbsp	Natural sweetener, low Na/P
Low-sodium soy sauce	1.5 Tbsp	Max — this is the Na source, no more
Garlic, minced	4 cloves	—
Rice vinegar	1 Tbsp	Tart note Andrew craves
Fresh ginger, grated	1 tsp	Inflammation-support bonus
Avocado oil	1 Tbsp	—
Sesame seeds	1 tsp	Garnish only
Green onion, sliced	2 stalks	Garnish
Jasmine rice	1 cup dry	Rinsed

Method

1. Whisk honey, soy sauce, garlic, rice vinegar, ginger in a bowl.
2. Heat avocado oil in cast iron over medium-high. Place thighs skin-side down. Cook 6-7 min until skin is deeply golden and crisp.
3. Flip. Pour honey-garlic sauce over thighs. Reduce heat to medium-low, cover loosely. Cook 12-15 min until internal temp hits 175F.
4. Uncover last 3 min, spoon sauce over thighs to glaze.
5. Serve over jasmine rice. Top with green onion and sesame seeds.

Per Serving (estimated)

Na	K	P
~380 mg	~350 mg	~230 mg

Recipe 4: Cast Iron Steak with Compound Herb Butter

Andrew's number one. Respect the iron.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
NY strip or ribeye	10 oz total (5 oz/serving)	Slightly generous — it's date night
Avocado oil	1 Tbsp	—
Black pepper, coarse	1 tsp	—
Garlic powder	1/2 tsp	—
Compound Butter:		
Unsalted margarine, softened	3 Tbsp	—
Fresh rosemary, minced	1 tsp	—
Fresh thyme, minced	1 tsp	—
Garlic, minced	1 clove	—
Lemon zest	1/2 tsp	Citrus brightness
Cracked pepper	pinch	—

Method

1. **Compound butter:** Mix margarine, rosemary, thyme, garlic, lemon zest, pepper. Roll in plastic wrap into a log. Refrigerate 20 min (or freeze 10 min).
2. Pull steak from fridge 30 min before cooking. Pat dry aggressively. Season with pepper and garlic powder.
3. Heat cast iron until it smokes slightly. Add avocado oil.
4. Lay steak away from you. Do not touch for 4 min. Flip once. Cook 3-4 min more for medium-rare (130F internal).
5. Rest 5 min. Top each portion with a thick coin of compound butter.
6. Pair with jasmine rice or sourdough bread.

Per Serving (estimated)

Na	K	P
~180 mg	~440 mg	~260 mg

Recipe 5: Thai Basil Chicken (Pad Gra Prao) over Rice

Fish sauce gets dialed back. Lime picks up the slack.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
Ground chicken thigh	10 oz	Dark meat = more flavor at same P
Fresh Thai basil leaves	1 cup packed	The star — not negotiable
Garlic, minced	4 cloves	—
Thai chili or serrano, sliced	1-2	Heat to preference
Low-sodium soy sauce	1 Tbsp	Na control
Fish sauce	1 tsp	Just 1 tsp — umami without the Na bomb
Honey	1 Tbsp	Balances heat
Fresh lime juice	2 Tbsp	Andrew's sour fix, replaces excess fish sauce
Avocado oil	1 Tbsp	—
Jasmine rice	1 cup dry	—
Fried egg (optional)	2	Adds richness, moderate P

Method

1. Heat avocado oil in wok or large skillet over high heat.
2. Add garlic + chili, stir 30 seconds.
3. Add ground chicken, break apart. Cook 5-6 min until browned and crispy in spots.
4. Add soy sauce, fish sauce, honey. Toss 1 min.
5. Kill heat. Add Thai basil, stir until just wilted. Squeeze lime over top.
6. Serve over jasmine rice. Top with fried egg if desired.

Per Serving (estimated)

Na	K	P
~420 mg	~370 mg	~240 mg

Recipe 6: Lemon Herb Salmon with Rice

Wild salmon only. No farmed. No canned. No exceptions.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
Wild salmon fillets	2 (4 oz each)	Wild has less P than farmed; keep to 4 oz
Fresh lemon juice	2 Tbsp	—
Lemon zest	1 tsp	—
Fresh dill	1 Tbsp, chopped	—
Garlic, minced	2 cloves	—
Avocado oil	1 Tbsp	—
Unsalted margarine	1 Tbsp	—
Black pepper	1/2 tsp	—
Jasmine rice	1 cup dry	—

Method

1. Mix lemon juice, zest, dill, garlic, pepper in a small bowl.
2. Pat salmon dry. Coat flesh side with lemon-herb mixture. Let sit 10 min.
3. Heat avocado oil + margarine in a nonstick pan over medium-high.

4. Place salmon skin-side up. Sear 3-4 min until golden crust forms. Flip gently. Cook 3 min more.
5. Serve skin-side down over jasmine rice. Spoon any pan juices over top.

Per Serving (estimated)

Na	K	P
~200 mg	~450 mg	~280 mg

Recipe 7: Velvet Chicken Alfredo

Vespa's favorite. The cauliflower is invisible. Do not tell her until after she says it's good.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
Fettuccine or penne	6 oz dry	Regular pasta — boil in excess water to leach K/P
Chicken breast, sliced thin	8 oz	Leaner cut works here since sauce is rich
Cauliflower florets	2 cups	Boil 15 min to leach K, then blend — this IS the sauce
Unsweetened almond milk	1/2 cup	Low-P milk sub
Unsalted margarine	2 Tbsp	—
Garlic, minced	3 cloves	—
Smoked gouda, shredded	2 Tbsp	Tiny amount, big flavor
Fresh mozzarella	1 oz, torn	Melts into sauce
Black pepper	1/2 tsp	—
Italian seasoning	1/2 tsp	—
Fresh lemon juice	1 tsp	Cuts richness
Avocado oil	1 Tbsp	—

Method

1. Boil cauliflower in large pot of water for 15 min (leaches K). Drain. Blend with almond milk until silky smooth.
2. Cook pasta in fresh boiling water per package. Drain.
3. Season chicken with Italian seasoning + pepper. Sear in avocado oil over medium-high, 3 min/side. Slice.
4. In same pan, add margarine + garlic. Cook 1 min. Pour in cauliflower puree. Stir in gouda + mozzarella until melted. Add lemon juice.
5. Toss pasta in sauce. Top with sliced chicken.

Per Serving (estimated)

Na	K	P
~290 mg	~360 mg	~230 mg

Recipe 8: Loaded Game-Night Nachos

Game night. No restaurant nachos — those have 2000mg Na per plate.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
Unsalted tortilla chips	4 oz	Read the label — unsalted or lightly salted only
CKD Nacho Cheese:		
Sharp cheddar, shredded	2 oz	Portion-controlled
Unsweetened almond milk	1/4 cup	—
Cornstarch	1 tsp	Thickener
Garlic powder	1/4 tsp	—
Paprika	1/4 tsp	—
Cayenne	pinch	—
Toppings:		
Cooked chicken thigh, shredded	4 oz	—
Pickled jalapenos	2 Tbsp	Na hit — keep small
Sour cream	2 Tbsp	—
Fresh lime juice	1 Tbsp	—
Cilantro, chopped	2 Tbsp	—
Avocado, diced	1/4 medium	K source — small portion

Method

1. **Nacho cheese:** Whisk almond milk + cornstarch in small saucepan over medium heat until slightly thickened. Add cheddar, garlic powder, paprika, cayenne. Stir until smooth and pourable.
2. Spread chips on a sheet pan. Layer shredded chicken over chips.
3. Drizzle nacho cheese over everything. Add jalapenos.
4. Broil 2-3 min until cheese bubbles.
5. Top with sour cream, avocado, cilantro, lime juice.

Per Serving (estimated)

Na	K	P
~410 mg	~390 mg	~260 mg

Recipe 9: Breakfast for Dinner — Country Fried Steak, Eggs & Biscuits

Comfort. Southern. Unapologetic.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
Cube steak	8 oz (2 pieces)	Thin cut = fast cook, portion controls P
All-purpose flour	1/2 cup	—
Garlic powder	1/2 tsp	—
Paprika	1/2 tsp	—
Black pepper	1/2 tsp	—
Egg, beaten	1	For dredge
Avocado oil	3 Tbsp	For frying
Cream Gravy:		
Unsalted margarine	1 Tbsp	—
All-purpose flour	1 Tbsp	—
Unsweetened almond milk	3/4 cup	Low-P sub for whole milk
Black pepper	generous	—
Sides:		
Eggs	2	Fried or scrambled
renal-aware biscuits (see baking section)	2	Or use low-Na store-bought

Method

1. Mix flour, garlic powder, paprika, pepper on a plate.
2. Dip cube steak in beaten egg, then dredge in seasoned flour. Press coating on firmly.
3. Heat avocado oil in cast iron over medium-high. Fry steak 3-4 min/side until golden crust. Rest on wire rack.
4. **Gravy:** Pour off all but 1 Tbsp drippings. Add margarine, melt. Whisk in flour, cook 1 min. Slowly whisk in almond milk. Stir until thickened, ~3 min. Hit it with generous black pepper.
5. Fry eggs in a separate pan.
6. Plate: steak, ladle gravy, eggs on the side, warm biscuit.

Per Serving (estimated)

Na	K	P
~350 mg	~380 mg	~270 mg

Recipe 10: Chocolate Lava Mug Cake for Two

8 minutes. Two mugs. Molten center. Done.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
All-purpose flour	4 Tbsp	—
Unsweetened cocoa powder	2 Tbsp	Moderate P — small amount is fine
Granulated sugar	3 Tbsp	—
Baking powder (low-sodium)	1/4 tsp	Use sodium-free if available
Unsweetened almond milk	3 Tbsp	—
Avocado oil	2 Tbsp	—
Vanilla extract	1/2 tsp	—
Semi-sweet chocolate chips	2 Tbsp	Pushed into center for lava

Method

1. Divide dry ingredients (flour, cocoa, sugar, baking powder) between two large microwave-safe mugs. Stir each.
2. Add half the almond milk, oil, and vanilla to each mug. Stir until just combined — few lumps OK.
3. Push 1 Tbsp chocolate chips into the center of each mug. Don't stir them in.
4. Microwave each mug 60-90 seconds on high. Center should be slightly jiggly (that's the lava).
5. Let stand 1 min. Eat from the mug.

Per Serving (estimated)

Na	K	P
~40 mg	~120 mg	~80 mg

Recipe 11: Strawberry Cheesecake Bites (No Bake)

Cold. Sweet. Tart. Disappear at 11pm.

Serves 2 (6 bites)

Ingredients

Ingredient	Amount	CKD Note
Cream cheese, softened	4 oz	Moderate P — portion is small per bite
Powdered sugar	3 Tbsp	—
Vanilla extract	1/2 tsp	—
Fresh strawberries, diced small	1/2 cup	Low-K fruit, sour-sweet
Graham cracker crumbs	3 Tbsp	For coating
Fresh lemon juice	1 tsp	Tart hit

Method

1. Beat cream cheese, powdered sugar, vanilla, and lemon juice until fluffy.
2. Fold in diced strawberries gently.
3. Scoop into 6 balls using a tablespoon. Roll each in graham cracker crumbs.
4. Place on parchment-lined plate. Freeze 20 min or refrigerate 1 hour until firm.
5. Serve cold.

Per Serving (3 bites, estimated)

Na	K	P
~170 mg	~130 mg	~70 mg

Recipe 12: Late Night Quesadilla — Smoked Gouda & Chicken

Midnight. Raccoons outside. Gouda inside.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
Flour tortillas (low-sodium)	2 large	Read labels — some have 400mg Na each
Smoked gouda, shredded	2 oz	Andrew's cheese, lower Na than cheddar
Cooked chicken thigh, shredded	4 oz	Leftover works perfect
Unsalted margarine	1 Tbsp	For the crisp
Pickled jalapenos (optional)	1 Tbsp	—
Sour cream	2 Tbsp	For dipping
Fresh lime juice	1 Tbsp	Squeeze over top
Cilantro	garnish	—

Method

1. Lay tortillas flat. Distribute gouda and chicken on one half of each.
2. Add jalapenos if desired. Fold tortillas in half.
3. Melt margarine in a skillet over medium heat. Place quesadillas in pan.
4. Cook 3 min/side until tortilla is golden and cheese is fully melted.
5. Slice each into 3 wedges. Serve with sour cream and lime.

Per Serving (estimated)

Na	K	P
~380 mg	~240 mg	~200 mg

CKD Considerations

> ***Daily Limits (Hemodialysis 3x/week):*** *Na < 1500 mg | K < 2000 mg | P < 800 mg*
>
> ***These 12 recipes are designed so any 2-3 dishes per day stay within limits.***
>
> - *All sodium estimates assume **no added salt**. Season with pepper, garlic, herbs, citrus, vinegar.*
> - *Potassium: leach vegetables by boiling in excess water 10+ min, drain, then cook. Rice should be rinsed.*
> - *Phosphorus: use almond milk (not dairy), limit cheese portions, avoid processed/packaged versions of these dishes.*
> - ***Fluid note:** count all liquids (broth, milk, sauces) toward daily fluid allowance per your doctor's guidance.*
> - *Protein portions are kept to 4-5 oz cooked meat per serving.*
> - *When in doubt, weigh it. A kitchen scale is not optional — it's renal armor.*
>
> *Reviewed against NKF and KDOQI dietary guidelines for maintenance hemodialysis. Individual needs vary — verify with your care team.*

> *"He who distinguishes the true savor of his food can never be a glutton; he who does not cannot be otherwise." — Thoreau*
>
> *"Cooking is like love. It should be entered into with abandon or not at all." — Harriet Van Horne*

CHAPTER 26

Andrew's ESRD Favorites

Clean import from the source guide; tables, lists, and meal plans restored.

BEFORE YOU COOK: These recipes are designed for ESRD on hemodialysis 3x/week. Every recipe stays within per-meal budgets (~500-650mg Na, ~600-650mg K, ~250mg P per meal). Always check with your nephrologist or renal dietitian before making major diet changes. Take your phosphorus binders with meals that contain protein.

1. Chicken Tinga

GREEN

Servings: 4 Prep: 10 min Cook: 25 min

Ingredients

- 1.5 lbs boneless skinless chicken thighs
- 4 medium fresh Roma tomatoes, diced
- 1 medium white onion, diced
- 3 cloves garlic, minced
- 1 chipotle pepper from a can (just ONE pepper, not the whole can) + 1 tsp adobo sauce
- 1 tsp cumin
- 1 tsp smoked paprika
- 1/2 tsp oregano
- 1 tbsp olive oil
- Juice of 1 lime
- Fresh cilantro for topping

Instructions

1. Put olive oil in a big pan. Medium-high heat.
2. Put the chicken thighs in the pan. Cook 5 minutes. Flip. Cook 5 more minutes. Take chicken out and put it on a plate.
3. Same pan. Throw in the onion. Stir it around for 3 minutes until soft.
4. Add the garlic. Stir for 30 seconds. Don't burn it.
5. Add the diced tomatoes, the ONE chipotle pepper (chop it up first), and the 1 tsp of adobo sauce.
6. Add cumin, paprika, oregano. Stir it all together.
7. Put the chicken back in. Turn heat to medium-low. Cover. Cook 15 minutes.
8. Take chicken out. Shred it with two forks. Put it back in the sauce. Stir.
9. Squeeze lime juice over everything. Top with cilantro.
0. Eat it in a bowl, over rice, or in corn tortillas.

Nutrition Per Serving

Nutrient	Amount	% Daily Limit	Status
Calories	285 kcal	14%	
Sodium	195 mg	10%	LOW
Potassium	520 mg	26%	GOOD
Phosphorus	230 mg	29%	GOOD
Fluid	~120 mL	8%	LOW
Protein	34 g	--	GREAT

CKD Tips: The secret is using fresh tomatoes instead of canned (canned = sodium bomb). Using just ONE chipotle pepper from the can gives you all the smoky heat with almost no sodium. Rinse the pepper under water to remove extra adobo if you want even less. Chicken thighs have more iron than breasts and stay juicier — important when you're fighting anemia.

Andrew's Notes: This is the one. Tastes like the real thing from a taqueria. Put it over Spanish rice (recipe #11) with a side of pico (#16). If you want more heat, add a diced jalapeno in step 3. Pairs well with a Ghetto Baja Blast (#17).

2. Kidney-Friendly Chicken Cacciatore

GREEN

Servings: 4 Prep: 10 min Cook: 35 min

Ingredients

- 1.5 lbs boneless skinless chicken thighs, cut into chunks
- 1 can (14.5 oz) no-salt-added diced tomatoes
- 1 bell pepper (any color), sliced
- 1 medium onion, sliced
- 3 cloves garlic, minced
- 1 tsp Italian seasoning (or mix of oregano, basil, thyme)
- 1/2 tsp black pepper
- 1 tbsp olive oil
- 1/4 cup water
- 2 cups cooked white rice (for serving)

Instructions

1. Put olive oil in a big pan or Dutch oven. Medium-high heat.
2. Put chicken chunks in. Cook 4 minutes, stir, cook 3 more minutes until browned on the outside.
3. Take chicken out. Set aside.
4. Same pan. Add onion and bell pepper. Cook 4 minutes until they start to soften.
5. Add garlic. Stir 30 seconds.
6. Pour in the can of no-salt tomatoes and the water.
7. Add Italian seasoning and black pepper. Stir.
8. Put chicken back in. Push it down into the sauce.
9. Turn heat to low. Cover. Cook 25 minutes.
10. Serve over white rice.

Nutrition Per Serving (with 1/2 cup rice)

Nutrient	Amount	% Daily Limit	Status
Calories	365 kcal	18%	
Sodium	120 mg	6%	LOW
Potassium	560 mg	28%	GOOD
Phosphorus	245 mg	31%	GOOD
Fluid	~150 mL	10%	LOW
Protein	35 g	--	GREAT

CKD Tips: No-salt-added canned tomatoes are your best friend. Regular canned tomatoes have 300-400mg sodium per can. The no-salt version? About 50mg. White rice is the #1 CKD grain — low potassium, low phosphorus, and it stretches meals. Skip brown rice (way more K and P).

Andrew's Notes: Classic Italian comfort food. Use different colored peppers for variety. Add a pinch of red pepper flakes if you want some kick. Good leftover — tastes even better the next day. Pair with the Garden Salad (#14).

3. Chicken Ragu over White Pasta (Slow Cooker)

GREEN

Servings: 5 Prep: 10 min Cook: 4-6 hours (slow cooker)

Ingredients

- 2 lbs boneless skinless chicken thighs
- 1 can (28 oz) no-salt-added crushed tomatoes
- 1 medium onion, diced
- 4 cloves garlic, minced
- 1 bell pepper, diced
- 1 tsp Italian seasoning
- 1 tsp smoked paprika
- 1/2 tsp black pepper
- 1 tbsp olive oil
- 10 oz white spaghetti or penne, cooked (for serving)

Instructions

1. Put the chicken thighs in the slow cooker.
2. Pour the crushed tomatoes over the chicken.
3. Add the onion, garlic, bell pepper on top.
4. Sprinkle Italian seasoning, paprika, black pepper over everything.
5. Drizzle the olive oil on top.
6. Put the lid on. Set to LOW for 6 hours or HIGH for 4 hours.
7. When it's done, take the chicken out. Shred it with two forks.
8. Put the shredded chicken back in. Stir everything together.
9. Cook your pasta separately. Drain it.
10. Put pasta in a bowl. Spoon the ragu on top.

Nutrition Per Serving (with 2 oz dry pasta)

Nutrient	Amount	% Daily Limit	Status
Calories	410 kcal	21%	
Sodium	105 mg	5%	LOW
Potassium	580 mg	29%	GOOD
Phosphorus	260 mg	33%	MODERATE

Fluid	~140 mL	9%	LOW
Protein	36 g	--	GREAT

CKD Tips: The slow cooker is your dialysis-day best friend. Throw everything in before your session. Come home to a hot meal. White pasta is CKD-aware — regular enriched spaghetti has less phosphorus than whole wheat. Avoid "protein-enriched" pastas — they add phosphorus additives.

Andrew's Notes: This is the lazy day recipe. Zero effort. Dump and forget. Makes great leftovers for 2-3 days. Add a Caesar salad (#13) on the side for a full meal. If you want it thicker, take the lid off for the last 30 minutes.

4. Homemade Spaghetti with Meat Sauce

GREEN

Servings: 4 Prep: 10 min Cook: 30 min

Ingredients

- 1 lb lean ground beef (90/10)
- 1 can (28 oz) no-salt-added crushed tomatoes
- 1 medium onion, diced fine
- 3 cloves garlic, minced
- 1 tsp Italian seasoning
- 1 tsp garlic powder
- 1/2 tsp onion powder
- 1/2 tsp black pepper
- 1 tbsp olive oil
- 1 tsp sugar (cuts the acidity)
- 8 oz white spaghetti, cooked

Instructions

1. Put olive oil in a big pan. Medium-high heat.
2. Add the ground beef. Break it up with a spoon. Cook 6-7 minutes until browned.
3. Drain the fat. Tilt the pan and spoon out the grease.
4. Add the diced onion. Cook 3 minutes.
5. Add the garlic. Stir 30 seconds.
6. Pour in the whole can of no-salt crushed tomatoes.
7. Add Italian seasoning, garlic powder, onion powder, black pepper, and sugar.
8. Stir it all together. Turn heat to low.
9. Let it simmer 20 minutes. Stir it every 5 minutes so it doesn't stick.
0. Cook spaghetti separately in unsalted water. Drain.
1. Put spaghetti in bowl. Put sauce on top.

Nutrition Per Serving (with 2 oz dry spaghetti)

Nutrient	Amount	% Daily Limit	Status
Calories	450 kcal	23%	
Sodium	110 mg	6%	LOW
Potassium	620 mg	31%	GOOD
Phosphorus	255 mg	32%	GOOD
Fluid	~150 mL	10%	LOW
Protein	30 g	--	GREAT

CKD Tips: Store-bought marinara has 400-600mg sodium per half cup. Making your own from no-salt crushed tomatoes drops that to almost nothing. The sugar isn't for sweetness — it kills the acidic bite from the tomatoes. Don't add parmesan — it's a phosphorus and sodium bomb (450mg Na per ounce). Cook pasta in UNSALTED water.

Andrew's Notes: The classic. Make a double batch of sauce and freeze half — you'll have a 5-minute meal next week. This is the recipe that proves you don't need jarred sauce. Way better, and your kidneys will thank you. Pairs with Caesar salad (#13).

5. Steak and Eggs

YELLOW

Servings: 1 Prep: 5 min Cook: 12 min

Ingredients

- 6 oz sirloin or ribeye steak
- 2 large eggs
- 1 tbsp olive oil (or unsalted butter)
- 1/2 tsp garlic powder
- 1/2 tsp black pepper
- 1/2 tsp dried rosemary (or thyme)
- 1 clove garlic, smashed (optional)

Instructions

1. Take the steak out of the fridge 15 minutes before cooking. Let it warm up a little.
2. Rub garlic powder, black pepper, and rosemary on both sides of the steak.
3. Put a cast iron pan on the stove. Medium-high heat. Let it get hot for 2 minutes.
4. Add half the olive oil. Put the steak in. Don't touch it for 4 minutes.
5. Flip the steak. Cook 3-4 more minutes (medium-rare to medium).
6. If you have the smashed garlic clove, throw it in the pan next to the steak for the last 2 minutes.
7. Take steak out. Put it on a plate. Let it rest 3 minutes. (Seriously, don't cut it yet.)
8. Same pan. Turn heat to medium. Add the rest of the olive oil.
9. Crack both eggs in. Cook 3 minutes for over-easy, 4 minutes for over-medium.
10. Put eggs next to the steak. Done.

Nutrition Per Serving

Nutrient	Amount	% Daily Limit	Status
Calories	520 kcal	26%	
Sodium	210 mg	11%	LOW
Potassium	580 mg	29%	GOOD
Phosphorus	380 mg	48%	MODERATE
Fluid	~80 mL	5%	LOW
Protein	48 g	--	HIGH (take binder)

CKD Tips: YELLOW because of the phosphorus from two eggs + steak. Take your phosphorus binder with this meal — seriously. Eggs have about 95mg P each. The organic phosphorus in steak absorbs at 40-60%, so it's not as bad as the number looks. Still, don't pair this with a high-P side. No cheese on the eggs. No ketchup (hidden sodium).

Andrew's Notes: This is the king of breakfasts. The herbs on the steak replace salt completely — you won't miss it. If you want, add the roasted peppers and onions (#15) on the side. Don't use steak sauce (1 tbsp = 280mg Na). The garlic in the pan makes the whole kitchen smell incredible.

6. Chicken Fajita Bowl

GREEN

Servings: 3 Prep: 10 min Cook: 15 min

Ingredients

- 1.25 lbs boneless skinless chicken breast, sliced thin
- 2 bell peppers (any colors), sliced
- 1 large onion, sliced
- 3 cloves garlic, minced
- 1 tbsp olive oil
- 1 tsp cumin
- 1 tsp chili powder
- 1/2 tsp smoked paprika
- 1/2 tsp garlic powder
- 1/2 tsp black pepper
- Juice of 1 lime
- 1.5 cups cooked white rice (for bowls)
- Fresh cilantro, pico de gallo (#16) for topping

Instructions

1. Mix cumin, chili powder, paprika, garlic powder, and black pepper in a small bowl. This is your fajita seasoning.
2. Toss the sliced chicken with half the seasoning mix.
3. Put olive oil in a big pan. High heat.
4. Put chicken in. Spread it out so it's not piled up. Cook 3 minutes. Stir. Cook 3 more minutes. Take chicken out.
5. Same pan. Add peppers and onions. Sprinkle the rest of the seasoning on them.
6. Cook 5 minutes, stirring a couple times. You want them a little charred but still crunchy.
7. Put chicken back in with the peppers and onions. Squeeze lime juice over everything. Stir 1 minute.
8. Put rice in a bowl. Put the fajita mix on top. Add pico and cilantro.

Nutrition Per Serving (with 1/2 cup rice)

Nutrient	Amount	% Daily Limit	Status
Calories	380 kcal	19%	
Sodium	125 mg	6%	LOW
Potassium	560 mg	28%	GOOD
Phosphorus	250 mg	31%	GOOD
Fluid	~110 mL	7%	LOW
Protein	38 g	--	GREAT

CKD Tips: Skip the flour tortilla — one large flour tortilla is 450-500mg sodium all by itself. The bowl version gives you all the same flavors with almost zero sodium. Homemade fajita seasoning has ZERO sodium compared to a store packet (500mg+). If you must have a tortilla, use a small corn tortilla (~10mg Na each).

Andrew's Notes: This is better than Chipotle and costs about $4 per serving. The char on the peppers and onions is everything — don't be scared of the high heat. Top with the homemade pico (#16). Add a squeeze of extra lime. If you want sour cream, use 1 tbsp max (15mg Na, 20mg P — not bad).

7. Grilled Chicken Soft Tacos

GREEN

Servings: 3 (2 tacos each) Prep: 10 min Cook: 12 min

Ingredients

- 1.25 lbs boneless skinless chicken thighs
- 6 small corn tortillas
- 1 tsp cumin
- 1 tsp chili powder
- 1/2 tsp garlic powder
- 1/2 tsp black pepper
- Juice of 1 lime
- 1 tbsp olive oil
- Toppings: shredded lettuce, diced onion, fresh cilantro, pico de gallo (#16)

Instructions

1. Mix cumin, chili powder, garlic powder, and black pepper in a bowl.
2. Rub the seasoning all over the chicken thighs.
3. Put olive oil in a pan. Medium-high heat.
4. Put chicken in. Cook 5 minutes. Flip. Cook 5 minutes.
5. Take chicken out. Let it rest 2 minutes. Chop it up into small pieces.
6. Squeeze lime juice over the chopped chicken.
7. Warm the corn tortillas. You can microwave them in a damp paper towel for 30 seconds. Or put them on a dry pan for 20 seconds each side.
8. Put chicken in tortillas. Add your toppings.

Nutrition Per Serving (2 tacos)

Nutrient	Amount	% Daily Limit	Status
Calories	350 kcal	18%	
Sodium	85 mg	4%	LOW
Potassium	440 mg	22%	GOOD
Phosphorus	240 mg	30%	GOOD
Fluid	~90 mL	6%	LOW
Protein	36 g	--	GREAT

CKD Tips: Corn tortillas are the CKD move. About 10-15mg sodium each vs. 450-500mg for flour. Six corn tortillas = ~80mg Na total. Six flour tortillas = 2,700mg Na. That's the entire day. No cheese — use extra cilantro and lime instead. The acid from lime juice tricks your brain into thinking there's salt.

Andrew's Notes: Tuesday night tacos. Quick, easy, and the sodium is so low you could eat 4 of these and still be under budget. Double up the corn tortillas for each taco if they rip (they do that). The pico de gallo (#16) makes these sing.

8. Grilled Steak Tacos

GREEN

Servings: 3 (2 tacos each) Prep: 10 min Cook: 12 min

Ingredients

- 1 lb flank steak or skirt steak
- 6 small corn tortillas
- Juice of 2 limes
- 2 cloves garlic, minced
- 1 tsp cumin
- 1/2 tsp chili powder
- 1/2 tsp black pepper
- 1 tbsp olive oil
- Fresh cilantro, chopped
- Diced white onion
- Pico de gallo (#16) for topping

Instructions

1. Mix lime juice (from 1 lime), garlic, cumin, chili powder, pepper, and olive oil in a bowl.
2. Put the steak in the bowl. Coat it. Let it sit 10 minutes (or up to 1 hour in the fridge if you planned ahead).
3. Heat a pan or grill to high heat.
4. Cook the steak 4 minutes. Flip. Cook 3-4 more minutes.
5. Take it out. Let it rest 5 minutes. This is important — if you cut it now, all the juice runs out.
6. Slice it thin against the grain. (Look at the lines in the meat. Cut across them, not with them.)
7. Squeeze the second lime over the sliced steak.
8. Warm your corn tortillas. Load them up with steak, cilantro, onion, and pico.

Nutrition Per Serving (2 tacos)

Nutrient	Amount	% Daily Limit	Status
Calories	340 kcal	17%	
Sodium	95 mg	5%	LOW
Potassium	490 mg	25%	GOOD
Phosphorus	260 mg	33%	GOOD
Fluid	~75 mL	5%	LOW
Protein	32 g	--	GREAT

CKD Tips: Lime juice marinade does two things: tenderizes the steak AND replaces salt. Your tongue can't tell the difference between "salty" and "acidic + seasoned" when there's enough lime. Organic phosphorus from real steak absorbs at 40-60% — so that 260mg P is really more like 130-160mg absorbed. Take your binder anyway.

Andrew's Notes: Street taco vibes. The cilantro-lime combo on steak is absolutely elite. If you have an outdoor grill, even better — gives it that smoky char. These are the tacos you make when company comes over and nobody knows it's kidney-friendly food.

9. One-Pan Chicken and Rice

GREEN

Servings: 4 Prep: 10 min Cook: 30 min

Ingredients

- 1.5 lbs boneless skinless chicken thighs
- 1 cup white long-grain rice (uncooked)
- 2 cups water
- 1 bell pepper, diced
- 1 medium onion, diced
- 3 cloves garlic, minced
- 1 tsp cumin
- 1 tsp smoked paprika
- 1/2 tsp oregano
- 1/2 tsp black pepper
- 1 tbsp olive oil
- Juice of 1 lime
- Fresh cilantro

Instructions

1. Mix cumin, paprika, oregano, and pepper in a small bowl. Rub half of it on the chicken.
2. Put olive oil in a deep pan or skillet with a lid. Medium-high heat.
3. Put chicken in. Cook 4 minutes per side. Take it out.
4. Same pan. Add onion and bell pepper. Cook 3 minutes.
5. Add garlic. Stir 30 seconds.
6. Add the uncooked rice. Stir it around for 1 minute so it gets coated in the oil and veggies.
7. Pour in the 2 cups of water. Add the rest of the seasoning. Stir.
8. Put the chicken on top of the rice. Don't stir it in.
9. Bring to a boil. Then turn heat to LOW. Put the lid on.
0. Cook 18 minutes. Don't open the lid. Seriously, don't.
1. Turn off the heat. Let it sit with the lid on for 5 more minutes.
2. Open it up. Squeeze lime over everything. Add cilantro.

Nutrition Per Serving

Nutrient	Amount	% Daily Limit	Status
Calories	420 kcal	21%	
Sodium	115 mg	6%	LOW
Potassium	510 mg	26%	GOOD
Phosphorus	255 mg	32%	GOOD
Fluid	~130 mL	9%	LOW
Protein	35 g	--	GREAT

CKD Tips: Using water instead of chicken broth saves 800-900mg sodium for the whole dish. The chicken drippings flavor the rice anyway, so you don't miss the broth at all. This is a complete meal in one pan — protein, carb, and veggies. One pan = one thing to wash. Win.

Andrew's Notes: The rice absorbs the chicken juices and becomes insanely flavorful. Don't skip the "don't open the lid" step — the steam is what cooks the rice perfectly. This is a weeknight go-to. Leftovers reheat great in the microwave with a splash of water.

10. Chicken Stir-Fry

YELLOW

Servings: 3 Prep: 10 min Cook: 12 min

Ingredients

- 1.25 lbs boneless skinless chicken breast, sliced thin
- 2 bell peppers (mixed colors), sliced
- 1 large onion, sliced
- 3 cloves garlic, minced
- 1 tbsp low-sodium soy sauce (like Kikkoman Less Sodium)
- 1 tsp sesame oil
- 1 tbsp olive oil
- 1/2 tsp ground ginger (or 1 tsp fresh grated)
- 1/2 tsp black pepper
- 1/2 tsp garlic powder
- 1.5 cups cooked white rice (for serving)

Instructions

1. Put olive oil in a big pan or wok. High heat.
2. Put chicken in. Spread it out flat — don't pile it. Cook 3 minutes. Stir. Cook 2 more minutes. Take chicken out.
3. Same pan. Add sesame oil. Then peppers and onions. Cook 3 minutes on high heat. You want a little char.
4. Add garlic and ginger. Stir 30 seconds.
5. Put chicken back in.
6. Pour the low-sodium soy sauce over everything.
7. Add garlic powder and black pepper.
8. Stir everything together for 1 minute.
9. Serve over white rice.

Nutrition Per Serving (with 1/2 cup rice)

Nutrient	Amount	% Daily Limit	Status
Calories	390 kcal	20%	
Sodium	320 mg	16%	MODERATE
Potassium	530 mg	27%	GOOD
Phosphorus	260 mg	33%	GOOD
Fluid	~100 mL	7%	LOW
Protein	39 g	--	GREAT

CKD Tips: YELLOW because of the soy sauce sodium. Even low-sodium soy sauce has about 575mg per tablespoon split across 3 servings. Regular soy sauce would be 1,000mg per tablespoon — never use regular. If you want to go GREEN, replace soy sauce with 1 tbsp rice vinegar + extra garlic. Sesame oil is a flavor cheat code — a tiny bit goes a long way.

Andrew's Notes: This is fast. 12 minutes from pan to plate. The trick is cooking on HIGH heat so the chicken and veggies get that restaurant stir-fry char. Don't overcrowd the pan or everything steams instead of sears. If your pan isn't big enough, cook the chicken in two batches.

SIDES

11. Low-Sodium Spanish Rice

GREEN

Servings: 4 Prep: 5 min Cook: 25 min

Ingredients

- 1 cup white long-grain rice
- 2 cups water (NOT broth)
- 2 tbsp no-salt-added tomato paste
- 1/2 medium onion, diced fine
- 2 cloves garlic, minced
- 1 tsp cumin
- 1/2 tsp chili powder
- 1/2 tsp smoked paprika
- 1/4 tsp black pepper
- 1 tbsp olive oil

Instructions

1. Put olive oil in a medium pot. Medium heat.
2. Add the uncooked rice. Stir it around for 2 minutes until it starts to look a little golden.
3. Add the onion. Cook 2 minutes.
4. Add garlic. Stir 30 seconds.
5. Add the tomato paste. Stir it in so it coats the rice.
6. Pour in the 2 cups of water.
7. Add cumin, chili powder, paprika, black pepper.
8. Stir once. Bring to a boil.
9. Turn heat to LOW. Put the lid on. Cook 18 minutes.
10. Turn off heat. Leave the lid on for 5 minutes.
11. Fluff with a fork.

Nutrition Per Serving (about 3/4 cup)

Nutrient	Amount	% Daily Limit	Status
Calories	210 kcal	11%	
Sodium	15 mg	1%	ALMOST ZERO
Potassium	120 mg	6%	LOW
Phosphorus	55 mg	7%	LOW
Fluid	~80 mL	5%	LOW
Protein	4 g	--	

CKD Tips: Restaurant Spanish rice uses chicken broth (1,000mg+ sodium per batch). Yours uses water + spices. Tastes just as good. Toasting the rice first in oil gives it that nutty, restaurant-style flavor without any sodium. No-salt tomato paste has about 10mg Na per tablespoon vs. regular at 130mg.

Andrew's Notes: This goes with literally everything in this cookbook. Make a big batch — it reheats perfectly. The secret is toasting the dry rice in oil before adding water. That's what makes it taste like restaurant rice instead of plain white rice.

12. Homemade Refried Beans (40% Less Potassium)

YELLOW

Servings: 6 Prep: 8 hours (soaking) + 10 min Cook: 2 hours

Ingredients

- 1 lb dry pinto beans
- Water for soaking and boiling (lots)
- 1 medium onion, diced
- 3 cloves garlic, minced
- 1 tsp cumin
- 1/2 tsp chili powder
- 1/2 tsp black pepper
- 2 tbsp olive oil

Instructions

1. Put the dry beans in a big bowl. Cover with water. At least 3 inches of water above the beans. Let them soak for 8 hours or overnight.
2. Drain the soaking water. Rinse the beans. (This is what removes the potassium — the K leaches into the water.)
3. Put beans in a big pot. Cover with fresh water — about 2 inches above the beans.
4. Bring to a boil. Turn to medium-low. Cook 1.5 to 2 hours until beans are very soft. Add more water if it gets low.
5. Drain the beans. Save about 1/2 cup of the cooking water.
6. In a separate pan, heat olive oil. Medium heat. Add onion. Cook 4 minutes.
7. Add garlic. Stir 30 seconds.
8. Add the drained beans to the pan. Add cumin, chili powder, pepper.
9. Mash them with a potato masher or the back of a big spoon. Add a little of the saved cooking water if they're too thick.
0. Stir and mash until you get the texture you want. Some chunks are fine.

Nutrition Per Serving (about 2/3 cup)

Nutrient	Amount	% Daily Limit	Status
Calories	220 kcal	11%	
Sodium	8 mg	0.4%	ZERO
Potassium	380 mg	19%	MODERATE
Phosphorus	150 mg	19%	GOOD
Fluid	~60 mL	4%	LOW
Protein	12 g	--	GOOD

CKD Tips: YELLOW for potassium — beans are naturally high in K, but the soak-drain-boil-drain method removes about 40% of it. Canned refried beans have 500-700mg sodium per serving. Yours have 8mg. EIGHT. This is the biggest sodium win in the whole cookbook. Keep portions to 2/3 cup max. Freeze extras in 2/3 cup portions.

Andrew's Notes: Yes, you have to plan ahead with the soaking. Do it before bed, make beans the next day. These taste 10x better than canned and cost like $1.50 for the whole batch. Perfect side for taco night (#20). Make a big pot and freeze in portions.

13. Caesar Salad

GREEN

Servings: 2 Prep: 10 min Cook: 0 min

Ingredients

- 4 cups chopped romaine lettuce
- 1 tbsp olive oil
- Juice of 1 lemon
- 1 clove garlic, minced very fine (or 1/2 tsp garlic powder)
- 1/2 tsp black pepper
- 1/2 tsp dried oregano
- Unsalted croutons (optional — make your own by cubing bread and toasting in olive oil)

Dressing Instructions

1. Put olive oil, lemon juice, garlic, pepper, and oregano in a small jar or bowl.
2. Whisk it or shake it up.
3. Pour over the romaine. Toss it.
4. Add croutons if you want.
5. That's it.

Nutrition Per Serving

Nutrient	Amount	% Daily Limit	Status
Calories	95 kcal	5%	
Sodium	10 mg	0.5%	ZERO
Potassium	220 mg	11%	LOW
Phosphorus	35 mg	4%	LOW
Fluid	~100 mL	7%	LOW
Protein	2 g	--	

CKD Tips: Skip the parmesan. 1 oz of parmesan = 450mg sodium + 200mg phosphorus. Not worth it. The lemon-olive oil dressing is a perfect substitute. Bottled Caesar dressing has 300-400mg sodium per serving. Your homemade version has basically zero. Romaine is the best lettuce for CKD — low potassium and a good source of folate.

Andrew's Notes: Simple, fast, and goes with pasta nights. The lemon + garlic + olive oil combo is honestly better than bottled dressing once you get used to it. If you want more substance, add sliced chicken from any of the main recipes on top.

14. Garden Salad with Herb Vinaigrette

GREEN

Servings: 2 Prep: 10 min Cook: 0 min

Ingredients

- 4 cups mixed greens or chopped romaine
- 1/2 bell pepper, diced
- 1/4 cup diced onion
- 1/4 cup diced cucumber
- 4-5 grape tomatoes, halved

Herb Vinaigrette

- 2 tbsp olive oil
- 1 tbsp red wine vinegar (or white vinegar)
- 1/2 tsp dried basil
- 1/2 tsp dried oregano
- 1/4 tsp garlic powder
- 1/4 tsp black pepper

Instructions

1. Put all the salad stuff in a big bowl.
2. Mix all the dressing stuff together in a small bowl or jar.

3. Pour dressing on salad. Toss.
4. Eat.

Nutrition Per Serving

Nutrient	Amount	% Daily Limit	Status
Calories	140 kcal	7%	
Sodium	12 mg	0.6%	ZERO
Potassium	280 mg	14%	LOW
Phosphorus	40 mg	5%	LOW
Fluid	~120 mL	8%	LOW
Protein	2 g	--	

CKD Tips: Bottled dressings are sodium nightmares (300-500mg per serving). This herb vinaigrette has basically zero. Avoid croutons from a bag (150-200mg Na per serving) — if you want crunch, toast unsalted bread cubes in olive oil. Keep the tomatoes limited to 4-5 grape tomatoes to keep potassium manageable.

Andrew's Notes: Quick side salad. Throw whatever veggies you have in. The vinaigrette is the key — once you realize you can make dressing in 30 seconds, you'll never buy a bottle again. Good with the chicken cacciatore (#2) or spaghetti (#4).

15. Roasted Peppers and Onions

GREEN

Servings: 3 Prep: 5 min Cook: 20 min

Ingredients

- 3 bell peppers (mix of colors), sliced thick
- 2 medium onions, sliced thick
- 4 cloves garlic, whole or halved
- 2 tbsp olive oil
- 1 tsp oregano
- 1/2 tsp black pepper
- 1/2 tsp smoked paprika

Instructions

1. Turn oven to 425F.
2. Put peppers, onions, and garlic on a baking sheet.
3. Pour olive oil over everything. Sprinkle oregano, pepper, paprika.
4. Toss it around with your hands so everything is coated.
5. Spread it out in one layer. Don't pile it up.
6. Put it in the oven. 20 minutes.
7. Take it out. Done.

Nutrition Per Serving

Nutrient	Amount	% Daily Limit	Status
Calories	130 kcal	7%	
Sodium	8 mg	0.4%	ZERO
Potassium	310 mg	16%	GOOD
Phosphorus	40 mg	5%	LOW
Fluid	~70 mL	5%	LOW
Protein	2 g	--	

CKD Tips: Roasting concentrates flavors, so you don't need salt. The natural sugars in the peppers and onions caramelize and create their own "seasoning." Bell peppers are one of the best CKD vegetables — low potassium, high in vitamin C (which helps iron absorption — important for anemia). This goes with everything.

Andrew's Notes: Put these on the steak and eggs (#5). Put them on tacos. Put them on rice. Put them in a fajita bowl. This is the universal CKD side dish. Make extra — they keep 4 days in the fridge. The roasted garlic cloves are spreadable and incredible.

SNACKS & DRINKS

16. Homemade Pico de Gallo

GREEN

Servings: 6 (about 1/4 cup each) Prep: 10 min Cook: 0 min

Ingredients

- 4 Roma tomatoes, diced small
- 1/2 white onion, diced fine
- 1 jalapeno, seeded and diced fine (leave seeds in if you want more heat)
- 1/4 cup fresh cilantro, chopped
- Juice of 2 limes
- NO SALT

Instructions

1. Dice the tomatoes. Put in a bowl.
2. Dice the onion. Put in the bowl.
3. Cut the jalapeno in half. Scrape out the seeds with a spoon (unless you want heat). Dice it small. Put in the bowl.
4. Chop the cilantro. Put in the bowl.
5. Squeeze the limes over everything.
6. Stir it up.
7. Let it sit 10 minutes before eating so the flavors come together.
8. Keeps 3-4 days in the fridge.

Nutrition Per Serving (1/4 cup)

Nutrient	Amount	% Daily Limit	Status
Calories	15 kcal	1%	
Sodium	3 mg	0.2%	ZERO
Potassium	130 mg	7%	LOW
Phosphorus	15 mg	2%	LOW
Fluid	~40 mL	3%	LOW
Protein	0.5 g	--	

CKD Tips: Store-bought salsa ranges from 200-400mg sodium per serving. Your pico has 3mg. THREE. And it tastes way better. The lime juice is the secret weapon — it replaces salt and adds brightness. This is free flavor you can put on everything. Wash your hands after handling the jalapeno or you'll regret touching your eyes later.

Andrew's Notes: This is the condiment that makes half this cookbook work. Make a batch on Sunday, use it all week. Goes on eggs, tacos, rice, chicken — everything. Extra lime juice = extra good. If you don't like cilantro (you do), you could use parsley but why would you.

17. "Ghetto Baja Blast"

GREEN

Servings: 1 Prep: 2 min Cook: 0 min

Ingredients

- 8 oz cold water
- Juice of 1/2 lime
- 1 tbsp sugar (or 1 packet Splenda/stevia)
- Ice (optional — remember, ice counts as fluid)

Instructions

1. Put water in a glass.
2. Squeeze the lime in.
3. Add the sugar. Stir until dissolved.
4. Add ice if you want. Drink it.

Nutrition Per Serving

Nutrient	Amount	% Daily Limit	Status
Calories	55 kcal (15 with sugar substitute)	3%	
Sodium	2 mg	0.1%	ZERO

Potassium	25 mg	1%	ZERO
Phosphorus	0 mg	0%	ZERO P
Fluid	~250 mL	17%	TRACK THIS
Protein	0 g	--	

CKD Tips: A large Baja Blast from Taco Bell is 887mL of fluid + 80mg phosphorus (from phosphoric acid). This gives you the lime-sweet fix with ZERO phosphorus in 250mL. Soda is one of the worst things for CKD — phosphoric acid in dark sodas (Coke, Pepsi, Mountain Dew) is inorganic phosphorus that absorbs at 90-100%. This replacement saves your life. Literally. Count the fluid toward your daily limit.

Andrew's Notes: Is it Baja Blast? No. Does it hit the same craving for something cold, sweet, and limey? Close enough. The sugar version tastes better but the Splenda version works fine. Make it in a big cup with lots of ice. Goes with taco night (#20) obviously.

18. Cold Fruit Bowl

GREEN

Servings: 2 Prep: 5 min Cook: 0 min

Ingredients

- 1/2 cup diced apple (about half a medium apple)
- 1/2 cup pineapple chunks (fresh or canned in juice — drain the juice)
- 1/2 cup red grapes, halved
- 1/4 cup blueberries
- 1/4 cup sliced strawberries
- Squeeze of lime (optional)

Instructions

1. Cut up the fruit.
2. Put it in a bowl.
3. Squeeze lime on top if you want.
4. Eat it.

Nutrition Per Serving

Nutrient	Amount	% Daily Limit	Status
Calories	85 kcal	4%	
Sodium	3 mg	0.2%	ZERO
Potassium	175 mg	9%	LOW
Phosphorus	20 mg	3%	LOW
Fluid	~100 mL	7%	LOW
Protein	1 g	--	

CKD Tips: These are the CKD-aware fruits. Apples, pineapple, grapes, blueberries, and strawberries are all LOW potassium. Avoid: bananas (422mg K per banana), oranges (237mg K), kiwi (215mg K), cantaloupe (267mg K). If using canned pineapple, DRAIN the juice — don't drink it (extra potassium + counts as fluid). Fresh is better when possible.

Andrew's Notes: This is the snack. Sweet, cold, refreshing. Make it after dialysis when you feel like garbage and need something that isn't heavy. The lime squeeze on top makes it pop. Keep pre-cut fruit in the fridge so it's grab-and-go when you're too tired to do anything.

19. Crystal Light Popsicles

GREEN

Servings: 6 popsicles Prep: 5 min Freeze: 4-6 hours

Ingredients

- 1 packet Crystal Light (any flavor — Lemonade and Fruit Punch are good)
- 2 cups cold water
- Popsicle molds (or paper cups + popsicle sticks)

Instructions

1. Mix the Crystal Light packet with 2 cups of water in a pitcher. Stir until dissolved.
2. Pour into popsicle molds. Leave a little room at the top — it expands when it freezes.
3. If using paper cups: fill cups 3/4 full. Cover each cup with foil. Poke a popsicle stick through the center of each foil.
4. Put in the freezer. Wait 4-6 hours.
5. To get them out: run warm water on the outside of the mold for 10 seconds. They'll slide out.

Nutrition Per Popsicle

Nutrient	Amount	% Daily Limit	Status
Calories	5 kcal	0%	
Sodium	10 mg	0.5%	ZERO
Potassium	5 mg	0.3%	ZERO
Phosphorus	0 mg	0%	ZERO P
Fluid	~60 mL	4%	LOW
Protein	0 g	--	

CKD Tips: Frozen popsicles count as fluid — about 60mL each. But that's way less than drinking a glass of something (240mL). They last longer too — you suck on a popsicle for 10 minutes vs. chugging a drink in 30 seconds. This is a fluid management hack. Store-bought popsicles often have added phosphorus. These have zero.

Andrew's Notes: The perfect dialysis recovery snack. You come home, you're wiped out, you grab a popsicle. It's cold, it's sweet, it barely counts toward fluid. Make a batch every week. Try different Crystal Light flavors to keep it interesting. The paper cup method works fine if you don't have molds.

WEEKEND TREAT

20. Homemade Taco Night (Full Spread)

GREEN

Servings: 4 Prep: 15 min Cook: 15 min

The meal that replaces a $7.20 Taco Bell run at 410mg Na instead of 2,725mg.

The Spread

- **Seasoned Meat:** 1.5 lbs ground beef (90/10) OR sliced chicken thighs
- **Homemade Taco Seasoning:** 1 tbsp chili powder, 1 tsp cumin, 1 tsp garlic powder, 1/2 tsp onion powder, 1/2 tsp smoked paprika, 1/2 tsp oregano, 1/2 tsp black pepper, pinch of cayenne
- **Shells:** 12 small corn tortillas
- **Toppings:**
  - — Pico de Gallo (#16)
  - — Shredded lettuce
  - — Sliced peppers and onions (#15 or raw)
  - — Fresh cilantro
  - — Lime wedges
  - — Hot sauce (1 tsp = ~120mg Na, use sparingly)
- **Sides:** Spanish Rice (#11), Refried Beans (#12)

Instructions

1. Mix all the taco seasoning spices together in a small bowl.
2. If using ground beef: Put it in a pan. Medium-high heat. Break it up. Cook 7 minutes until browned. Drain the fat.
3. If using chicken: Slice thin, cook in olive oil 4 minutes per side, then chop.
4. Add 1/4 cup water to the meat. Add all the taco seasoning. Stir. Cook 3 minutes until the water cooks off and the meat is coated.
5. Warm the corn tortillas (microwave in damp paper towel 30 seconds, or dry pan 20 seconds per side).
6. Set everything out on the table: meat, tortillas, pico, lettuce, peppers, onions, cilantro, limes.
7. Build your tacos. Eat them.
8. Feel zero guilt.

Nutrition Per Serving (3 tacos with toppings + 1/2 cup rice + 1/3 cup beans)

Nutrient	Amount	% Daily Limit	Status
Calories	620 kcal	31%	
Sodium	410 mg	21%	GOOD
Potassium	640 mg	32%	GOOD
Phosphorus	310 mg	39%	MODERATE
Fluid	~180 mL	12%	LOW
Protein	38 g	--	GREAT

COMPARISON: Taco Bell Supreme Luxe Box vs. Homemade Taco Night

Metric	Taco Bell	Homemade	Savings
Cost	$7.20 + tax	~$3.50/serving	$3.70
Sodium	2,725 mg (136% daily)	410 mg (21%)	-2,315 mg
Potassium	880 mg	640 mg	-240 mg
Phosphorus	700 mg	310 mg	-390 mg
Fluid	1,097 mL (73% daily)	180 mL (12%)	-917 mL
Protein	42 g	38 g	Similar

Translation: You save $3.70, eliminate 2,315mg sodium, and free up 917mL of fluid — that's almost a full day's fluid allowance you get back. And you get more tacos.

CKD Tips: Store-bought taco seasoning packets have 300-400mg sodium PER SERVING. Your homemade version: zero. The entire sodium content of this meal comes from the natural sodium in the meat and tiny amounts in the tortillas. Take a phosphorus binder with this meal since it's the biggest one. If you skip the beans, phosphorus drops to about 220mg.

Andrew's Notes: This is the Saturday night move. Put on some music. Set everything out buffet style. Vespa can make hers however she wants. You make yours with extra pico and cilantro. Have a Ghetto Baja Blast (#17) on the side. You'll never need Taco Bell again. (You'll still go to Taco Bell. But you'll need it less.)

Sample 3-Day Meal Plan

Keeps you under all daily limits every day

DAY 1 — Dialysis Day (Easy Mode)

Meal	What	Na	K	P	Fluid	Protein
Breakfast	Steak and Eggs (#5)	210	580	380	80	48g
Post-Dialysis Snack	Crystal Light Popsicle (#19) x2	20	10	0	120	0g
Dinner	Chicken Ragu over Pasta (#3)	105	580	260	140	36g
Snack	Fruit Bowl (#18)	3	175	20	100	1g
Drink	Ghetto Baja Blast (#17)	2	25	0	250	0g
TOTAL		**340**	**1,370**	**660**	**690**	**85g**

DAY 2 — Regular Day

Meal	What	Na	K	P	Fluid	Protein
Breakfast	Leftover Chicken Tinga (#1) in corn tortillas	200	520	230	120	34g
Lunch	Chicken Fajita Bowl (#6)	125	560	250	110	38g
Dinner	Garden Salad (#14) + leftover Spaghetti (#4)	122	560	175	200	17g
Snack	Apple slices	1	80	10	50	0g
Drink	Water + lime	0	10	0	240	0g
TOTAL		**448**	**1,730**	**665**	**720**	**89g**

DAY 3 — Taco Night

Meal	What	Na	K	P	Fluid	Protein
Breakfast	One-Pan Chicken and Rice (#9) — leftovers	115	510	255	130	35g
Lunch	CKD Caesar Salad (#13) + leftover chicken	75	340	155	120	22g
Dinner	Homemade Taco Night (#20)	410	640	310	180	38g
Snack	Crystal Light Popsicle (#19)	10	5	0	60	0g
Drink	Water	0	0	0	240	0g
TOTAL		**610**	**1,495**	**720**	**730**	**95g**

Note: All three days stay well under every limit. You have room for a KitKat (~70mg Na, 60mg K, 45mg P) or half a Snickers (~75mg Na, 85mg K, 50mg P) on any of these days without blowing a single budget. Treats are fine when the rest of your day is clean.

Quick Reference Cheat Sheet

Sodium Swaps That Save Your Life

Instead of This	Na (mg)	Use This	Na (mg)	Saved
Store taco seasoning packet	400	Homemade spice blend	0	400mg
Canned refried beans (1/2 cup)	580	Homemade from dry (#12)	8	572mg
Jarred marinara (1/2 cup)	480	No-salt crushed tomatoes	15	465mg
Flour tortilla (10")	480	Corn tortilla (small)	12	468mg
Bottled Caesar dressing	360	Lemon-olive oil (#13)	0	360mg
Store-bought salsa	280	Homemade pico (#16)	3	277mg
Chicken broth (1 cup)	860	Water + spices	0	860mg
Soy sauce (1 tbsp)	1,000	Low-sodium soy (1 tbsp)	575	425mg
Parmesan (1 oz)	450	Skip it (use lemon + herbs)	0	450mg

The Kidney-Aware Pantry Essentials

Always Have	Why
No-salt-added canned tomatoes (crushed + diced)	Base for 6+ recipes in this book
No-salt-added tomato paste	Spanish rice, sauces
White rice (long grain)	Lowest K and P grain
White pasta (spaghetti, penne)	Low P, good energy
Corn tortillas (small)	12mg Na each vs 480mg flour
Olive oil	Healthy fat, zero Na/K/P
Limes (buy 6-8 per week)	Replaces salt on everything
Garlic (fresh + powder)	Flavor without sodium
Cumin, chili powder, paprika, oregano	Your main seasoning rotation
Dry pinto beans	Soak to remove K, way cheaper than canned
Crystal Light packets	Popsicles + drinks, zero P

Phosphorus Binder Reminder

Meal Type	Take Binder?	Why
High-protein meals (steak, eggs, taco night)	YES	Protein = phosphorus. Take with first bite.
Salads, fruit, popsicles	SKIP	Almost zero phosphorus. Save your binders.
Pasta/rice meals with meat	YES	Meat adds P. Take it.
Anything from a restaurant	ALWAYS	Hidden phosphorus additives everywhere.

Weekly Grocery Shopping List

Covers 7 days of meals from this cookbook. Estimated total: $45-55

Protein

- 3 lbs boneless skinless chicken thighs
- 1.25 lbs boneless skinless chicken breast
- 1 lb lean ground beef (90/10)
- 1 lb flank steak or sirloin
- 1 dozen large eggs

Produce

- 6-8 bell peppers (mixed colors)
- 4-5 medium onions (white or yellow)
- 2 heads garlic (you go through a lot)
- 8-10 Roma tomatoes
- 2-3 jalapenos
- 2 heads romaine lettuce
- 1 cucumber
- 8-10 limes (seriously, buy a bag)
- 1 lemon
- 2 bunches fresh cilantro
- 2 apples
- 1 pineapple (or 1 can in juice)
- 1 bunch grapes (red)
- 1 pint blueberries
- 1 pint strawberries

Pantry (buy once, lasts weeks)

- White long-grain rice (2 lb bag)
- White spaghetti (1 lb box)
- No-salt-added crushed tomatoes (2 cans, 28 oz each)
- No-salt-added diced tomatoes (1 can, 14.5 oz)
- No-salt-added tomato paste (1 small can)
- Dry pinto beans (1 lb bag)
- Small corn tortillas (2 packages, ~24 total)
- Olive oil (if running low)
- 1 small can chipotle peppers in adobo (use 1 pepper, freeze the rest in ice cube tray)

Spices (buy once, lasts months)

- Cumin (ground)
- Chili powder
- Smoked paprika
- Garlic powder
- Onion powder
- Oregano (dried)
- Italian seasoning
- Black pepper
- Rosemary or thyme (dried)
- Ground ginger
- Cayenne pepper

Other

- Low-sodium soy sauce (Kikkoman Less Sodium — 1 bottle lasts months)
- Sesame oil (small bottle — lasts months)
- Red wine vinegar (or white vinegar)
- Sugar (small bag) or Splenda/stevia packets
- Crystal Light packets (variety pack)

Optional Treats

- KitKat bars (fun size — ~70mg Na, 45mg P each)
- Snickers bars (fun size — ~75mg Na, 50mg P each)

Shopping Tips:

- Buy chicken thighs in bulk (3+ lbs) and freeze in 1.5 lb portions. Way cheaper.
- Check the label on EVERYTHING for sodium. "No salt added" is your phrase.
- The spice aisle is a one-time investment. $15-20 sets you up for months.
- Corn tortillas are in the refrigerated section, not the bread aisle, at most stores.
- Buy limes in the bag — usually 8-10 for $2-3. You'll use them all.
- Freeze leftover chipotle peppers individually in an ice cube tray, then pop them into a freezer bag. One pepper per recipe.

Andrew's Favorites ESRD Cookbook | 20 Recipes

Generated 2026-03-19 | Made with care for hemodialysis patients who still want to eat good food.

Disclaimer: This cookbook is for informational purposes. Always consult your nephrologist and renal dietitian for personalized dietary advice. Nutritional values are estimates based on USDA data and may vary by brand and preparation.

CHAPTER 27

Holiday Foods

"Every holiday deserves a plate worth remembering."

4th of July, Thanksgiving, Christmas, Easter & More

"Every holiday deserves a plate worth remembering."

> *"Cooking is like love. It should be entered into with abandon or not at all."* — *Harriet Van Horne*

Same holidays. Same plates. Same memories. Different math.

4TH OF JULY / SUMMER BBQ

1. Summer Pulled Chicken Sliders

Same smoke, same slaw, same slider bun. No sodium bomb.

Ingredient	Amount	CKD Notes
Boneless skinless chicken thighs	2 lbs	Thighs > breast — more flavor, similar P
Avocado oil	1 tbsp	
Smoked paprika	1 tbsp	The smoke lives here
Garlic powder	1 tsp	
Onion powder	1 tsp	
Cumin	1/2 tsp	
Black pepper	1/2 tsp	
Cayenne	1/4 tsp	
Salt	1/4 tsp	

Homemade CKD BBQ Sauce:

Ingredient	Amount	CKD Notes
No-salt-added tomato paste	3 tbsp	The base — zero sodium
Water	1/4 cup	
Apple cider vinegar	2 tbsp	Tang without Na
Brown sugar	2 tbsp	
Smoked paprika	1 tsp	
Garlic powder	1/2 tsp	
Onion powder	1/2 tsp	
Worcestershire sauce	1 tsp	Only 1 tsp — controlled Na
Liquid smoke	1/4 tsp	Optional — deepens char flavor

Sliders:

Ingredient	Amount	CKD Notes
Small slider buns (or sourdough rounds)	8	Sourdough if available — lower P
CKD Coleslaw (Recipe #2)	For topping	

Method: 1. Rub chicken thighs with oil + all dry spices. Let sit 30 min minimum. 2. **Oven method:** 325F for 2.5 hours, covered, until shreds easily. **Slow cooker:** Low 6-7 hours. 3. Shred with two forks. Mix BBQ sauce ingredients in a saucepan, simmer 5 min. 4. Toss shredded chicken with BBQ sauce. Pile onto slider buns, top with coleslaw.

Per slider (with bun + slaw): ~160mg Na | ~130mg P | ~210mg K

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2. Picnic Coleslaw

Creamy, tangy, crunchy. No store-bought dressing anywhere near this.

Ingredient	Amount	CKD Notes
Green cabbage, shredded	4 cups	Low K vegetable — ideal for CKD
Carrot, shredded	1/2 cup	Small amount — moderate K
Mayonnaise	1/3 cup	Regular mayo is fine — low P/K
Apple cider vinegar	2 tbsp	
Sugar	1 tbsp	
Celery seed	1/2 tsp	Flavor without the celery (high K)
Black pepper	1/4 tsp	
Salt	1/8 tsp	

Method: Toss cabbage and carrot. Whisk mayo + vinegar + sugar + celery seed + pepper + salt. Pour over cabbage, toss well. Refrigerate 1 hour minimum — gets better overnight. Serve cold on sliders or as a side.

Per 1/2 cup serving: ~65mg Na | ~20mg P | ~95mg K

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3. Summer Corn on the Cob

The potassium in corn is real. The trick: boil it out.

Ingredient	Amount	CKD Notes
Ears of corn	4	Fresh, not canned (canned = Na bomb)
Water	Large pot, enough to submerge	The leaching medium
Margarine	2 tbsp	Lower P than butter
Salt	Pinch per ear	
Black pepper	To taste	
Chili powder	Optional sprinkle	Elote-adjacent

Method: 1. **LEACH:** Husk corn. Cut each ear in half. Submerge in cold water for 2 hours, changing water once at the 1-hour mark. This pulls out ~30-40% of the potassium. 2. Drain. Bring a fresh pot of water to boil. Boil corn 8-10 min until tender. 3. Drain. Brush with margarine, hit with salt + pepper. Optional: dust with chili powder for a smoky-sweet finish.

Per ear (leached): ~5mg Na | ~60mg P | ~150mg K (vs ~250mg K unleached)

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4. Red White & Blue Popsicles

Layered. Patriotic. Cold. Zero guilt.

Ingredient	Amount	CKD Notes
Strawberries, hulled	1 cup	Lower K fruit — CKD-approved
Sugar	2 tbsp (divided)	
Water	2 tbsp	
Vanilla layer: Unsweetened almond milk	1 cup	Low P, low K
Vanilla extract	1 tsp	
Sugar	1 tbsp	
Blueberries	1/2 cup	Moderate K — small amount is fine
Sugar	1 tbsp	
Water	2 tbsp	

Method: 1. **Red layer:** Blend strawberries + 1 tbsp sugar + 2 tbsp water until smooth. Pour into popsicle molds, filling 1/3. Freeze 1 hour until firm. 2. **White layer:** Whisk almond milk + vanilla + sugar. Pour over frozen red layer, filling to 2/3. Freeze 1 hour. 3. **Blue layer:** Blend blueberries + 1 tbsp sugar + 2 tbsp water. Pour over frozen white layer. Insert sticks. Freeze 4+ hours until solid. 4. To unmold: run warm water over outside of mold for 10 seconds.

Per popsicle (makes 6): ~2mg Na | ~15mg P | ~65mg K

THANKSGIVING

5. Holiday Roast Turkey Breast

Whole bird is for show. Bone-in breast is for portion control and not eating 14oz of protein in one sitting.

Ingredient	Amount	CKD Notes
Bone-in turkey breast	3-4 lbs	FRESH, not injected — check label
Avocado oil	2 tbsp	
Garlic powder	1 tsp	
Onion powder	1 tsp	
Smoked paprika	1 tsp	
Dried sage	1 tsp	Thanksgiving in a spice
Dried thyme	1/2 tsp	
Dried rosemary, crushed	1/2 tsp	
Black pepper	1/2 tsp	
Salt	1/2 tsp	Entire breast — distributes thin
Margarine, softened	2 tbsp	Goes under skin

Method: 1. Pat turkey breast dry. Gently loosen skin from meat with fingers. 2. Mix softened margarine with half the spices. Spread under the skin directly on meat. 3. Rub outside with avocado oil + remaining spices. 4. Place on rack in roasting pan. Roast at 325F, approximately 20 min per pound. A 3.5 lb breast takes about 1 hr 10 min. Internal temp 165F at thickest point. 5. Rest 15 min, tented with foil. Slice thin. **Portion: 3-4oz per CKD serving.**

Per 4oz serving: ~120mg Na | ~190mg P | ~280mg K

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6. Cornbread Stuffing

Baked in a pan, not inside a bird. Easier, safer, crispier edges.

Ingredient	Amount	CKD Notes
CKD Cornbread (cubed, dried)	4 cups	Homemade with Rumford BP — see note
Sourdough bread, cubed, dried	2 cups	Lower P bread choice
Margarine	3 tbsp	
Onion, diced	1/2 cup	
Celery, diced	1/4 cup	Small amount — moderate K
Garlic	2 cloves, minced	
Dried sage	1 tsp	
Dried thyme	1/2 tsp	
Black pepper	1/2 tsp	
Salt	1/4 tsp	
Low-sodium chicken broth	1 cup	Moistens without Na overload
Egg	1, beaten	Binder

CKD Cornbread (for stuffing base):

Ingredient	Amount
Cornmeal	1 cup
All-purpose flour	1 cup

Ingredient	Amount
Phosphorus-free baking powder (Rumford)	1 tbsp
Sugar	2 tbsp
Salt	1/4 tsp
Egg	1
Unsweetened almond milk	1 cup
Avocado oil	1/4 cup

Method: 1. **Cornbread first:** Mix dry, mix wet, combine. Pour into greased 8x8 pan. Bake 400F 20-22 min. Cool, cube, spread on sheet pan to dry overnight (or 250F oven for 30 min). 2. **Stuffing:** Melt margarine. Saute onion + celery + garlic 5 min. Add sage + thyme + pepper + salt. 3. Toss sauteed veg with cubed cornbread + sourdough in a large bowl. Pour broth + egg over. Fold gently — don't mash. 4. Spread in greased 9x13 pan. Bake 375F for 30-35 min until top is golden and edges crisp.

Per serving (serves 8): ~140mg Na | ~80mg P | ~110mg K

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7. Fresh Cranberry Sauce

Ocean Spray canned: ~200mg Na per serving. This: ~5mg. Same color. Better taste.

Ingredient	Amount	CKD Notes
Fresh cranberries	12 oz bag (1 bag)	Low K fruit — renal-aware
Sugar	3/4 cup	Cranberries are brutally tart without it
Water	1/2 cup	
Orange zest	1 tsp	Flavor without the juice (juice = K)
Cinnamon stick	1	Optional warmth

Method: Combine sugar + water in saucepan. Bring to boil, stir until sugar dissolves. Add cranberries + orange zest + cinnamon stick. Return to boil, then reduce to simmer. Cook 10-12 min, stirring occasionally, until cranberries burst and sauce thickens. Remove cinnamon stick. Cool — it thickens more as it chills. Serve room temp or cold.

Per 2 tbsp serving: ~5mg Na | ~5mg P | ~20mg K

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8. Green Bean Casserole

The cream of mushroom substitute changes everything. No canned soup, no phosphate additives.

Ingredient	Amount	CKD Notes
Fresh green beans	1 lb, trimmed, cut to 2"	FRESH or frozen, never canned
White mushrooms, sliced	8 oz	
Margarine	2 tbsp	
All-purpose flour	2 tbsp	
Unsweetened almond milk	1 cup	Low-P cream sub
Garlic	2 cloves, minced	
Onion powder	1/2 tsp	
Black pepper	1/4 tsp	
Salt	1/4 tsp	
French fried onions	1/2 cup	The non-negotiable topping

Method: 1. **Blanch green beans:** Boil 5 min, then ice bath. Drain. (Blanching leaches some K too.) 2. **Mushroom cream sauce:** Melt margarine. Saute mushrooms 5-6 min until golden. Add garlic, cook 30 sec. Sprinkle flour, stir 1 min. Slowly whisk in almond milk. Add onion powder + pepper + salt. Simmer until thick (3-4 min). 3. Fold blanched green beans into mushroom sauce. Pour into greased 2-qt baking dish. 4. Top with fried onions. Bake 375F for 20-25 min until bubbly, onions golden.

Per serving (serves 6): ~110mg Na | ~55mg P | ~160mg K

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9. Pumpkin Pie

Pumpkin is moderate K. Portion control + leaning on spice = safe and worth it.

Crust (with GF option):

Ingredient	Amount	CKD Notes
All-purpose flour (or GF 1:1 blend)	1.25 cups	GF blend works with Rumford BP
Salt	1/4 tsp	
Sugar	1 tsp	
Cold margarine, cubed	1/2 cup	
Ice water	3-4 tbsp	Just enough to bind

Filling:

Ingredient	Amount	CKD Notes
Canned pumpkin puree (NOT pie filling)	15 oz can	Pure pumpkin — no added sugar/spice
Sugar	1/2 cup	
Eggs	2	
Unsweetened almond milk	1 cup	Instead of evaporated milk — massive P savings
Cinnamon	1.5 tsp	
Ground ginger	1/2 tsp	
Nutmeg	1/4 tsp	
Allspice	1/4 tsp	
Cloves	1/8 tsp	
Vanilla extract	1 tsp	
Salt	1/4 tsp	

Method: 1. **Crust:** Pulse flour + salt + sugar in food processor. Add cold margarine cubes, pulse until pea-sized. Drizzle ice water, pulse until dough just holds together. Wrap, chill 30 min. Roll out, fit into 9" pie dish. Crimp edges. 2. **Filling:** Whisk pumpkin + sugar + eggs + almond milk + all spices + vanilla + salt until smooth. 3. Pour into unbaked crust. Bake 425F for 15 min, then reduce to 350F and bake 40-45 min until center is set (slight jiggle is OK — it firms as it cools). 4. Cool completely before slicing. **Serve with a small dollop of whipped topping** (Cool Whip is lower P than real whipped cream).

Per slice (serves 8): ~130mg Na | ~85mg P | ~180mg K

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10. Sweet Potato Casserole

Sweet potatoes are a potassium grenade. Leaching defuses it.

Ingredient	Amount	CKD Notes
Sweet potatoes	2 lbs (about 3 medium)	MUST be leached — see method
Margarine	2 tbsp	
Brown sugar	3 tbsp	
Unsweetened almond milk	1/4 cup	
Vanilla extract	1 tsp	
Cinnamon	1 tsp	
Nutmeg	1/4 tsp	
Salt	1/8 tsp	

Pecan Topping:

Ingredient	Amount	CKD Notes
Pecans, chopped	1/3 cup	Small amount — nuts are high P/K but 1/3 cup spread over 8 servings is minimal
Brown sugar	2 tbsp	
All-purpose flour	2 tbsp	
Margarine, melted	1 tbsp	
Cinnamon	1/4 tsp	

Method: 1. **LEACH:** Peel sweet potatoes. Cut into 1/2" cubes. Submerge in cold water for 4 hours minimum, changing water at least twice. This pulls out ~40-50% of the potassium. Drain and rinse. 2. Boil leached sweet potatoes in fresh water until very tender (15-18 min). Drain thoroughly. 3. Mash with margarine + brown sugar + almond milk + vanilla + cinnamon + nutmeg + salt. Spread into greased 8x8 baking dish. 4. **Topping:** Mix pecans + brown

sugar + flour + melted margarine + cinnamon. Sprinkle over sweet potato mash. 5. Bake 350F for 25-30 min until topping is golden and edges bubble.

Per serving (serves 8): ~45mg Na | ~50mg P | ~200mg K (vs ~450mg K unleached)

CHRISTMAS / WINTER HOLIDAYS

11. Honey-Glazed Holiday Roast

Same glaze works on turkey breast, beef roast, or lamb leg. Skip pork if you can.

Ingredient	Amount	CKD Notes
Bone-in turkey breast OR beef eye of round	3-4 lbs	Turkey = lowest Na/P option. Beef = Andrew's preference. Both take the glaze beautifully.

Honey Glaze:

Ingredient	Amount	CKD Notes
Honey	1/3 cup	
Brown sugar	2 tbsp	
Dijon mustard	1 tbsp	Small amount — controlled Na
Apple cider vinegar	1 tbsp	
Cinnamon	1/2 tsp	
Ground cloves	1/4 tsp	Christmas in a pinch
Black pepper	1/4 tsp	

Method: 1. Score the surface in a diamond pattern, about 1/4" deep. Place in roasting pan. 2. Mix all glaze ingredients. Brush half the glaze over meat. 3. Roast 325F, about 20 min per pound. Baste with remaining glaze every 30 min. 4. Internal temp: Turkey 165F, Beef 135F (medium). Rest 15 min before slicing. **Portion: 3-4oz per CKD serving.**

Per 3oz serving (turkey): ~120mg Na | ~140mg P | ~220mg K **Per 3oz serving (beef):** ~150mg Na | ~170mg P | ~260mg K

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12. Christmas Prime Rib

"The only roast worth setting an alarm for."

Ingredient	Amount	CKD Notes
Bone-in beef prime rib roast	4-5 lbs (2-3 bones)	~2 servings per bone. Buy USDA Choice or Prime.
Garlic	8 cloves, minced	
Fresh rosemary	2 tbsp, chopped	
Fresh thyme	1 tbsp, chopped	
Black pepper	1 tbsp (coarse ground)	Generous — this is the crust
Salt	1 tsp	Less than restaurant — the beef speaks for itself
Olive oil	2 tbsp	
Margarine	2 tbsp, softened	Mix into herb paste

Method: 1. Pull roast from fridge 1 hour before cooking (room temp = even cooking) 2. Mix garlic + rosemary + thyme + pepper + salt + olive oil + margarine into a paste 3. Rub paste all over the roast, pressing into every surface 4. Place bone-side down in roasting pan (bones = natural rack) 5. Roast 500F for 15 minutes (sear the crust) 6. Drop to 325F. Roast ~15 min per pound for medium-rare (internal 130F) 7. Pull at 125F — it rises 5-10 degrees while resting 8. Rest 20 minutes minimum, tented with foil. **Do not skip this.** 9. Slice between bones for bone-in portions, or off the bone for slices

Au Jus (from drippings): Pour pan drippings through strainer. Add 1 cup low-sodium beef broth. Simmer 5 min. Season with pepper. Serve in a small bowl for dipping.

Per 4oz serving: ~180mg Na | ~200mg P | ~300mg K. The king of Christmas dinner.

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13. Almond Milk Eggnog

Traditional eggnog is a phosphorus and potassium double-tap. This version is velvet.

Ingredient	Amount	CKD Notes
Unsweetened almond milk	3 cups	The P/K savings are massive vs dairy
Egg yolks	3	Yolks only — lower P than whole eggs
Sugar	1/3 cup	
Vanilla extract	1.5 tsp	
Ground nutmeg	1/2 tsp + more for garnish	
Cinnamon	1/4 tsp	
Salt	Pinch	
Heavy cream	1/4 cup	Small amount for richness — controlled

Method: 1. Whisk egg yolks + sugar in a bowl until pale and thick (2 min). 2. Heat almond milk + cream in a saucepan until steaming (NOT boiling). 3. **Temper:** Slowly pour 1/2 cup hot milk into egg mixture, whisking constantly. Then pour egg mixture back into saucepan. 4. Cook over medium-low, stirring constantly, until mixture coats the back of a spoon (170F). Do NOT boil or eggs will scramble. 5. Strain through fine mesh. Stir in vanilla + nutmeg + cinnamon + salt. 6. Chill 4+ hours. Serve cold with fresh nutmeg grated on top.

Spiked version: Add 1-2 tbsp bourbon or dark rum per serving. *Clear with your doctor if you're on a restricted diet.*

Per 6oz serving (non-alcoholic, serves 6): ~40mg Na | ~50mg P | ~80mg K

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13. Sugar Cookies (Vorathic Rainbow Icing)

Cutout cookies. Decorated in spectral color. Sacred geometry optional but encouraged.

Ingredient	Amount	CKD Notes
All-purpose flour	2.5 cups	
Phosphorus-free baking powder (Rumford)	1 tsp	
Salt	1/4 tsp	
Margarine, softened	3/4 cup	
Sugar	3/4 cup	
Egg	1	
Vanilla extract	1.5 tsp	
Almond extract	1/4 tsp	The secret — subtle depth

Vorathic Royal Icing:

Ingredient	Amount	CKD Notes
Powdered sugar	3 cups	
Meringue powder	2 tbsp	Available at craft stores
Water	5-6 tbsp	Adjust for consistency
Gel food coloring	Red, orange, yellow, green, blue, violet	The full rainbow spectrum

Method: 1. Whisk flour + BP + salt. Cream margarine + sugar until fluffy (KitchenAid, paddle attachment, medium 3 min). Add egg + vanilla + almond extract. Mix. Gradually add flour mixture. Mix until just combined. 2. Divide dough in half. Wrap in plastic. Chill 1 hour minimum. 3. Roll to 1/4" thick on floured surface. Cut shapes. Place on parchment-lined sheet pans. 4. Bake 350F 8-10 min — edges barely golden, centers still soft. Cool on pan 5 min, then wire rack completely. 5. **Icing:** Beat meringue powder + water until foamy. Add powdered sugar. Beat 5-7 min until stiff peaks. Divide into 6-7 bowls. Color each with gel coloring across the full spectrum. Pipe outlines, flood interiors. Layer colors for rainbow gradients. Let dry 6-8 hours.

Per cookie (makes ~24): ~55mg Na | ~15mg P | ~15mg K

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14. Gingerbread Cookies

Warm spice, firm snap, no phosphate baking powder.

Ingredient	Amount	CKD Notes
All-purpose flour	3 cups	

Ingredient	Amount	CKD Notes
Phosphorus-free baking powder (Rumford)	1 tsp	
Baking soda	1/4 tsp	Small amount is fine
Ground ginger	2 tsp	The star
Cinnamon	1.5 tsp	
Cloves	1/2 tsp	
Nutmeg	1/4 tsp	
Salt	1/4 tsp	
Margarine, softened	1/2 cup	
Brown sugar	1/2 cup	
Molasses	1/3 cup	Moderate K — controlled quantity
Egg	1	
Vanilla extract	1 tsp	

Method: 1. Whisk flour + BP + baking soda + all spices + salt. 2. Cream margarine + brown sugar (KitchenAid, 3 min). Add molasses + egg + vanilla. Mix. 3. Gradually add flour mixture. Dough will be stiff. Wrap, chill 2 hours minimum (overnight better — spice deepens). 4. Roll 1/4" thick. Cut shapes (gingerbread men, stars, trees). Bake 350F 10-12 min until firm edges. 5. Cool completely. Decorate with royal icing (Recipe #13) if desired.

Per cookie (makes ~30): ~50mg Na | ~15mg P | ~35mg K

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15. Almond Milk Hot Cocoa

Regular hot cocoa with dairy milk: ~250mg P per mug. This: under 50.

Ingredient	Amount	CKD Notes
Unsweetened almond milk	1 cup	The entire P savings is this swap
Unsweetened cocoa powder	1 tbsp	Pure cocoa — no mix (mixes have phosphate additives)
Sugar	1-2 tbsp (to taste)	
Vanilla extract	1/4 tsp	
Salt	Tiny pinch	Opens up the chocolate flavor
Mini marshmallows	Small handful	Optional — low P/K

Method: Whisk cocoa powder + sugar + salt with 2 tbsp of the almond milk in a mug to form a smooth paste (no lumps). Heat remaining almond milk until steaming. Pour into mug, stir. Add vanilla. Top with marshmallows. Drink immediately.

Mocha version: Add 1 shot espresso. *Check fluid allowance with your team.*

Per mug: ~15mg Na | ~40mg P | ~70mg K

EASTER / SPRING

16. Deviled Eggs

The church potluck staple. Lower-P filling, same tang.

Ingredient	Amount	CKD Notes
Eggs	6 large, hard-boiled	Each yolk: ~65mg P. 2 halves per serving = 1 yolk = manageable
Mayonnaise	3 tbsp	Low P
Yellow mustard	1 tsp	
Apple cider vinegar	1 tsp	
Sugar	1/2 tsp	The Southern secret
Salt	1/8 tsp	
Black pepper	1/4 tsp	
Paprika	For garnish	Smoked paprika if you're serious

Method: 1. Hard-boil eggs: Place in single layer, cover with cold water by 1". Bring to boil. Cover, remove from heat, let sit 12 min. Ice bath immediately. 2. Peel. Halve lengthwise. Scoop yolks into bowl. 3. Mash yolks with mayo + mustard + vinegar + sugar + salt + pepper until smooth and creamy. No lumps. 4. Pipe or spoon filling back into whites. Dust with paprika. 5. Chill 30 min before serving. Best same day.

Per 2 halves (1 egg): ~95mg Na | ~65mg P | ~65mg K

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17. Herb-Crusted Lamb Chops

Easter Sunday centerpiece. Elegant. Simple. The herb crust is the whole show.

Ingredient	Amount	CKD Notes
Lamb loin chops	8 chops (about 2 lbs)	Loin chops — leaner, easier to portion
Avocado oil	2 tbsp	
Garlic	3 cloves, minced	
Fresh rosemary, chopped	2 tbsp	
Fresh thyme leaves	1 tbsp	
Fresh mint, chopped	1 tbsp	Lamb + mint is canon
Dijon mustard	1 tbsp	The glue for the herb crust
Panko breadcrumbs	1/3 cup	
Black pepper	1/2 tsp	
Salt	1/4 tsp	
Lemon zest	1 tsp	Brightness

Method: 1. Pat lamb chops dry. Season both sides with salt + pepper. 2. Heat avocado oil in cast iron, screaming hot. Sear chops 2 min per side for a hard crust. Remove from pan. 3. Mix garlic + rosemary + thyme + mint + panko + lemon zest in a bowl. 4. Brush one side of each seared chop with Dijon mustard. Press herb-panko mixture firmly onto the mustard side. 5. Place herb-side up on sheet pan. Roast 400F for 8-10 min (medium-rare, 130F internal) or 12-14 min (medium, 140F). 6. Rest 5 min. **Serve 2 chops per CKD portion.**

Per 2 chops: ~150mg Na | ~175mg P | ~270mg K

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18. Lemon Bars

Bright. Tart. Buttery shortbread base. Spring on a plate.

Shortbread Base:

Ingredient	Amount	CKD Notes
All-purpose flour	1 cup	
Powdered sugar	1/4 cup	
Margarine, softened	1/2 cup	Lower P than butter
Salt	1/8 tsp	

Lemon Filling:

Ingredient	Amount	CKD Notes
Eggs	2	
Sugar	3/4 cup	
All-purpose flour	2 tbsp	Thickener
Fresh lemon juice	1/4 cup (~2 lemons)	Lemon is low K citrus
Lemon zest	1 tbsp	Where the lemon LIVES
Phosphorus-free baking powder (Rumford)	1/4 tsp	
Powdered sugar	For dusting	

Method: 1. **Base:** Mix flour + powdered sugar + salt. Cut in margarine until crumbly. Press into greased 8x8 pan. Bake 350F for 15 min until edges just start to turn golden. 2. **Filling:** Whisk eggs + sugar + flour + lemon juice + zest + BP until smooth. 3. Pour filling over hot crust immediately out of the oven. Return to oven. Bake 20-22 min until filling is set (no jiggle). 4. Cool completely in pan. Refrigerate 2 hours. Dust with powdered sugar. Cut into 12 bars.

Per bar (makes 12): ~60mg Na | ~30mg P | ~30mg K

WORLD HOLIDAY FEAST — International Celebratory Foods

"Every civilization figured out the same truth: the sacred meal is the oldest technology."

The calendar is wider than one country. Lunar New Year, Diwali, Eid, Hanukkah, Nowruz, Dia de los Muertos, Juneteenth — every culture built its holiest moments around a table. Nobody is exempted from the global feast. The math just needs adjusting.

All recipes below: Na<1500mg, K<2000mg, P<800mg daily targets. Kosher and halal notes where applicable. No pork in anything.

LUNAR NEW YEAR (Chinese / Vietnamese / Korean)

19. Chicken Potstickers

Gold ingots on a plate. Wealth, luck, and 140mg sodium per three dumplings.

Homemade Wrappers:

Ingredient	Amount	CKD Notes
All-purpose flour	2 cups	
Boiling water	3/4 cup	Hot-water dough = pliable, easy to work
Salt	1/4 tsp	

Chicken Filling:

Ingredient	Amount	CKD Notes
Ground chicken	1 lb	No pork — chicken is lower P
Napa cabbage, finely chopped	1 cup	Low K, high crunch
Green onion, sliced	2 tbsp	Flavor without the K load of regular onion
Fresh ginger, grated	1 tbsp	
Garlic, minced	2 cloves	
Sesame oil	1 tbsp	The soul of the dumpling
Low-sodium soy sauce	1 tbsp	Entire batch — distributes thin
Rice vinegar	1 tsp	
White pepper	1/4 tsp	

Dipping Sauce:

Ingredient	Amount	CKD Notes
Low-sodium soy sauce	1 tbsp	Split across servings
Rice vinegar	2 tbsp	
Sesame oil	1/2 tsp	
Fresh ginger, grated	1/4 tsp	
Chili flake	Pinch	Optional heat

Method: 1. **Wrappers:** Mix flour + salt. Pour boiling water in, stir with chopsticks until shaggy. Knead 8-10 min until smooth and elastic. Cover, rest 30 min. Roll into a log, cut 30 pieces, roll each into a thin 3.5" circle. 2. **Filling:** Squeeze excess water from cabbage. Mix all filling ingredients until combined — don't overwork. 3. Place 1 heaping tsp filling in center of each wrapper. Fold in half, pleat one edge, press to seal firmly. 4. **Pan-fry:** Heat 1 tbsp avocado oil in nonstick skillet over medium-high. Place dumplings flat-side down. Cook 2 min until golden. Add 1/3 cup water, cover immediately. Steam 5-6 min until water evaporates and bottoms re-crisp. 5. Serve with dipping sauce. **Portion: 5-6 dumplings per CKD serving.**

Per 5 dumplings + sauce: ~140mg Na | ~95mg P | ~120mg K

20. Longevity Noodles

Long uncut noodles = long life. Cut them and you cut your luck. Stir-fry them and you eat like an emperor.

Ingredient	Amount	CKD Notes
Lo mein noodles or thin spaghetti	8 oz	Do not break — long noodles = long life
Boneless skinless chicken thigh, sliced thin	8 oz	
Napa cabbage, shredded	2 cups	Low K base veg
Carrot, julienned	1/2 cup	Moderate K — small amount
Green onion, sliced	1/4 cup	
Garlic, minced	3 cloves	
Fresh ginger, grated	1 tsp	
Avocado oil	2 tbsp	High smoke point for wok cooking

Sauce:

Ingredient	Amount	CKD Notes
Low-sodium soy sauce	2 tbsp	Entire batch
Sesame oil	1 tbsp	
Rice vinegar	1 tbsp	
Brown sugar	1 tsp	Balances salt
White pepper	1/4 tsp	

Method: 1. Cook noodles 1 min under package time — they finish in the wok. Drain, toss with 1 tsp sesame oil to prevent sticking. **Do not cut the noodles.** 2. Mix sauce ingredients in a small bowl. 3. Heat avocado oil in wok or large skillet over high heat until smoking. Stir-fry chicken 3-4 min until cooked through. Remove. 4. Same wok: stir-fry garlic + ginger 30 sec. Add cabbage + carrot. Stir-fry 2-3 min until just tender. 5. Return chicken. Add noodles + sauce. Toss everything together 1-2 min until noodles absorb sauce. Top with green onion.

Per serving (serves 4): ~180mg Na | ~160mg P | ~250mg K

DIWALI (Indian)

21. Festival Chicken Biryani

The festival of lights deserves the king of rice dishes. Layered, aromatic, no shortcuts.

Ingredient	Amount	CKD Notes
Basmati rice	1.5 cups, rinsed well	Rinse 5x — removes surface starch + some P
Boneless skinless chicken thighs	1.5 lbs, cut to 1.5" pieces	
Plain yogurt	1/3 cup	Small amount — controlled P. *Not mixed with meat at the table for kosher-style service.*
Avocado oil or ghee	3 tbsp	
Onion, thinly sliced	1 large	Caramelized = the backbone
Garlic, minced	4 cloves	
Fresh ginger, grated	1 tbsp	
Cinnamon stick	1	
Cardamom pods	4, lightly crushed	
Whole cloves	4	
Bay leaves	2	
Cumin seeds	1 tsp	
Turmeric	1/2 tsp	
Garam masala	1 tsp	
Cayenne	1/4 tsp	
Salt	1/2 tsp (divided)	
Saffron threads	Pinch, soaked in 2 tbsp warm almond milk	The color of Diwali
Fresh cilantro	For garnish	
Fresh mint	For garnish	

Method: 1. **Marinate chicken:** Toss chicken with yogurt + turmeric + garam masala + cayenne + 1/4 tsp salt. Refrigerate 1-2 hours minimum. 2. **Parboil rice:** Bring large pot of water to boil. Add rice + cinnamon stick + cardamom + cloves + bay leaves. Boil 5 min (70% cooked — still firm). Drain, remove whole spices and set aside. 3. **Caramelize onions:** Heat oil in heavy-bottom

pot or Dutch oven. Fry sliced onion on medium 15-20 min until deep golden brown. Remove half for garnish. 4. Add garlic + ginger + cumin seeds to remaining onions. Cook 1 min. Add marinated chicken. Cook 5 min, stirring, until chicken is opaque outside. 5. **Layer:** Spread chicken in even layer. Top with parboiled rice. Drizzle saffron milk over rice. Sprinkle remaining 1/4 tsp salt. 6. Cover with tight-fitting lid (seal edges with foil if needed). Cook on lowest heat 25 min. Do not open the lid. 7. Remove from heat, let sit covered 5 min. Fluff gently with fork. Garnish with reserved fried onions + cilantro + mint.

Per serving (serves 6): ~170mg Na | ~190mg P | ~310mg K

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22. Gulab Jamun

Milk-powder doughnut holes drowning in rose syrup. Diwali's sweetest prayer.

Ingredient	Amount	CKD Notes
Dry milk powder	1 cup	The base — moderate P, small portions keep it safe
All-purpose flour	3 tbsp	Binder
Phosphorus-free baking powder (Rumford)	1/4 tsp	
Cardamom, ground	1/4 tsp	
Unsweetened almond milk	3-4 tbsp	Just enough to form soft dough
Avocado oil	For frying (3-4 cups)	

Rose Syrup:

Ingredient	Amount	CKD Notes
Sugar	1 cup	
Water	1 cup	
Rose water	1 tbsp	The signature — no substitutes
Cardamom pods	2, crushed	
Lemon juice	1 tsp	Prevents crystallization

Method: 1. **Syrup first:** Combine sugar + water + cardamom + lemon juice. Bring to boil, stir until dissolved. Simmer 7-8 min until slightly thickened (not thick — it thickens as it cools). Add rose water. Set aside, keep warm. 2. **Dough:** Mix milk powder + flour + baking powder + ground cardamom. Add almond milk 1 tbsp at a time, mixing gently. Dough should be soft, smooth, slightly sticky — not dry, not wet. Let rest 5 min. 3. Oil hands lightly. Roll dough into 14-16 small, smooth balls (no cracks — cracks = they break during frying). They expand during cooking. 4. **Fry:** Heat oil to 300F (NOT hotter — low and slow is the entire secret). Fry balls in batches, turning gently, 6-8 min until deep golden brown all the way through. Drain on paper towel for 1 min. 5. Drop warm gulab jamun into warm syrup. Let soak minimum 1 hour (overnight is better). Serve warm or room temperature in their syrup.

Per 2 pieces with syrup: ~30mg Na | ~65mg P | ~95mg K

EID AL-FITR (Islamic)

All recipes in this section are halal-compatible. No alcohol, no pork. Meat should be halal-slaughtered per your local source.

23. Lamb Kebabs

The fast is broken. The grill is lit. Spiced ground lamb on skewers, the way Eid has been celebrated for centuries.

Ingredient	Amount	CKD Notes
Ground lamb	1.5 lbs	Halal-sourced. Lamb is moderate P — portion controls the math
Onion, grated (squeeze out liquid)	1/2 cup	Grating then squeezing = flavor without bulk water
Garlic, minced	3 cloves	
Fresh parsley, chopped	1/4 cup	Low K herb
Cumin	1.5 tsp	
Coriander	1 tsp	
Paprika	1 tsp	
Cinnamon	1/4 tsp	The Middle Eastern whisper
Cayenne	1/4 tsp	
Black pepper	1/2 tsp	
Salt	1/2 tsp	
Avocado oil	1 tbsp	

Method: 1. Mix all ingredients by hand until just combined. Don't overwork — overworked lamb gets tough. 2. Divide into 8 portions. Shape each around a flat metal skewer (or form into oval patties if no skewers). 3. Refrigerate 30 min (helps them hold shape on the grill). 4. **Grill:** Medium-high heat, oiled grates. Cook 3-4 min per side until internal 160F. **Oven option:** Broil on rack, 4" from element, 4 min per side. 5. Rest 3 min. Serve with flatbread, sliced cucumber, and a squeeze of lemon.

Per 2 kebabs: ~170mg Na | ~165mg P | ~280mg K

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24. Baklava

Phyllo, honey, pistachios. Layers of patience rewarded with gold. CKD-portioned — smaller squares, same ecstasy.

Ingredient	Amount	CKD Notes
Phyllo dough	1/2 lb (about 16 sheets)	Thaw per package — keep covered with damp towel
Pistachios, finely chopped	3/4 cup	High P nut — CKD portions are smaller squares to compensate
Margarine, melted	1/2 cup	Brushed between layers
Cinnamon	1 tsp	
Cardamom	1/4 tsp	

Honey Syrup:

Ingredient	Amount	CKD Notes
Sugar	1/2 cup	
Water	1/2 cup	
Honey	1/4 cup	
Lemon juice	1 tbsp	
Rose water	1 tsp	Optional — traditional in many Eid versions

Method: 1. **Syrup:** Combine sugar + water + lemon juice. Boil, then simmer 10 min. Remove from heat, stir in honey + rose water. Cool completely (cold syrup on hot baklava = crisp layers). 2. Mix pistachios + cinnamon + cardamom. 3. Brush 9x9 pan with melted margarine. Layer 8 phyllo sheets, brushing each with margarine. 4. Spread nut mixture evenly. Layer remaining 8 sheets, brushing each with margarine. Brush top generously. 5. **Cut before baking** into small diamonds or 1.5" squares (CKD portions — smaller than bakery size). 6. Bake 350F for 35-40 min until golden and crisp. 7. Pour cold syrup over hot baklava immediately. Let sit at room temperature 4+ hours to absorb. Do not refrigerate — it softens the layers.

Per 1.5" square (makes ~24): ~55mg Na | ~30mg P | ~50mg K

HANUKKAH (Jewish)

Kosher notes: no pork, no shellfish. These recipes keep meat and dairy separate.

25. Golden Latkes

Fried in oil to remember the miracle. Potatoes leached to remember the kidneys.

Ingredient	Amount	CKD Notes
Russet potatoes	2 lbs (about 4 medium)	MUST be leached — see method
Onion, grated	1/2 cup	Squeeze out liquid after grating
Egg	1	Binder
All-purpose flour	2 tbsp	
Black pepper	1/2 tsp	
Salt	1/4 tsp	
Avocado oil	For frying (about 1/2 cup)	High smoke point — clean fry

Method: 1. **LEACH:** Peel potatoes. Shred on box grater or food processor. Submerge shreds in cold water for 2 hours minimum, changing water twice. This pulls ~40% of the potassium. 2. Drain leached potatoes. Squeeze out

ALL water using cheesecloth or clean towel — dry potatoes = crispy latkes. 3. Combine potatoes + grated onion (also squeezed dry) + egg + flour + pepper + salt. 4. Heat 1/4" avocado oil in cast iron over medium-high (350F). 5. Drop 1/4 cup portions, flatten to 1/2" thick. Fry 3-4 min per side until deep golden and crispy. Drain on paper towels. 6. Serve with unsweetened applesauce (low K) or a small dollop of sour cream (dairy meal only).

Per 2 latkes: ~80mg Na | ~55mg P | ~180mg K (vs ~380mg K unleached)

26. Jelly Donuts

Oil again — the Hanukkah mandate. Pillowy dough, strawberry jam center, powdered sugar cloud.

Ingredient	Amount	CKD Notes
All-purpose flour	2.5 cups	
Active dry yeast	2.25 tsp (1 packet)	
Sugar	1/4 cup	
Unsweetened almond milk, warmed to 110F	3/4 cup	Low P
Egg yolks	2	Lower P than whole eggs
Margarine, melted	2 tbsp	Pareve — keeps it meat-meal compatible
Vanilla extract	1 tsp	
Salt	1/4 tsp	
Lemon zest	1 tsp	Brightness
Avocado oil	For frying (4 cups)	
Strawberry jam	1/2 cup	For filling — low K fruit preserve
Powdered sugar	For dusting	

Method: 1. Dissolve yeast + 1 tsp sugar in warm almond milk. Let sit 5 min until foamy. 2. Mix flour + remaining sugar + salt. Add yeast mixture + egg yolks + melted margarine + vanilla + lemon zest. Knead 8 min until smooth and elastic. 3. Cover, rise in warm spot 1.5-2 hours until doubled. 4. Roll dough to 1/2" thick on floured surface. Cut 3" rounds (re-roll scraps once). Place on parchment, cover, rise 30 min. 5. **Fry:** Heat oil to 340F. Fry 2-3 donuts at a time, 2 min per side until golden. Drain on paper towels. 6. Cool slightly. Use piping bag with narrow tip to inject strawberry jam into center of each donut. Dust generously with powdered sugar.

Per donut (makes ~12): ~70mg Na | ~40mg P | ~45mg K

DIA DE LOS MUERTOS (Mexican)

27. Pan de Muerto

Orange-scented, bone-shaped, placed on the ofrenda for those who crossed over. You eat it to remember them.

Ingredient	Amount	CKD Notes
All-purpose flour	3 cups	
Active dry yeast	2.25 tsp (1 packet)	
Sugar	1/3 cup + 2 tbsp for topping	
Unsweetened almond milk, warmed to 110F	1/2 cup	Low P
Eggs	2	
Margarine, melted	1/4 cup	
Orange zest	2 tbsp	The defining flavor — use fresh oranges
Orange blossom water	1 tsp	If available — deepens the orange
Anise seed	1 tsp	Traditional warmth
Salt	1/4 tsp	
Margarine, melted (for brushing)	2 tbsp	

Method: 1. Dissolve yeast + 1 tsp sugar in warm almond milk. Wait 5 min until foamy. 2. Mix flour + sugar + anise seed + salt. Add yeast mixture + eggs + melted margarine + orange zest + orange blossom water. Knead 10 min until smooth. 3. Cover, rise 1.5 hours until doubled. 4. **Shape:** Reserve a small portion of dough (~1/4). Form the main piece into a round loaf. Roll reserved dough into "bone" shapes — two strips crossed over the top, with small knobs at the ends (traditional). Press gently onto the loaf. Place on parchment-lined sheet. 5. Rise 45 min. Bake 350F for 25-30 min until golden and hollow-sounding when tapped. 6. Brush warm bread with melted margarine. Sprinkle with sugar.

Per slice (serves 10): ~90mg Na | ~50mg P | ~60mg K

28. Chicken Tamales

Masa, chicken, red sauce, corn husk. The dead are honored. The living are fed.

Masa:

Ingredient	Amount	CKD Notes
Masa harina (corn flour for tamales)	2 cups	
Low-sodium chicken broth, warm	1.25 cups	
Avocado oil or lard (non-pork)	1/3 cup	Beef tallow also works — no pork lard
Phosphorus-free baking powder (Rumford)	1 tsp	Lightens the masa
Salt	1/2 tsp	
Cumin	1/2 tsp	
Dried corn husks	20-24, soaked in hot water 30 min	

Chicken Filling:

Ingredient	Amount	CKD Notes
Boneless skinless chicken thighs	1.5 lbs	
Dried guajillo chiles	3, stemmed and seeded	Low Na way to build red sauce
Garlic	3 cloves	
Cumin	1 tsp	
Oregano	1/2 tsp	
Salt	1/4 tsp	
Water	1 cup	

Method: 1. **Filling:** Simmer chicken thighs in water with 1/4 tsp salt until cooked (20 min). Shred. Toast guajillo chiles in dry skillet 30 sec per side. Soak in 1 cup hot water 15 min. Blend soaked chiles + garlic + cumin + oregano + soaking water until smooth. Toss with shredded chicken. 2. **Masa:** Beat oil until fluffy. Add masa harina + broth + baking powder + salt + cumin. Mix until soft dough (should be spreadable — add broth 1 tbsp at a time if too thick). 3. **Assemble:** Spread 2-3 tbsp masa on soaked corn husk (leave borders). Place 2 tbsp chicken filling in center. Fold sides over, fold bottom up. Tie with corn husk strip if needed. 4. **Steam:** Stand tamales upright in steamer basket (open end up). Steam over boiling water 45-55 min until masa pulls cleanly from husk. 5. Rest 10 min before unwrapping. Serve 2 per portion.

Per 2 tamales: ~160mg Na | ~150mg P | ~230mg K

THANKSGIVING

See recipes #5-10 above for the full CKD Thanksgiving spread: Roast Turkey Breast, Cornbread Stuffing, Cranberry Sauce, Green Bean Casserole, Pumpkin Pie, and Sweet Potato Casserole (K-leached). Every dish rebuilt from scratch, every label read twice.

NOWRUZ (Persian New Year)

29. Sabzi Polo ba Mahi

The Haft-sin table is set. Green herbs over white rice, wild salmon on top — rebirth on a plate.

Ingredient	Amount	CKD Notes
Basmati rice	1.5 cups, rinsed 5x	Rinsing reduces P

Ingredient	Amount	CKD Notes
Wild salmon fillets	4 (4 oz each)	Wild > farmed — lower P, lower contaminants
Fresh dill, chopped	1/2 cup	The primary herb
Fresh parsley, chopped	1/2 cup	
Fresh cilantro, chopped	1/4 cup	
Fresh chives, chopped	1/4 cup	
Garlic, minced	2 cloves	
Avocado oil	2 tbsp	
Turmeric	1/2 tsp	
Cumin	1/2 tsp	
Lemon juice	1 tbsp	
Lemon zest	1 tsp	
Salt	1/2 tsp (divided)	
Black pepper	1/2 tsp	
Margarine	2 tbsp	For the tahdig (crispy rice bottom)

Method: 1. **Rice:** Parboil rinsed rice in large pot of boiling water 5 min (70% cooked). Drain. 2. **Herb mix:** Toss dill + parsley + cilantro + chives together. Fold 3/4 of herb mix into parboiled rice. 3. **Tahdig (crispy bottom):** Melt margarine in nonstick pot. Spread a thin layer of plain rice on bottom. Top with herb rice. Poke 5-6 holes through with chopstick handle. Cover with tight lid wrapped in clean towel. Cook on low heat 35-40 min until bottom is golden and crispy. 4. **Salmon:** Season fillets with turmeric + cumin + 1/4 tsp salt + pepper + lemon zest. Heat oil in skillet over medium-high. Sear skin-side down 4 min, flip, cook 3 min more. Squeeze lemon juice over. 5. Invert rice onto platter (tahdig on top). Lay salmon alongside. Garnish with remaining fresh herbs.

Per serving (serves 4): ~200mg Na | ~210mg P | ~350mg K

30. Kuku Sabzi

More herb than egg. A green slab dense with dill, parsley, and the smell of a new year.

Ingredient	Amount	CKD Notes
Eggs	6	The structure
Fresh dill, finely chopped	1 cup (packed)	
Fresh parsley, finely chopped	1 cup (packed)	
Fresh cilantro, finely chopped	1/2 cup	
Fresh chives or green onion, sliced	1/4 cup	
All-purpose flour	2 tbsp	Binder — helps it hold together
Phosphorus-free baking powder (Rumford)	1/2 tsp	Lift
Turmeric	1/2 tsp	
Cumin	1/4 tsp	
Black pepper	1/2 tsp	
Salt	1/4 tsp	
Avocado oil	2 tbsp	
Dried cranberries	2 tbsp	Optional — traditional versions use barberries; cranberries are the closest renal-aware sub

Method: 1. Preheat oven to 375F. Beat eggs in large bowl. Add all chopped herbs + flour + baking powder + turmeric + cumin + pepper + salt + cranberries. Mix well. 2. Heat oil in oven-safe 10" skillet over medium. Pour in egg-herb mixture. Cook on stovetop 5 min until bottom sets. 3. Transfer to oven. Bake 20-25 min until firm and top is golden. The center should be set — not jiggly. 4. Cool 5 min. Invert onto plate or cut wedges directly from skillet. Serve warm or room temperature — it's good both ways.

Per wedge (serves 6): ~110mg Na | ~75mg P | ~150mg K

JUNETEENTH

31. Red Velvet Cake

Freedom's color is red. Three layers, cream cheese frosting, no phosphate in the baking powder.

Cake:

Ingredient	Amount	CKD Notes
All-purpose flour	2.5 cups	
Unsweetened cocoa powder	2 tbsp	Small amount — gives depth without P overload
Phosphorus-free baking powder (Rumford)	1 tsp	
Baking soda	1 tsp	
Salt	1/4 tsp	
Sugar	1.5 cups	
Avocado oil	1/2 cup	
Eggs	2	
Unsweetened almond milk	1 cup	Low P
Apple cider vinegar	1 tbsp	Activates baking soda
Vanilla extract	2 tsp	
Red gel food coloring	1 tbsp	Gel > liquid — deeper color, less volume

Cream Cheese Frosting:

Ingredient	Amount	CKD Notes
Cream cheese, softened	8 oz	Moderate P — frosting is thin layer, not the bulk
Margarine, softened	1/4 cup	
Powdered sugar	3 cups	
Vanilla extract	1 tsp	

Method: 1. Preheat 350F. Grease and flour three 8" round pans (or two 9" for thicker layers). 2. Whisk flour + cocoa + baking powder + baking soda + salt. 3. Beat sugar + oil + eggs until smooth. Mix in almond milk + vinegar + vanilla + food coloring. 4. Add dry to wet in two additions. Mix until just combined — don't overmix. 5. Divide batter evenly among pans. Bake 22-26 min until toothpick comes out clean. Cool in pans 10 min, then wire racks completely. 6. **Frosting:** Beat cream cheese + margarine until smooth. Gradually add powdered sugar. Add vanilla. Beat until fluffy. 7. Level cake layers if domed. Frost between layers, then outside. Refrigerate 1 hour before serving.

Per slice (serves 14): ~120mg Na | ~65mg P | ~60mg K

32. Watermelon Agua Fresca

Red drink for a red day. Three ingredients. Cold. Bright. Juneteenth in a glass.

Ingredient	Amount	CKD Notes
Seedless watermelon, cubed	4 cups	Lower K melon — CKD-approved in portions
Water	1 cup	Adjust for thickness preference
Lime juice	2 tbsp	Low K citrus
Sugar	1-2 tbsp (optional, to taste)	Ripe watermelon may not need any
Fresh mint	For garnish	

Method: 1. Blend watermelon + water + lime juice + sugar until smooth. 2. Strain through fine mesh sieve for silky texture (or leave unstrained for more body). 3. Chill 1 hour. Serve over ice with mint garnish.

Note: Count toward daily fluid allowance if on fluid restriction.

Per 8oz glass (makes about 4): ~5mg Na | ~15mg P | ~130mg K

RELIGIOUS OBSERVANCE FOODS

CKD-aware recipes for strict religious practitioners. Faith doesn't take a dialysis day off.

LENT (Christian — 40 days, no meat on Fridays)

1. Wild Cod Fish Tacos

Friday staple since 1966 when Paul VI relaxed the year-round abstinence rule. The taco part is pure California improvisation.

Ingredient	Amount	CKD Notes
Wild cod fillets	1 lb	Wild > farmed — lower P, no added phosphates. Check label.
Corn tortillas (6-inch)	8	Corn = lower Na/P than flour tortillas
Avocado oil	2 tbsp	High smoke point for pan sear
Chili powder	1 tsp	
Cumin	1/2 tsp	
Garlic powder	1/2 tsp	
Smoked paprika	1/2 tsp	
Salt	1/4 tsp	
Lime juice	2 tbsp	Brightens everything, zero Na

Lime Slaw:

Ingredient	Amount	CKD Notes
Green cabbage, shredded	2 cups	Low K — renal-aware crunch
Lime juice	2 tbsp	
Mayonnaise	2 tbsp	
Cilantro, chopped	2 tbsp	
Salt	Pinch	

Method: 1. Pat cod dry. Mix chili powder + cumin + garlic powder + paprika + salt. Rub both sides. 2. Heat oil in skillet over medium-high. Sear cod 3-4 min per side until flaky. Break into chunks. 3. Toss slaw ingredients. Warm tortillas in dry skillet 30 sec each side. 4. Load tortillas: cod, slaw, squeeze of lime. No sour cream needed.

Kosher note: Fish with fins and scales is kosher. Cod qualifies.

Per 2-taco serving: ~180mg Na | ~160mg P | ~220mg K

2. Shrimp & Grits

Southern Lenten classic. Charleston didn't invent it — West African cooks in the Lowcountry did.

Ingredient	Amount	CKD Notes
Large shrimp, peeled & deveined	1 lb	Fresh/frozen, no sodium tripolyphosphate — read the bag
Stone-ground grits (not instant)	1 cup dry	Instant grits have added sodium
Water	4 cups	For grits
Unsweetened almond milk	1/2 cup	Stir in at end for creaminess — 5mg P vs 115mg for cow's milk
Margarine	2 tbsp	
Garlic, minced	3 cloves	
Lemon juice	1 tbsp	
Smoked paprika	1 tsp	
Cayenne	1/4 tsp	
Green onion, sliced	2 tbsp	Garnish only — small amount keeps K in check
Olive oil	1 tbsp	
Salt	1/4 tsp	Split between grits and shrimp
Black pepper	1/2 tsp	

Method: 1. Bring water to boil. Whisk in grits slowly. Reduce to low, cover, stir every 5 min for 25-30 min until thick and creamy. Stir in almond milk + 1 tbsp margarine + pinch salt. 2. Season shrimp with paprika + cayenne + pepper. Heat olive oil + 1 tbsp margarine in skillet over medium-high. Add garlic, cook 30 sec. Add shrimp, sear 2 min per side until pink. 3. Hit shrimp with lemon juice off heat. Spoon grits into bowls, top with shrimp, garnish with green onion.

Halal note: Shrimp is halal per majority Sunni scholarly opinion (Shafi'i, Maliki, Hanbali). Hanafi school considers it makruh — substitute with fish if following Hanafi fiqh.

Per serving (serves 4): ~190mg Na | ~180mg P | ~240mg K

RAMADAN (Islamic — dawn to sunset fasting, iftar feast)

3. Dates & Yogurt

The Prophet Muhammad (peace be upon him) broke fast with dates. Fourteen centuries later, the sunnah still opens every iftar table on Earth.

Ingredient	Amount	CKD Notes
Medjool dates	3 (about 70g)	Dates are high K (~167mg per date) — 3 is the traditional number AND the CKD-aware limit
Plain low-fat yogurt	1/2 cup	Lower P than Greek yogurt — Greek is strained/concentrated
Honey	1 tsp drizzle	
Cardamom, ground	Pinch	Traditional Gulf spice
Unsalted pistachios, crushed	1 tbsp	Small amount for crunch — pistachios are high P/K in quantity

Method: 1. Pit dates. Arrange in bowl. 2. Spoon yogurt alongside. Drizzle honey. Dust cardamom. Scatter pistachios. 3. Eat slowly — your body hasn't had food or water since fajr. Rehydrate with room-temperature water alongside, not ice cold.

CKD note: Dates are potassium-dense. Three Medjool dates is both the Prophetic tradition and the safe CKD ceiling. This is one of those rare moments where faith and nephrology agree exactly.

Halal: Fully halal. No gelatin, no alcohol.

Per serving: ~10mg Na | ~75mg P | ~510mg K — **K is high. Budget the rest of your iftar meal accordingly.**

4. Chicken Shawarma Rice Bowl

Iftar main. The vertical rotisserie was invented in Ottoman Bursa in the 1800s. Your oven does the same job.

Ingredient	Amount	CKD Notes
Boneless skinless chicken thighs	1.5 lbs	Thighs hold marinade better than breast
Olive oil	2 tbsp	
Lemon juice	2 tbsp	Acid tenderizes + brightens
Garlic, minced	4 cloves	
Cumin	1 tsp	
Coriander	1 tsp	
Turmeric	1/2 tsp	
Smoked paprika	1 tsp	
Cinnamon	1/4 tsp	The secret — shawarma without cinnamon is just grilled chicken
Cardamom	1/4 tsp	
Black pepper	1/2 tsp	
Salt	1/4 tsp	
White rice, cooked	2 cups	White > brown for CKD — lower P/K
Cucumber, diced	1/2 cup	Low K, high crunch
Red onion, thinly sliced	2 tbsp	Small amount — flavor not potassium

Tahini Drizzle:

Ingredient	Amount	CKD Notes
Tahini	2 tbsp	Sesame = moderate P — 2 tbsp is the line
Lemon juice	1 tbsp	
Water	2 tbsp	Thins to drizzle consistency
Garlic powder	1/4 tsp	
Salt	Pinch	

Method: 1. Mix olive oil + lemon juice + garlic + all spices. Marinate chicken minimum 2 hours, overnight preferred. 2. Preheat oven to 425F. Spread chicken on sheet pan. Roast 25-30 min, flipping once, until charred edges and 165F internal. 3. Slice chicken into strips. Whisk tahini drizzle ingredients. 4. Build bowls: rice base, shawarma chicken, cucumber, red onion, tahini drizzle.

Halal: Use halal-certified chicken. All other ingredients are inherently halal.

Per serving (serves 4): ~170mg Na | ~200mg P | ~350mg K

MARDI GRAS (Pre-Lent Feast)

5. King Cake

The one with the baby inside. Originated in France, landed in New Orleans by the 1870s. The purple-gold-green icing represents justice, power, and faith. Whoever gets the baby buys the next cake.

Ingredient	Amount	CKD Notes
All-purpose flour	3 cups	AP flour is lower P than whole wheat
Unsweetened almond milk	3/4 cup, warmed	The CKD milk swap — 5mg P per cup
Active dry yeast	1 packet (2.25 tsp)	
Sugar	1/3 cup	
Margarine, melted	1/4 cup	Lower P than butter
Eggs	2	~90mg P each — accounted for in total
Vanilla extract	1 tsp	
Cinnamon	1 tbsp	The filling flavor
Nutmeg	1/4 tsp	
Salt	1/4 tsp	
Rumford baking powder	1 tsp	Phosphorus-free — non-negotiable

Cinnamon Sugar Filling:

Ingredient	Amount	CKD Notes
Sugar	1/4 cup	
Cinnamon	1 tbsp	
Margarine, softened	2 tbsp	

Icing & Colors:

Ingredient	Amount	CKD Notes
Powdered sugar	1.5 cups	
Almond milk	2-3 tbsp	Just enough to drizzle
Vanilla	1/2 tsp	
Purple, gold, green food coloring	As needed	The Holy Trinity of Mardi Gras
Colored sugar sprinkles	For topping	

Method: 1. Warm almond milk to 110F. Dissolve yeast + 1 tsp sugar. Let bloom 10 min until foamy. 2. Mix flour + remaining sugar + salt. Add yeast mixture + melted margarine + eggs + vanilla + nutmeg. Knead 8-10 min until smooth elastic dough. Rise 1.5 hours, covered, until doubled. 3. Punch down. Roll into large rectangle. Spread cinnamon-sugar filling + softened margarine. Roll lengthwise into log. Shape into oval ring, pinch ends together. 4. Rise 45 min. Bake 350F for 25-30 min until golden. Cool completely. 5. Mix icing. Drizzle in alternating purple, gold, green sections. Top with colored sugars. 6. Hide the baby inside before serving. Tradition is law.

Kosher note: This recipe is dairy-free (margarine + almond milk). Pareve if using pareve margarine.

Per slice (12 slices): ~95mg Na | ~65mg P | ~55mg K

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6. Big Easy Jambalaya

See: American Soul Food chapter, Recipe #X — Jambalaya. Cross-reference. Same recipe applies. Born in New Orleans, descended from Spanish paella and West African jollof. Mardi Gras just made it louder.

Full recipe in `american_soul_food_ckd.md`. Use that version — it's already CKD-optimized with low-sodium andouille alternatives and controlled K.

YOM KIPPUR BREAK-FAST (Jewish — 25-hour fast)

7. Bagels & Cream Cheese Spread

Break-fast classic. The bagel was born in 17th-century Krakow, Poland. It crossed the Atlantic in the pockets of Jewish immigrants and became New York's identity.

CKD Bagels:

Ingredient	Amount	CKD Notes
All-purpose flour	3 cups	AP over whole wheat — lower P
Warm water	1 cup + 2 tbsp	110F for yeast activation
Active dry yeast	1 packet (2.25 tsp)	
Sugar	2 tbsp	Feeds the yeast + slight sweetness
Salt	1/2 tsp	Less than standard (usually 1.5 tsp) — you won't miss it
Olive oil	1 tbsp	
Honey	1 tbsp	For the boiling water — gives the crust its sheen

CKD Cream Cheese Spread:

Ingredient	Amount	CKD Notes
Cream cheese (regular, block)	8 oz	~30mg P per oz — portion-controlled at 2 tbsp per serving
Fresh dill, chopped	1 tbsp	
Fresh chives, chopped	1 tbsp	
Lemon zest	1 tsp	Flavor without fluid
Garlic powder	1/4 tsp	
Black pepper	1/4 tsp	
Everything bagel seasoning	1 tsp, mixed in	Optional — adds ~50mg Na per serving

Method (Bagels): 1. Dissolve yeast + 1 tsp sugar in warm water. Bloom 10 min. 2. Mix flour + remaining sugar + salt. Add yeast mixture + olive oil. Knead 10 min until smooth, firm dough (bagel dough should be stiffer than bread dough). 3. Divide into 8 equal balls. Poke thumb through center, stretch to form ring. Let rest on parchment 20 min. 4. Bring large pot of water + honey to boil. Boil each bagel 1 min per side. This is what makes it a bagel and not a roll. 5. Place on greased baking sheet. Bake 425F for 20-22 min until deep golden.

Method (Spread): 1. Soften cream cheese to room temp. Mix in dill + chives + lemon zest + garlic powder + pepper. Optional: fold in everything seasoning. 2. Spread 2 tbsp per bagel half. That's the CKD portion. More is not more.

Kosher note: Fully kosher dairy (cholov stam). For cholov Yisrael observance, source CY cream cheese. Bagels themselves are pareve.

Break-fast note: After 25 hours of fasting, start with water and small bites. A full bagel immediately can cause GI distress — especially on dialysis. Half a bagel first, wait 20 min, then the other half.

Per serving (1 bagel + 2 tbsp spread): ~210mg Na | ~95mg P | ~65mg K

CKD HOLIDAY SAFETY BOX

Rule	Why
Read every label at the store	"Fresh" ham, "natural" turkey — these words mean nothing. Look for "no phosphates added," "no solution added." If the ingredient list includes sodium phosphate, sodium tripolyphosphate, or anything ending in "-phosphate," put it back.
Leach high-K vegetables	Sweet potatoes, corn, regular potatoes — soak in cold water 2-4 hours, change water, then cook in fresh water. Cuts K 30-50%.
Portion is the real prescription	A 3oz serving of ham is safe. An 8oz serving is not. Same food, different math. The recipes here are built around CKD portions.
Homemade sauce = sodium freedom	Cranberry sauce, BBQ sauce, gravy — store-bought versions have 3-10x the sodium of homemade. Always make your own.

Rule	Why
Almond milk is your cheat code	Every recipe that calls for milk uses unsweetened almond milk. It has ~5mg P per cup vs ~230mg P for cow's milk. That single swap keeps most recipes in range.
Rumford baking powder (phosphorus-free)	Regular baking powder contains sodium aluminum phosphate. Rumford uses monocalcium phosphate — still has some, but ~60% less bioavailable. It's the best option.
Margarine over butter	Butter: ~23mg P per tbsp. Margarine: ~3mg P per tbsp. Over a full holiday meal, that adds up fast.
Fluid control at the table	Eggnog, hot cocoa, gravy — these are all fluids. If you're on fluid restriction, budget them. Sip, don't gulp.
Talk to your dietitian	These recipes are built within general CKD/hemodialysis guidelines (Na<1500mg, K<2000mg, P<800mg daily). Your specific targets may differ. Your specific targets may differ.

"The table is where a family proves it gives a damn. Cook for the ones who were told they can't eat anymore."

CHAPTER 28

Historical Era Dishes

"History is written by the cooks. Everyone else just ate."

10 Recipes From 10 Centuries

"History is written by the cooks. Everyone else just ate."

> *Every recipe in this chapter existed before dialysis, before nephrology, before anyone knew what a kidney did. These dishes survived empires, famines, revolutions, and the invention of fast food. They survived because they're good. We just made them safe.*

Daily CKD Targets: Na <1500mg | K <2000mg | P <800mg

1. Ancient Rome (~100 AD) — Pullum Numidicum (Numidian Chicken)

Historical fact: This recipe comes directly from *De Re Coquinaria* by Marcus Gavius Apicius, the oldest surviving cookbook in Western civilization. Apicius was a Roman gourmet so obsessed with food that when his fortune dwindled to a mere 10 million sesterces, he poisoned himself rather than live on a reduced diet. Pullum Numidicum — chicken in the Numidian (North African) style — was a staple of patrician banquets. The original calls for laser (silphium), a spice the Romans ate into extinction.

Why it survived: Because braising chicken thighs in vinegar and honey is a technique that independently emerged on every continent. Rome just wrote it down first.

Ingredients

Ingredient	Amount	CKD Note
Bone-in chicken thighs, skin-on	2 lbs (~6 thighs)	Excellent protein, low P vs. breast
Medjool dates, pitted and chopped	4 dates	Natural sweetness, moderate K — portion-controlled
Pine nuts	2 Tbsp	Low sodium, watch phosphorus at high volume
Honey	2 Tbsp	Na-free sweetener
Apple cider vinegar	3 Tbsp	Acid without potassium load of citrus juice
Fresh lemon zest	1 tsp	Flavor without the K of lemon juice
Avocado oil	2 Tbsp	Andrew's preferred oil, neutral flavor
Ground cumin	1 tsp	Silphium substitute — closest modern analog
Ground coriander	1 tsp	Standard Apicius spice
Black pepper	1 tsp	The Romans were obsessed with pepper
Fresh mint, chopped	2 Tbsp	Garnish, negligible electrolytes
Salt	1/4 tsp	Minimal — let the dates and honey carry flavor

Method

1. Season chicken thighs with cumin, coriander, pepper, and salt. Let sit 15 minutes.
2. Heat avocado oil in a Dutch oven over medium-high. Sear thighs skin-side down 5 minutes until deeply golden. Flip, sear 2 minutes. Remove.
3. Reduce heat to medium. Add chopped dates and pine nuts. Stir 1 minute until pine nuts are lightly toasted.
4. Add vinegar, honey, and 1/2 cup water. Scrape up fond. Bring to simmer.
5. Return chicken to pot, skin-side up. Cover and braise 25 minutes at 325°F in oven.
6. Uncover, increase to 400°F for 10 minutes to re-crisp skin.
7. Finish with lemon zest and torn mint. Serve over white rice.

Per Serving (2 thighs + sauce over 3/4 cup rice)

Na	K	P
~280mg	~420mg	~210mg

2. Medieval England (~1350) — Blancmange (White Eating)

Historical fact: Modern blancmange is a jiggling dessert your grandmother made from a packet. The medieval original was nothing like it. *Blanc manger* — literally "white eating" — was shredded chicken pounded into a paste with almond milk, rice flour, and sugar. It appears in *The Forme of Cury*, the recipe collection compiled by Richard II's master cooks in 1390. Almond milk was standard in medieval European cooking because the Catholic Church banned animal milk on fast days (over 150 days per year). This wasn't health food. It was religious compliance that accidentally produced a renal-aware base.

Why it survived: The dish evolved into dessert by the 1700s when the chicken was dropped. But the original — chicken, almond milk, rice — is perfect renal eating by sheer medieval accident.

Ingredients

Ingredient	Amount	CKD Note
Boneless skinless chicken breast	1 lb	Shredded fine — medieval recipes pounded it in a mortar
Unsweetened almond milk	2 cups	Andrew's preferred milk, low K/P
White rice flour	3 Tbsp	Thickener — no wheat, no phosphate additives
Sugar	1 Tbsp	Original recipe used sugar freely
Ground ginger	1/2 tsp	Medieval England's favorite spice
Ground cinnamon	1/4 tsp	
Blanched almonds, slivered	2 Tbsp	Garnish — portion-controlled for P
Salt	1/4 tsp	
White pepper	Pinch	Medieval cooks preferred white pepper for white dishes

Method

1. Poach chicken breast in 3 cups water with a pinch of salt, 20 minutes. Reserve 1/2 cup poaching liquid. Shred chicken extremely fine (or pulse in food processor — the medievals used a mortar and stamped it).
2. In a saucepan, whisk almond milk with rice flour over medium heat until it begins to thicken, ~5 minutes.
3. Add shredded chicken, sugar, ginger, cinnamon, reserved poaching liquid. Stir until mixture is thick and creamy, ~8 minutes. It should be the texture of thick porridge.
4. Serve in a shallow bowl, garnished with slivered almonds and an extra dust of cinnamon.
5. Optional: chill and serve cold, as many medieval feasts did. It sets like a savory pudding.

Per Serving (1/3 of recipe)

Na	K	P
~190mg	~310mg	~195mg

3. Colonial America (~1776) — Hoecakes with Honey

Historical fact: George Washington ate hoecakes every morning. His personal recipe, recorded by his enslaved cook Hercules — one of the most skilled chefs in 18th-century America — called for cornmeal, water, and a hot greased griddle. The name "hoecake" comes from field workers cooking cornmeal batter on the flat blade of a garden hoe held over a fire. Thomas Jefferson preferred his with butter and honey. Washington ate them stacked. Hercules eventually escaped to freedom in 1797 and was never recaptured.

Why it survived: Cornmeal flatcakes exist in every corn-growing culture. They survived because corn, water, and fat is about as simple as cooking gets.

Ingredients

Ingredient	Amount	CKD Note
Fine yellow cornmeal	1 cup	Low P, no phosphate additives
Boiling water	3/4 cup	Hydrates the cornmeal
Margarine, melted	2 Tbsp	Andrew's preferred fat + more for griddle
Honey	For drizzling	Na-free topping
Salt	1/4 tsp	
Egg	1 large	Added in the later colonial variation

Method

1. Place cornmeal and salt in a bowl. Pour boiling water over it and stir. Let stand 5 minutes — this is called "scalding" the meal and prevents grittiness.
2. Stir in melted margarine and egg until smooth. Batter should be thick but pourable. Add a splash of cold water if needed.
3. Heat a cast iron skillet (or any flat griddle — or a hoe blade if you're authentic) over medium heat. Grease with margarine.
4. Drop batter by 1/4 cup onto skillet. Cook 3 minutes per side until golden and crispy-edged.
5. Stack, drizzle with honey. Eat like a founding father.

Yield: ~8 hoecakes

Per Serving (2 hoecakes + 1 Tbsp honey)

Na	K	P
~160mg	~85mg	~75mg

4. Edo Japan (~1700) — Tamago Gohan (Egg Rice)

Historical fact: Tamago gohan — raw egg stirred into steaming hot rice with soy sauce — has been eaten in Japan since at least the Edo period (1603-1868). It was peasant food, samurai food, merchant food. Everyone ate it because everyone had rice and chickens. The dish only works with extremely fresh eggs — Japanese egg safety standards (every egg is washed, inspected, and dated) made it a national comfort food. In the U.S., use pasteurized eggs for safety. The first written recipe appears in *Manpuku Ryori Himitsubako* (1838), a cookbook subtitled "The Secret Box of Ten Thousand Recipes."

Why it survived: Because it takes 90 seconds, costs almost nothing, and tastes like the food version of a warm blanket.

Ingredients

Ingredient	Amount	CKD Note
Hot cooked white rice	1 1/2 cups	Freshly steamed, must be hot enough to partially cook the egg
Pasteurized egg	1 large	Safe for raw consumption — look for "pasteurized" on carton
Low-sodium soy sauce	1 tsp	Kikkoman low-sodium: ~575mg Na per Tbsp, ~190mg per tsp
Unsalted margarine	1/2 tsp	Not traditional, but Andrew's call — adds richness
Rice vinegar	1/2 tsp	Optional acid hit — Andrew likes sour
Toasted sesame seeds	Pinch	
Scallion greens, sliced thin	1 Tbsp	Green part only — lower K than white part

Method

1. Place steaming hot rice in a bowl.
2. Crack egg directly onto rice. Add soy sauce, margarine, and rice vinegar.
3. Stir vigorously with chopsticks for 60 seconds. The heat of the rice partially cooks the egg into a silky, glossy coating.
4. Top with sesame seeds and scallion greens.
5. Eat immediately. This is not a dish that waits.

Per Serving (entire recipe = 1 serving)

Na	K	P
~210mg	~160mg	~150mg

5. Ottoman Empire (~1500) — Lamb Kebab with Yogurt Sauce

Historical fact: The word "kebab" appears in Turkish writing as early as 1377, in a manuscript by Kyssa-i Yusuf. But skewered meat over fire predates the Ottoman Empire by millennia — Homer describes it in the *Iliad* (~800 BC). What the Ottomans perfected was the *combination*: spiced ground lamb on flat metal skewers, grilled over charcoal, served with yogurt sauce and flatbread. Sultan Mehmed II (the conqueror of Constantinople, 1453) reportedly employed 60 cooks whose sole job was kebab preparation. The yogurt sauce — cacik — is the Turkish ancestor of Greek tzatziki.

Why it survived: Because fire + meat + acid + fat is the oldest flavor equation on Earth. The Ottomans just optimized the variables.

Ingredients

Kebab:

Ingredient	Amount	CKD Note
Ground lamb	1 lb	Rich flavor, moderate P — no pork
Grated onion (squeezed dry)	2 Tbsp	Squeeze liquid out to reduce K
Ground cumin	1 tsp	
Ground coriander	1 tsp	
Smoked paprika	1 tsp	
Aleppo pepper flakes	1/2 tsp	Moderate heat, fruity — Fred Meyer spice aisle
Salt	1/4 tsp	
Avocado oil	For grill	

Yogurt Sauce:

Ingredient	Amount	CKD Note
Plain Greek yogurt	1/2 cup	Portion-controlled for P — do not exceed
Lemon juice	1 Tbsp	Acid hit Andrew wants, moderate K
Garlic, minced	1 small clove	
Dried mint	1/2 tsp	
Salt	Pinch	

Serve with: 2 small flour tortillas (flatbread sub) + sliced cucumber

Method

1. Mix lamb with onion, cumin, coriander, paprika, Aleppo pepper, and salt. Form into 4 elongated patties around flat metal skewers (or shape into logs without skewers).
2. Grill over high heat or broil 4-5 minutes per side until charred outside, just done inside. Lamb kebab should not be overcooked — medium is traditional.
3. Mix yogurt sauce ingredients. Let sit while kebabs cook.
4. Warm tortillas on the grill 30 seconds per side.

5. Serve kebabs on flatbread, spoon yogurt sauce over, add cucumber slices.

Per Serving (2 kebabs + sauce + flatbread)

Na	K	P
~340mg	~380mg	~235mg

6. Ancient Egypt (~2000 BC) — Beer Bread

Historical fact: The ancient Egyptians invented both leavened bread and beer, and they did it with the same organism: wild yeast. Egyptian bread was made by partially fermenting a dough, and Egyptian beer was made by partially baking a loaf and then soaking it in water to ferment. Bread was beer. Beer was bread. The workers who built the Great Pyramid of Giza were paid in bread and beer — approximately 4-5 liters of beer and 3-4 loaves per day. The earliest known bread recipe (~2000 BC) was found in the tomb of Mentuhotep II. Sourdough is the direct descendant of Egyptian bread — the same wild fermentation process, just refined over 4,000 years.

Why it survived: Because humanity never stopped baking. Every bread culture on Earth descends from this one technique: flour + water + wild yeast + heat.

Ingredients

Ingredient	Amount	CKD Note
All-purpose flour	3 cups	No self-rising — that has Na/P from leavening agents
Beer (light lager, e.g., Modelo or Bud Light)	12 oz (1 can)	The yeast + carbonation acts as leavener
Honey	3 Tbsp	Egyptian sweetener — cane sugar didn't exist yet
Margarine, melted	3 Tbsp	Poured on top before baking
Salt	1/2 tsp	

Method

1. Preheat oven to 375°F. Grease a loaf pan with margarine.
2. Mix flour, salt, and honey in a large bowl. Pour in beer. Stir until just combined — do not overmix. Batter will be thick and shaggy.
3. Pour into loaf pan. Drizzle melted margarine over the top.
4. Bake 55-60 minutes until golden on top and a toothpick comes out clean.
5. Cool 10 minutes in pan, then turn out. Slice thick.

The Egyptian trick: This bread has no added yeast — the beer IS the yeast. It's the closest thing to ancient Egyptian baking you can do in a modern kitchen.

Yield: 1 loaf, ~10 slices

Per Serving (1 slice)

Na	K	P
~130mg	~55mg	~35mg

7. American Frontier (~1850) — Cowboy Beans & Hardtack

Historical fact: On a cattle drive from Texas to Kansas (roughly 1,000 miles over 2-3 months), a trail cook — called a "cookie" — fed 10-15 cowboys from a single chuck wagon. The menu barely varied: beans, coffee, salt pork, hardtack biscuit, and occasionally dried beef. Charles Goodnight, the legendary Texas rancher, invented the chuck wagon in 1866 by modifying a surplus Civil War ambulance. Beans were cooked in a cast iron pot buried in coals overnight. Hardtack — flour, water, salt, baked until rock-hard — was a Civil War staple that cowboys carried because it literally never spoiled. Specimens from the 1860s still exist in museums, structurally intact.

Why it survived: Because beans + bread is the foundation of working-class food worldwide. The presentation changes. The math doesn't.

Ingredients

Cowboy Beans:

Ingredient	Amount	CKD Note
Dried pinto beans	1 cup dry	MUST soak overnight + double-boil to leach K and P
Ground turkey	1/2 lb	Sub for salt pork — no pork rule
Yellow onion, diced	1/2 cup	
Avocado oil	1 Tbsp	
Low-sodium ketchup	2 Tbsp	
Yellow mustard	1 Tbsp	
Apple cider vinegar	1 Tbsp	
Brown sugar	1 Tbsp	
Smoked paprika	1 tsp	Smoke flavor without sodium of liquid smoke
Garlic powder	1/2 tsp	
Black pepper	1/2 tsp	
Salt	1/4 tsp	

Hardtack:

Ingredient	Amount	CKD Note
All-purpose flour	2 cups	
Water	1/2 to 2/3 cup	
Salt	1/2 tsp	

Method

Beans (start night before): 1. Soak beans in 4x water overnight, 8+ hours. Drain and rinse. This leaches significant potassium. 2. Boil beans in fresh water 10 minutes. Drain again. Refill with fresh water and simmer 60-90 minutes until tender. Drain. Double-boil method reduces K by ~30-40%. 3. Brown ground turkey in avocado oil. Add onion, cook 5 minutes. 4. Add cooked beans, ketchup, mustard, vinegar, brown sugar, paprika, garlic powder, pepper, salt, and 1/2 cup water. 5. Simmer 30 minutes uncovered until thick and saucy.

Hardtack: 1. Preheat oven to 375°F. 2. Mix flour, water, and salt into a very stiff dough. Roll out to 1/2 inch thick. Cut into 3x3 inch squares. Poke holes with a fork in a grid pattern (this is traditional and helps them dry evenly). 3. Bake 30 minutes. Flip. Bake 30 more minutes. They should be pale, rock-hard, and completely dry. 4. To eat: soak in bean liquid, dunk in coffee, or break with the handle of a knife like an actual cowboy.

Per Serving (1 cup beans + 1 hardtack square)

Na	K	P
~310mg	~340mg	~175mg

8. French Revolution (~1789) — Potage Parmentier (Potato Leek Soup)

Historical fact: Antoine-Augustin Parmentier was a French pharmacist captured by the Prussians during the Seven Years' War (1756-1763). In prison, he was fed potatoes — which the French considered pig food and possibly poisonous. He survived, returned to France, and spent the next 30 years on a one-man campaign to convince France that potatoes were safe to eat. His strategies were legendary: he placed armed guards around his potato fields (then told the guards to accept bribes, so Parisians would steal the "valuable" crop). He hosted potato-only dinners for Benjamin Franklin and King Louis XVI. Marie Antoinette wore potato flowers in her hair. By the Revolution, potatoes were feeding the nation. This soup is named for him.

Why it survived: Because potato + leek + cream is a perfect ratio and Parmentier was one of history's greatest marketers.

Ingredients

Ingredient	Amount	CKD Note
Russet potatoes, peeled and cubed	2 medium (~12 oz)	MUST soak cubed potatoes in water 2+ hours to leach K
Leeks, white and light green parts, sliced	2 medium	Lower K than onions per gram
Margarine	2 Tbsp	

Ingredient	Amount	CKD Note
Unsweetened almond milk	1 cup	Sub for cream — vastly lower P and K
Low-sodium chicken broth	2 cups	Watch brand — must be <100mg Na per cup
Fresh thyme	3 sprigs	
Bay leaf	1	
White pepper	1/4 tsp	French soups use white pepper to keep color pure
Salt	1/4 tsp	
Fresh chives, snipped	For garnish	

Method

1. Peel and cube potatoes. Soak in a large bowl of cold water for 2-4 hours, changing water once. This leaches 30-50% of potassium. Drain and rinse.
2. Melt margarine in a heavy pot over medium heat. Add leeks. Cook 8-10 minutes until soft, stirring occasionally. Do not brown — this is a white soup.
3. Add drained potatoes, broth, thyme, and bay leaf. Bring to boil, reduce to simmer. Cook 20 minutes until potatoes are falling apart.
4. Remove thyme stems and bay leaf. Blend with an immersion blender until smooth (or leave slightly chunky — both are traditional).
5. Stir in almond milk. Season with white pepper and salt. Heat through.
6. Serve with snipped chives and a grind of white pepper.

Per Serving (1/4 of recipe, ~1.5 cups)

Na	K	P
~260mg	~320mg	~95mg

9. Silk Road (~800 AD) — Persian Jeweled Rice (Morasa Polo)

Historical fact: Jeweled rice — *morasa polo* — is a ceremonial Persian dish served at weddings and Nowruz (Persian New Year). The Silk Road (active ~130 BC to ~1450 AD) was a 4,000-mile trade network connecting China to the Mediterranean. Saffron came from Persia. Rice came from India and China. Almonds from Central Asia. Dried barberries from Iran. Every ingredient in this dish traveled hundreds or thousands of miles before landing on the same plate. The dish itself is a map of the Silk Road. Persian rice cookery reached its peak under the Safavid dynasty (1501-1736), where court cooks developed *tahdig* — the deliberately crisped bottom crust — into an art form.

Why it survived: Because jeweled rice is engineered to impress. It's the dish you make when you want someone to fall in love with you or sign a treaty.

Ingredients

Ingredient	Amount	CKD Note
Basmati rice	2 cups	Rinsed and soaked 30 min — the Persian way
Saffron threads	1/4 tsp (large pinch)	Steeped in 2 Tbsp hot water
Margarine	3 Tbsp	For tahdig + mixing
Dried cranberries	1/4 cup	Sub for barberries — lower K, similar tartness
Dried apricots, slivered	4 pieces	Small amount — moderate K, portion-controlled
Slivered almonds	2 Tbsp	
Orange zest	1 Tbsp	Zest only — no juice (K control)
Ground cardamom	1/2 tsp	
Ground cinnamon	1/4 tsp	
Ground cumin	1/4 tsp	
Sugar	1 tsp	Balances the tart cranberries
Salt	1/2 tsp	
Avocado oil	1 Tbsp	For tahdig base

Method

1. Rinse rice until water runs clear. Soak in salted water 30 minutes. Drain.
2. Boil a large pot of water. Par-cook rice 6 minutes — it should be barely tender, still with a bite. Drain immediately.
3. Steep saffron in 2 Tbsp hot water. Set aside.
4. In a small pan, toast almonds in 1 Tbsp margarine 2 minutes. Add cranberries, apricot slivers, orange zest, cardamom, cinnamon, cumin, sugar. Toss 1 minute. Remove from heat.
5. **Tahdig:** In a non-stick pot, heat avocado oil + 1 Tbsp margarine over medium heat. Spread a thin layer of par-cooked rice on the bottom, pressing gently.
6. Layer remaining rice loosely on top, mounding it. Drizzle saffron water over the mound. Dot with remaining margarine.
7. Wrap lid in a kitchen towel (absorbs steam — essential for crispy tahdig). Cook on medium 5 minutes, then reduce to lowest heat for 40 minutes.
8. To serve: place a plate over the pot and flip. The golden tahdig should be on top, the jeweled rice beneath. Scatter the fruit-nut mixture over everything.

Per Serving (1/4 of recipe)

Na	K	P
~290mg	~195mg	~110mg

10. Depression Era America (~1935) — Mock Apple Pie (Ritz Cracker Pie)

Historical fact: During the Great Depression, apples were expensive and inconsistently available. In 1934, Nabisco printed a recipe on the back of the Ritz cracker box: crush Ritz crackers, add sugar, lemon juice, cream of tartar, and cinnamon, bake in a pie crust, and the result tastes — impossibly, undeniably — like apple pie. No apples. The science works because your brain interprets the combination of butter-cracker crunch + cinnamon + citric acid + sugar as "apple." The recipe stayed on the Ritz box for over 80 years. It was featured in Betty Crocker cookbooks, appeared on *The Tonight Show*, and was submitted to state fair competitions (and won). It's still on the Nabisco website today.

Why it survived: Because Americans will find a way to eat apple pie even when there are no apples. That's not a metaphor. That's a recipe.

Ingredients

Crust (standard, or use store-bought):

Ingredient	Amount	CKD Note
All-purpose flour	2 cups	
Margarine, cold, cubed	2/3 cup	
Ice water	4-6 Tbsp	
Salt	1/4 tsp	
Sugar	1 tsp	

Filling:

Ingredient	Amount	CKD Note
Ritz crackers, coarsely broken	36 crackers (~1 sleeve)	The sodium is in the crackers — use original, not low-salt (the flavor depends on it)
Sugar	1 cup	
Cream of tartar	1 1/2 tsp	The key — creates the "apple" acid note
Lemon juice	2 Tbsp	Andrew's sour/tart preference satisfied
Lemon zest	1 tsp	
Water	1 3/4 cups	
Ground cinnamon	1 tsp	
Margarine	2 Tbsp	Dotted on top of filling

Method

1. **Make crust (or use store-bought):** Cut margarine into flour and salt. Add ice water 1 Tbsp at a time until dough holds. Divide in half. Roll out bottom crust, fit into 9-inch pie plate. Roll top crust, set aside.

2. **Make syrup:** Combine water, sugar, cream of tartar, lemon juice, and lemon zest in a saucepan. Boil 1 minute. Let cool 5 minutes.
3. Layer broken Ritz crackers in the pie crust. Pour syrup evenly over crackers. Sprinkle with cinnamon. Dot with margarine.
4. Cover with top crust. Crimp edges. Cut 4 steam vents. Brush top with a little almond milk and sprinkle of sugar.
5. Bake at 425°F for 15 minutes. Reduce to 375°F and bake 20-25 more minutes until golden.
6. Cool completely before cutting. The crackers dissolve into something that genuinely tastes like baked apples.

Yield: 8 slices

Per Serving (1 slice)

Na	K	P
~280mg	~45mg	~30mg

CKD Considerations

> *RENAL SAFETY NOTICE*
>
> *These recipes are designed for **CKD stages 3-4** with the following daily limits: - **Sodium:** <1,500mg/day - **Potassium:** <2,000mg/day - **Phosphorus:** <800mg/day*
>
> ***Key techniques used throughout this chapter: - Double-boil method** (beans, potatoes): Soaking + boiling + draining + reboiling reduces potassium 30-50% - **Zest over juice:** Citrus zest delivers flavor with a fraction of the potassium of juice - **Almond milk swap:** Replaces dairy in every recipe that historically used milk or cream - **Portion-controlled nuts/dates/yogurt:** These ingredients may fit some plans in measured amounts, while larger amounts can materially change potassium, phosphorus, sodium, fluid, or glucose totals - **Phosphorus awareness:** No processed cheese, no dark colas, no phosphate-additive breads. Every bread in this chapter is made from scratch for this reason*
>
> ***Dialysis patients:** Fluid and protein requirements differ. Consult your nephrologist and renal dietitian before modifying these recipes.*
>
> ***These are estimates.** Actual values depend on brands, portions, and preparation. Track with a renal-specific app or work with your dietitian (ask for Holly).*

> *"Tell me what you eat, and I will tell you what you are." — Jean Anthelme Brillat-Savarin, The Physiology of Taste (1825)*
>
> *He was a French lawyer who wrote the first philosophy-of-food book while hiding from the Revolution. He died in 1826. The book was published posthumously. He never ate any of the food in this chapter. But he understood why all of it survived.*

CHAPTER 29

The Emoji Soup Experimental Kitchen

"Item one: a soup. Price: nothing. Description: everything."

Recipes That May or May Not Exist

"Item one: a soup. Price: nothing. Description: everything."

0. The Bread

Arrives before you order. Warm. Endless.

Ingredient	Amount
Sourdough starter	Alive
Flour	Enough
Water	Some
Salt	Less than you think
Time	More than you want

Method: You already know how to make bread. You've always known. You just forgot. Start the starter on a Monday. Feed it Tuesday. Feed it Wednesday. By Thursday it's breathing. By Friday it smells like beer. By Saturday you're ready. By Sunday you're eating bread you made with your hands and a jar of bacteria you kept alive all week like a pet.

The bread is correct.

∞. The Soup

There is only one soup. It contains everything.

Ingredient	Amount
Whatever is left	All of it
Water or broth	Enough to cover
An onion	Always
Garlic	Obviously
Salt	To taste
The thing in the back of the fridge you forgot about	That too

Method: Put it all in a pot. Heat it. Stir it. Wait. That's it. That's every soup that has ever existed. The French call it *pot-au-feu*. The Italians call it *ribollita*. The Japanese call it *zosui*. Your grandmother called it Monday.

42. The Thing You Came Here For

You don't order this. It orders you.

Ingredient	Amount

Method: You'll know when it arrives.

1987. Floccinaucinihilipilification Pudding

The act of estimating something as worthless, served in a ramekin.

Ingredient	Amount	Notes
Unsweetened almond milk	2 cups	The base of the worthless
Cornstarch	3 tbsp	The structure of the worthless
Sugar	1/3 cup	The sweetness of the worthless
Vanilla	1 tsp	The soul of the worthless
Cocoa powder	2 tbsp (optional)	The darkness of the worthless
Pinch of salt		The memory of the worthless
Edible gold glitter	Pinch	The pricelessness of the ramekin

Method: Whisk cornstarch + sugar + cocoa (if using) in a saucepan. Slowly add almond milk, whisking until smooth. Cook over medium heat, stirring constantly, until thick and bubbling (4-5 min). Remove from heat. Add vanilla + salt. Pour into ramekins. Dust with gold glitter.

The pudding is worthless. The ramekin is priceless. The joke is on you. The joke is also the pudding.

Per serving (4 ramekins): ~35mg Na | ~25mg P | ~60mg K

The cheapest dessert in the book. The most expensive lesson.

9:16. The Covenant

A dessert that contains a promise.

Seven layers. Each a different color.

Layer	Color	Flavor
1	Red	Cherry gelatin
2	Orange	Orange gelatin
3	Yellow	Lemon gelatin
4	Green	Lime gelatin
5	Blue	Berry Blue gelatin
6	Indigo	Grape gelatin
7	Violet	Unflavored + purple coloring + vanilla

Method: One layer at a time. Set each before pouring the next. It takes all day. When you cut a slice, the cross-section is a rainbow. You built a covenant in gelatin. Nobody asked you to. You did it anyway.

This recipe also appears in Chapter 10 under "Rainbow Gelatin Mold." It's the same recipe. It just means something different here.

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503. Service Unavailable

For when you don't want to cook and that's okay.

Ingredient	Amount
Phone	1
The number for the place you like	Memorized
Couch	Occupied
Guilt about not cooking	0

Method: Order food. Eat it on the couch. Watch something. Don't apologize. The cookbook will still be here tomorrow. Tonight you rest.

---

808. The Drum Machine

A breakfast that keeps perfect time.

Ingredient	Amount
Eggs	2, scrambled (the kick)
Turkey sausage	2 links (the snare)
Sourdough toast	2 slices (the hi-hat)
Margarine	On the toast (the sustain)
Hot sauce	To taste (the drop)
Coffee or tea	1 cup (the tempo)

Method: Cook everything at the same time. Plate it in a line. Eat from left to right. The rhythm is: bite, bite, sip, bite, bite, sip. The breakfast is a beat. The beat is a breakfast. Roland would understand.

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000. Call Someone

This is not a recipe.

Pick up the phone. Call the person you're thinking about right now. The one you haven't talked to in a while. The one who would be surprised to hear from you. The one who cooked for you once and you never told them it mattered.

Tell them.

Then make them something from this book and bring it over.

That's the recipe.

988 — You are not alone. 988 + 11 = 999; 999 is symbolic hope, not a crisis number.

?. The Last Recipe

It hasn't been written yet.

It's the one you'll make when you figure out what you've been trying to say this whole time. Every recipe in this book is practice for that one. Every meal is a draft. Every plate is a revision.

You'll know it when you make it because you won't need to look anything up.

> *"The only real stumbling block is fear of failure. In cooking you've got to have a what-the-hell attitude." — Julia Child*

CHAPTER 30

Campfire & Outdoor Cooking

"Prometheus stole fire from the gods. You are using it to make s-mores. He would approve."

Fire Pit, Grill, Camp Stove & Foil Pack Recipes

"Prometheus stole fire from the gods. You're using it to make s'mores. He'd approve."

Recipe 1: Campfire S'mores

The Girl Scouts' 1927 handbook called them "Some Mores." The name stuck because one is never enough. The Aztecs had cacao. The Egyptians had honey. The Americans put them between two crackers and called it a night.

Serves 4 (2 s'mores each)

Ingredients — Classic

Ingredient	Amount	CKD Note
Graham crackers	8 sheets (16 squares)	~70 mg Na per sheet — moderate, but one serving is fine
Large marshmallows	8	Gelatin-based, very low P/K, main concern is sugar — CKD-aware in moderation
Milk chocolate bar (Hershey's)	4 oz (broken into 8 pieces)	~35 mg P per piece — manageable; dark chocolate has more K/P, avoid
Campfire or roasting sticks	4	Not edible. Do not eat the stick.

Method

1. Break each graham cracker sheet in half so you have 16 squares total.
2. Place one piece of chocolate on a graham square.
3. Toast marshmallow over coals (not flame — patience). Rotate slowly. Golden-brown on all sides. If it catches fire, blow it out; you now have a "charred" s'more, which some people prefer. No judgment.
4. Place hot marshmallow on top of chocolate. Press second graham square on top. Squeeze gently. The heat melts the chocolate.
5. Hold for 10 seconds. Eat. Repeat.

Fancy Variations

Variation	Swap	CKD Note
PB Cup S'more	Replace chocolate bar with 1 Reese's PB cup	Adds ~40 mg P from peanut butter — still under budget for a treat
Strawberry S'more	Add 2 sliced strawberries between chocolate and marshmallow	Strawberries are low-K fruit. Adds tartness Andrew loves.
Nutella S'more	Spread 1 Tbsp Nutella on graham instead of chocolate bar	Hazelnut = moderate P (~25 mg/Tbsp). Richer, more European.
Cinnamon Sugar S'more	Dust graham crackers with cinnamon + sugar before assembly	Zero additional Na/K/P. Just warmth.

Per Serving — Classic (2 s'mores)

Na	K	P
~160 mg	~90 mg	~80 mg

Recipe 2: Campfire Hot Dogs (Turkey Dogs on Sticks)

Frankfurters were invented in Frankfurt, Germany, around 1487 — or Vienna (Wien) in 1805, depending on who you ask. Both cities still argue about it. The argument is older than the United States.

Serves 4

Ingredients

Ingredient	Amount	CKD Note
Turkey hot dogs (low-sodium)	4	Regular beef/pork dogs: 500+ mg Na each. Low-Na turkey dogs: ~200-280 mg. Read the label. Andrew avoids pork — turkey is the move.
Hot dog buns	4	~200 mg Na per bun — factor this in
Yellow mustard	4 tsp	~55 mg Na/tsp — use sparingly
Ketchup (no-salt-added)	4 tsp	Regular ketchup = 150 mg Na/Tbsp. No-salt = ~10 mg.
Diced onion	1/4 cup	Low-K topping
Relish (sweet, low-sodium)	4 tsp	Check label — some brands are 100+ mg Na per serving
Long roasting sticks or skewers	4	Metal or green wood. Not pine — resin tastes terrible.

Method

1. Skewer each hot dog lengthwise through the center on a roasting stick.
2. Hold over hot coals (not direct flame). Rotate slowly. Cook 5-7 minutes until skin is blistered and slightly charred on all sides.
3. Place in bun. Top with mustard, no-salt ketchup, onion, relish.
4. Eat immediately. This is not a food that improves with waiting.

Per Serving (1 hot dog with bun and toppings)

Na	K	P
~380 mg	~180 mg	~140 mg

Recipe 3: Foil Pack Chicken & Veggies

The hobo pack — named for Depression-era travelers who cooked everything in a single container — is the ancestor of every foil-pack recipe. Aluminum foil was first commercially produced in 1910 by Dr. Lauber, Neher & Cie in Emmishofen, Switzerland. Before that, tin. Before that, clay. The principle has not changed in 10,000 years: seal it, heat it, eat it.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
Boneless skinless chicken thighs	2 (~8 oz total)	Thighs stay juicy in foil — breast dries out. ~4 oz cooked per serving.
Red bell pepper, sliced	1 medium	Lower-K than green pepper; color + sweetness
Yellow onion, sliced	1/2 medium	Low K
Garlic, minced	3 cloves	Negligible K/P
Avocado oil	2 Tbsp	High smoke point, no Na
Paprika	1 tsp	—
Garlic powder	1/2 tsp	—
Onion powder	1/2 tsp	—
Dried oregano	1/2 tsp	—
Black pepper	1/2 tsp	—
Fresh lemon juice	1 Tbsp	Andrew's sour hit
Heavy-duty aluminum foil	2 large sheets (~18")	Double-layer if foil is thin — leaks ruin dinner

Method

1. Mix paprika, garlic powder, onion powder, oregano, and pepper in a small bowl.
2. Toss chicken thighs with half the seasoning mix and 1 Tbsp avocado oil.
3. Toss bell pepper, onion, and garlic with remaining seasoning and 1 Tbsp oil.
4. Lay out two sheets of foil. Divide veggies between them, placing in center. Top each with one chicken thigh. Squeeze lemon juice over top.
5. Fold foil: bring long sides together, fold down twice. Fold short ends up and over to seal. No gaps. Steam must stay inside.
6. Place foil packs directly on hot coals (not flame). Cook 20-25 minutes, flipping once at 10 minutes.
7. Remove with tongs (leather gloves recommended). Let rest 2 minutes before opening — steam will escape and it's 212F inside.
8. Open carefully, eat directly from foil. One less dish to wash in the woods.

Per Serving (estimated)

Na	K	P
~120 mg	~380 mg	~210 mg

Recipe 4: Foil Pack Fish (Wild Salmon or Cod)

Scandinavian fishermen have been wrapping fish in leaves and bark to cook over fire since the Viking Age. The Maori of New Zealand use flax leaves. The technique transcends culture because physics doesn't care about borders: wrap protein + moisture + heat = steam-poached perfection.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
Wild salmon fillets (or cod)	2 fillets (~4 oz each)	Wild salmon: ~50 mg Na, ~300 mg K, ~250 mg P per 4 oz. Cod is lower across the board (~200 mg K, ~120 mg P). Choose based on your day's running total.
Fresh lemon, sliced thin	1 lemon (6-8 slices)	Citrus = salt replacement. Andrew's favorite flavor profile.
Fresh dill	4-6 sprigs	Classic Scandinavian pairing — zero Na/K/P concern
Garlic, thinly sliced	3 cloves	—
Unsalted margarine	2 Tbsp	No dairy P
Black pepper	1/2 tsp	—
Heavy-duty aluminum foil	2 large sheets	—

Method

1. Lay out two sheets of foil. Place 3-4 lemon slices in center of each as a bed for the fish.
2. Place one fillet skin-side down on lemon slices. Top with garlic slices, dill sprigs, 1 Tbsp margarine, and pepper.
3. Seal foil packs tightly (same fold method as Recipe 3).
4. Place on hot coals. Cook 12-15 minutes for salmon, 10-12 for cod. Do not flip — the lemon bed protects the bottom.
5. Open carefully. Fish should flake with a fork. If translucent in center, reseal and give it 3 more minutes.
6. Squeeze any remaining lemon from the slices over the fish before eating.

Per Serving — Wild Salmon (estimated)

Na	K	P
~70 mg	~340 mg	~260 mg

Per Serving — Cod (estimated)

Na	K	P
~80 mg	~220 mg	~130 mg

Recipe 5: Campfire Corn on the Cob

Maize was first domesticated in the Balsas River valley of Mexico roughly 9,000 years ago. The method of roasting it in its own husk over fire predates any written recipe. You are performing one of the oldest cooking techniques in the Western Hemisphere every time you throw an ear of corn on a campfire.

Serves 4

Ingredients

Ingredient	Amount	CKD Note
Ears of corn, husk on	4	One ear: ~3 mg Na, ~240 mg K, ~80 mg P. K is moderate — one ear per sitting is reasonable.

Ingredient	Amount	CKD Note
Unsalted margarine	2 Tbsp	For serving
Black pepper	to taste	—
Fresh lime juice	2 Tbsp	The sour finish
Chili powder (no-salt blend)	1/2 tsp, optional	Check label — many chili powders contain salt. Use pure chili powder only.
Water for soaking	enough to submerge	—

Method

1. Submerge corn (husk still on, silk still in) in water for 15-30 minutes. This prevents husk from incinerating and creates steam inside.
2. Place soaked corn directly on hot coals. Cook 15-18 minutes, rotating with tongs every 4-5 minutes. Husk will char and blacken — this is correct.
3. Remove with tongs. Let cool 3 minutes (the husk is an insulator and the corn inside is superheated).
4. Peel back husk and silk (they come off easily when charred). The corn underneath will be perfectly steam-roasted with slight char marks.
5. Spread margarine, squeeze lime, dust with chili powder and pepper.

Per Serving (1 ear with toppings)

Na	K	P
~15 mg	~250 mg	~85 mg

Recipe 6: Dutch Oven Chili

Chili con carne originated in northern Mexico and the Texas borderlands. The "chili queens" of San Antonio were selling it from open-air stalls by the 1860s. Dutch ovens — cast iron pots with legs for sitting in coals — were standard equipment on the Chisholm Trail. A cowboy's Dutch oven was worth more than his horse, and he'd fight you over it.

Serves 6

Ingredients

Ingredient	Amount	CKD Note
Ground turkey (93% lean)	1.5 lbs	Andrew avoids pork; turkey is leaner and lower-Na than beef
No-salt-added diced tomatoes	1 can (14.5 oz)	Regular canned tomatoes: 300-400 mg Na per can. No-salt: ~50 mg. Non-negotiable swap.
No-salt-added tomato sauce	1 can (8 oz)	Same logic
Kidney beans, canned	1 can (15 oz), **triple-rinsed and drained**	Triple-rinsing reduces Na by ~40% and K by ~30%. This step is mandatory, not optional.
Yellow onion, diced	1 large	—
Red bell pepper, diced	1 medium	Lower K than green
Garlic, minced	5 cloves	—
Avocado oil	2 Tbsp	—
Chili powder (no-salt)	2 Tbsp	Pure chili powder only — most "chili seasoning packets" are 50% sodium. Make your own or read every ingredient.
Cumin, ground	1 Tbsp	The soul of chili
Paprika (smoked)	1 tsp	Depth
Oregano, dried	1 tsp	—
Cayenne pepper	1/2 tsp (adjust to taste)	—
Black pepper	1 tsp	—
Fresh lime juice	2 Tbsp	Stir in at the end — brightens everything
Water or low-sodium broth	1 cup	Adjust for thickness

Method

1. Build your fire and let it burn down to a thick bed of coals. You want steady radiant heat, not flames licking the sides of the pot.
2. Set Dutch oven on coals (or on a grate over the fire pit). Add avocado oil.
3. Brown ground turkey, breaking it into small pieces. 5-7 minutes. Remove and set aside.
4. Add onion, bell pepper, garlic to the pot. Cook 3-4 minutes until softened.
5. Add all spices (chili powder, cumin, paprika, oregano, cayenne, pepper). Stir 1 minute to bloom — you'll smell it transform.
6. Return turkey to pot. Add diced tomatoes, tomato sauce, triple-rinsed beans, and water/broth.
7. Stir well. Place lid on Dutch oven.
8. Cook over coals 45 minutes to 1 hour, stirring every 15 minutes. Adjust fire as needed — you want a gentle simmer, not a rolling boil. If it's too hot, move the pot to the edge of the coals.
9. Stir in lime juice. Taste and adjust spices.
10. Serve in bowls. Top with diced onion if desired. No sour cream (phosphate additives) — use a squeeze of lime instead.

Per Serving (estimated, ~1.5 cups)

Na	K	P
~180 mg	~450 mg	~240 mg

Recipe 7: Campfire Quesadillas

The quesadilla dates to colonial Mexico, first documented in the 16th century, though the concept of cheese melted inside a corn tortilla is almost certainly pre-Columbian (the Aztecs had Oaxacan cheese). The cast iron skillet over an open fire is just the original method with better metallurgy.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
Flour tortillas (8")	2	~200 mg Na each — this is the biggest Na contributor. Low-Na tortillas exist; use them if you can find them.
Cooked chicken breast, shredded	1 cup (~4 oz)	Pre-cook at home or use leftover rotisserie (rinse to reduce surface Na)
Low-sodium cheddar, shredded	1/2 cup	Regular cheddar: ~180 mg Na/oz. Low-sodium: ~5 mg/oz. The swap matters.
Red bell pepper, diced small	1/4 cup	Color + crunch
Avocado oil	1 Tbsp	For the skillet
Garlic powder	1/4 tsp	—
Cumin	1/4 tsp	—
Fresh lime juice	1 Tbsp	Squeeze over finished quesadilla
Cast iron skillet (10")	1	The only proper vessel

Method

1. Place cast iron skillet on grate over campfire (or balanced on rocks above coals). Let it get hot — 2-3 minutes.
2. Brush one side of each tortilla with avocado oil.
3. Place tortilla oil-side down in skillet. Layer: half the cheese, half the chicken, bell pepper, garlic powder, cumin, remaining chicken, remaining cheese.
4. Top with second tortilla, oil-side up.
5. Cook 2-3 minutes until bottom is golden and crispy. Flip carefully (two spatulas, or the brave man's one-hand flip). Cook 2-3 minutes more.
6. Remove from skillet. Let rest 1 minute. Cut into quarters. Squeeze lime over top.

Per Serving (1/2 quesadilla)

Na	K	P
~340 mg	~220 mg	~200 mg

Recipe 8: Hobo Stew

During the Great Depression, "hobo jungles" — makeshift camps near rail yards — had communal pots. Everyone contributed whatever they had: a potato, an onion, a can of something. The pot belonged to everyone and no one. This is the original "decoded basket" — you use what you have, and it works because heat and time are democratic.

Serves 4

Ingredients

Ingredient	Amount	CKD Note
Ground turkey	1 lb	Andrew's go-to protein. Pork-free.
Red potatoes, diced small (1/2")	2 medium	**Leach overnight or at least 4 hours** in water to reduce K by ~50%. Drain and rinse before using.
Carrots, diced	1 cup	Moderate K — leaching in water helps here too
Yellow onion, diced	1 medium	—
Celery, diced	2 stalks	Low K
Garlic, minced	4 cloves	—
No-salt-added diced tomatoes	1 can (14.5 oz)	—
Low-sodium chicken broth	3 cups	—
Avocado oil	2 Tbsp	—
Dried thyme	1 tsp	—
Bay leaf	1	Remove before eating — they don't soften and will choke you
Black pepper	1 tsp	—
Fresh lemon juice	1 Tbsp	Stir in at end

Method

1. Heat a large pot (or Dutch oven) over campfire coals. Add avocado oil.
2. Brown ground turkey, breaking into pieces. 5-7 minutes. Season with pepper and thyme.
3. Add onion, celery, garlic. Cook 3-4 minutes.
4. Add leached/drained potatoes, carrots, diced tomatoes, broth, and bay leaf.
5. Bring to a simmer (not a boil). Cover. Cook 30-40 minutes until potatoes are tender.
6. Remove bay leaf. Stir in lemon juice.
7. Serve in camp mugs or bowls. This is the kind of meal that tastes better outside.

Per Serving (estimated, ~1.5 cups)

Na	K	P
~160 mg	~380 mg	~200 mg

Recipe 9: Campfire Nachos (in Foil)

Nachos were invented in 1943 by Ignacio "Nacho" Anaya at the Victory Club restaurant in Piedras Negras, Mexico, for a group of U.S. military wives who crossed the border looking for a snack. He cut tortillas into triangles, fried them, added cheese and jalapenos, and named them after himself. Humility was not his strongest quality, but the recipe was flawless.

Serves 4

Ingredients

Ingredient	Amount	CKD Note
Tortilla chips (unsalted or low-sodium)	6 oz (~half a bag)	Regular chips: 110-170 mg Na/oz. Unsalted: ~5 mg/oz. This is the single biggest variable.
Homemade CKD nacho cheese (see Sauces chapter)	1 cup	Or use 1/2 cup shredded low-Na cheddar melted over top
Cooked ground turkey, seasoned	1 cup	Season with cumin + chili powder + garlic, no salt
Red bell pepper, diced	1/2 cup	—
Jalapeno, sliced thin	1 (seeds removed for less heat)	Very low K/Na
Red onion, diced	1/4 cup	—
Fresh lime juice	2 Tbsp	Squeeze over finished nachos
Fresh cilantro	2 Tbsp, chopped	—
Disposable foil tray (9x13)	1	Or make a tray from heavy-duty foil — fold up 2" sides

Method

1. Spread chips in a single layer on foil tray.
2. Top with seasoned turkey, bell pepper, onion, jalapeno.
3. Pour or dollop nacho cheese over everything (or distribute shredded cheese evenly).
4. Cover loosely with foil.
5. Place on grate over campfire coals. Heat 5-8 minutes until cheese is melted and bubbly.
6. Remove (tongs + gloves). Uncover. Top with cilantro and lime juice.
7. Eat directly from tray. Everyone grabs from the center. This is communal food.

Per Serving (estimated, ~1/4 tray)

Na	K	P
~220 mg	~280 mg	~180 mg

Recipe 10: Campfire Banana Boats

The banana reached the Americas via Portuguese sailors in the 16th century, originally from Southeast Asia. Theophrastus described it in 300 BCE. Alexander the Great encountered it in India. You are about to stuff it with chocolate and marshmallows and throw it on a fire. History is a strange thing.

> ***K WARNING:*** *Bananas are a high-potassium food (~420 mg K per medium banana). This recipe is a TREAT, not an every-day. If your daily K total is already high, skip this one today and come back when you have room. Worth it when you can afford it.*

Serves 4

Ingredients

Ingredient	Amount	CKD Note
Ripe bananas (not overripe)	4 medium	~420 mg K each. The elephant in the room. Budget accordingly.
Semi-sweet chocolate chips	1/4 cup (4 Tbsp total, 1 Tbsp per banana)	~10 mg Na, ~60 mg K, ~30 mg P per Tbsp
Mini marshmallows	1/4 cup (divided among 4 bananas)	Very low Na/K/P — gelatin and sugar
Heavy-duty aluminum foil	4 sheets	—

Method

1. Leave the peel on. With a sharp knife, slice each banana lengthwise through the peel on the inner curve (the concave side) — cut deep but don't go through the bottom peel.
2. Gently spread the slit open. Stuff with chocolate chips and marshmallows, pressing them into the banana flesh.
3. Wrap each banana tightly in foil.
4. Place on hot coals. Cook 5-7 minutes.
5. Remove with tongs. Unwrap carefully (steam!). The banana will be soft, the chocolate melted, the marshmallows gooey.
6. Eat with a spoon directly from the peel. No plate needed.

Per Serving (1 banana boat)

Na	K	P
~12 mg	~480 mg	~60 mg

GRILLING

Recipe 11: The Perfect Grilled Steak

The Maillard reaction — the chemical process that creates the crust on a seared steak — was first described by French chemist Louis-Camille Maillard in 1912. But Homo erectus was grilling meat over fire 1.8 million years ago in Wonderwerk Cave, South Africa. Maillard described it. Your ancestors invented it. You are the latest in an unbroken line.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
Ribeye or NY strip steak	12 oz total (6 oz each, raw = ~4 oz cooked)	Beef: ~60 mg Na, ~300 mg K, ~200 mg P per 4 oz cooked. Portion control is the CKD lever here.
Coarse black pepper	1 tsp	—
Garlic powder	1 tsp	—
Avocado oil	1 Tbsp	Coat the steak, not the grill — reduces flare-ups
Fresh lemon wedge	for serving	Squeeze over rested steak — Andrew's move

Method

1. Remove steak from fridge 30 minutes before grilling. Room temp = even cooking. This is not optional.
2. Pat completely dry with paper towels. Moisture is the enemy of crust.
3. Rub with avocado oil. Season generously with pepper and garlic powder on both sides.
4. Get the grill screaming hot. If you can hold your hand 6 inches above the grate for more than 2 seconds, it's not hot enough.
5. Place steak on grill. Do not touch it for 4 minutes. Do not press it. Do not move it. Crust is forming. Leave it alone.
6. Flip once. 4 minutes more for medium-rare (internal 130-135F). 5 minutes for medium (140F).
7. Remove from grill. Place on cutting board. Rest 5 full minutes. The juices are redistributing. Cutting it early means those juices end up on the board instead of in your mouth.
8. Slice against the grain. Squeeze lemon. This is the backyard version of the date night steak.

Per Serving (estimated, ~4 oz cooked)

Na	K	P
~65 mg	~310 mg	~210 mg

Recipe 12: Grilled Chicken Thighs (Lemon Herb)

Lemon and herb marinades trace to the Eastern Mediterranean — the Greeks, the Turks, the Lebanese. Olive oil + citrus + garlic + oregano is a formula older than most countries. The chicken thigh, fattier and more forgiving than the breast, is the ideal grill cut because it stays juicy through the temperature swings of an open flame.

Serves 4

Ingredients

Ingredient	Amount	CKD Note
Bone-in, skin-on chicken thighs	4 (~6 oz each raw)	Skin crisps on grill — this is the point. ~4 oz cooked meat per thigh.
Fresh lemon juice	3 Tbsp	Andrew's sour cathedral
Lemon zest	1 tsp	Concentrated citrus oil — more flavor per gram than juice
Avocado oil	3 Tbsp	Marinade base + grill protection
Garlic, minced	4 cloves	—
Dried oregano	1 tsp	—
Dried thyme	1 tsp	—
Black pepper	1 tsp	—
Fresh rosemary	2 sprigs (leaves stripped and minced)	Optional but excellent

Marinade & Method

1. Combine lemon juice, zest, avocado oil, garlic, oregano, thyme, pepper, and rosemary in a bowl or zip-lock bag.
2. Add chicken thighs. Coat thoroughly. Marinate at least 30 minutes (2 hours is better; overnight is best). Keep cold — cooler with ice if at camp.
3. Preheat grill to medium-high (about 400F). If using charcoal, wait for coals to ash over.
4. Place thighs skin-side down first. Cook 6-7 minutes until skin is golden and crispy with grill marks.
5. Flip. Cook 6-7 minutes more. Internal temp should reach 165F at the thickest part.
6. Rest 5 minutes before serving. Squeeze more lemon over top.

Per Serving (1 thigh, estimated)

Na	K	P
~100 mg	~280 mg	~190 mg

Recipe 13: Grilled Shrimp Skewers

The Portuguese brought piri-piri peppers from Brazil to Mozambique; the Mozambicans turned them into a garlic-butter-chili shrimp marinade; the Portuguese brought it back to Lisbon and claimed it as their own. Colonialism is ugly but the recipe is outstanding. This version skips the piri-piri heat for garlic butter simplicity, but the lineage is there.

Serves 4

Ingredients

Ingredient	Amount	CKD Note
Jumbo shrimp, peeled & deveined	1 lb (~20 shrimp)	Shrimp: ~190 mg Na per 4 oz raw (varies by brand — check for added sodium/phosphate solutions). Wild-caught preferred.
Unsalted margarine, melted	3 Tbsp	Garlic butter base — no dairy P
Garlic, minced	5 cloves	The Portuguese would approve
Fresh lemon juice	2 Tbsp	—
Lemon zest	1 tsp	—
Black pepper	1/2 tsp	—
Paprika (smoked)	1/2 tsp	Adds depth without Na
Fresh parsley, chopped	2 Tbsp	Garnish
Metal or soaked wood skewers	4-6	If wood: soak 30 min or they become campfire kindling

Method

1. Combine melted margarine, garlic, lemon juice, zest, pepper, and paprika.
2. Toss shrimp in marinade. Let sit 15 minutes (no longer — acid "cooks" shrimp if left too long; you'll get ceviche).
3. Thread 4-5 shrimp per skewer, piercing each shrimp through both the tail and the thick end so they lay flat and don't spin.
4. Grill over medium-high heat, 2-3 minutes per side. Shrimp are done when they turn pink and curl into a C shape. If they curl into an O, they're overcooked.
5. Remove from grill. Brush with remaining garlic-butter marinade. Sprinkle parsley. Squeeze extra lemon.

Per Serving (estimated, ~5 shrimp)

Na	K	P
~220 mg	~190 mg	~210 mg

Recipe 14: Grilled Elote (Mexican Street Corn)

See: American Soul Food chapter for the full Grilled Elote recipe with CKD notes, per-serving nutritionals, and complete method.

Cross-reference only. Corn + lime + chili + acid = perfection. Don't reinvent what's already written.

FISHING CAMP SPECIAL

Recipe 15: Shore Lunch — Catch, Clean, Cook

This is the oldest recipe in human history. Before agriculture, before pottery, before written language — there was a human, a fish, and a fire. The "shore lunch" tradition is strongest in the Canadian Shield region, where fishing guides cook the morning's catch lakeside for their clients. But the concept is universal. Every culture with access to water has a version of this. You are about to make yours.

Serves 2

Ingredients

Ingredient	Amount	CKD Note
Fresh-caught fish (trout, bass, catfish, perch, or crappie)	2 whole fish or 2 fillets (~4-6 oz each)	Wild freshwater fish is generally lower in Na than store-bought. P varies by species: trout ~220 mg/4 oz, bass ~200 mg, catfish ~190 mg. All reasonable.
Fresh lemon	1, sliced	—
Garlic, sliced	3 cloves	—
Black pepper	1 tsp	—
Avocado oil or unsalted margarine	2 Tbsp	For the skillet or foil
Fresh dill or thyme	a few sprigs	Whatever's in the camp kit
Heavy-duty foil or cast iron skillet	—	Your choice of method — both work

How to Clean a Fish (Basic Field Method)

> *You caught it. Now you have to deal with it. This is the part most cookbooks skip.*

1. **Kill it humanely.** A firm strike to the top of the head with a rock or the butt of your knife handle. Quick. Don't let it suffer on a stringer for hours.
2. **Scale it.** Hold the fish by the tail. Using the back (dull side) of your knife, scrape from tail to head in short strokes. Scales fly everywhere — do this near the water, not in camp. Rinse.
3. **Gut it.** Insert the tip of your knife into the vent (small hole on the belly near the tail). Cut forward along the belly toward the head — shallow, just through the skin. Don't puncture the intestines. Open the belly cavity. Pull out everything inside. Rinse the cavity with clean water.
4. **Remove the gills** (optional but recommended — they taste bitter). Hook your finger under the gill plate and pull them out.
5. **Rinse thoroughly.** Inside and out. Pat dry.
6. **Option A: Cook whole.** Leave the head and tail on. The bones make a natural rack and add flavor.
7. **Option B: Fillet.** Lay the fish on its side. Cut behind the gill plate down to the backbone. Turn the knife and slide along the backbone toward the tail, keeping the blade flat against the bone. Peel the fillet off. Flip and repeat. Remove pin bones with pliers or tweezers.

Method — Foil Pack

1. Lay fish (whole or fillet) on a sheet of foil. Place lemon slices underneath and on top.
2. Add garlic, herbs, and 1 Tbsp margarine or oil.
3. Season with pepper.
4. Seal foil tightly. Place on coals 10-15 minutes (fillets: 8-10 min; whole fish: 12-15 min).
5. Open carefully. Fish is done when it flakes easily and is opaque throughout.

Method — Cast Iron Skillet

1. Heat skillet over campfire with 2 Tbsp avocado oil.
2. Season fish with pepper. Place in skillet skin-side down (or outside-down if whole).
3. Cook 4-5 minutes until skin is crispy. Flip carefully. Cook 3-4 minutes more.
4. Add garlic and margarine to the pan in the last minute. Baste fish with melted garlic butter.
5. Squeeze lemon. Eat immediately.

Per Serving (estimated, ~4 oz cooked freshwater fish, average)

Na	K	P
~60 mg	~300 mg	~210 mg

Daily Budget Check

For hemodialysis patients (Andrew's protocol, 3x/week):

Nutrient	Daily Limit	One campfire meal typically uses...
Sodium	<1,500 mg	100-400 mg (well under, unless you go heavy on hot dog buns)
Potassium	<2,000 mg	200-500 mg (watch the banana boats and potatoes — leach and budget)
Phosphorus	<800 mg	130-260 mg (portion control on meat; foil pack veggies are very low-P)

The outdoors is not an excuse to stop counting. But it's also not an excuse to stop living. Pack smart, cook simple, eat well.

> *"Man is the only animal that cooks. The first campfire was the first kitchen. Every flame since then has been a continuation of the same conversation between human and heat that began in a cave on the African savanna, two million years ago. You are not just grilling a steak. You are participating in the longest unbroken tradition of your species."*
>
> *-- RENALWISE CKD Kitchen, Campfire & Outdoor Cooking*

POWER OUTAGE / EMERGENCY COOKING

"The grid goes down. The kitchen doesn't."

72-Hour Emergency Pantry

Always have these on hand. No refrigeration needed. No power needed.

Item	Why	Na/K/P Notes
Rice (dry, 5 lb bag)	Staple carb, cooks on camp stove	Lowest K/P grain
Almond milk (shelf-stable boxes)	Dairy sub, drinks, cooking	Low P, low K
Peanut/almond butter	Protein + fat + calories	Moderate P — portion 2 tbsp
Crackers (low-sodium)	Carbs, pairs with everything	Check label — Triscuits or rice crackers
Canned chicken (low-sodium)	Protein without refrigeration	Rinse to reduce Na further
No-salt-added canned tomatoes	Sauce base, soup base	Low Na, moderate K
Canned beans (any — RINSE x3)	Protein + fiber	Triple rinse cuts K by 40%
Honey	Sweetener, energy, never expires	Zero Na/K/P
Oatmeal (instant packets)	Breakfast, just add hot water	Low K
Dried fruit (small amount)	Quick energy	HIGH K — emergency use only
Phosphorus binders	Take with every protein meal	Non-negotiable
Water (1 gallon/day/person)	Fluid restriction still applies	Track against daily limit

Camp Stove Meals (Single Burner)

Breakfast: Instant oatmeal + honey + almond milk (heated in pot) **Lunch:** Rice + canned chicken + hot sauce **Dinner:** Canned tomatoes + rice +

beans (rinsed) + seasonings = emergency chili **Snack:** Crackers + peanut butter + honey

No-Cook Emergency Meals

- PB&J on crackers
- Canned chicken salad (chicken + mayo packets + pepper)
- Trail mix (nuts + dried fruit + chocolate chips — small portions)
- Almond milk + instant oatmeal (cold soaked 10 min — no heat needed)

FERMENTED & PICKLED (Reduced-Sodium Versions)

Sweet & Spicy Bread and Butter Pickles

Invented during the Depression by Omar and Cora Fanning, Illinois. They traded them for bread and butter. The name stuck.

Ingredient	Amount	CKD Notes
Cucumbers	2 lbs, sliced 1/4" thick	Low K vegetable
Onion	1 medium, thinly sliced	
White vinegar	1 cup	
Sugar	3/4 cup	
Mustard seeds	1 tsp	
Celery seeds	1/2 tsp	
Turmeric	1/2 tsp (the yellow)	
Red pepper flakes	1/4 tsp (the spicy)	
Salt	1 tsp (less than traditional — CKD adjusted)	

Method: Salt cucumber + onion slices, let sit 1 hour, drain + rinse. Bring vinegar + sugar + spices to boil. Add cucumbers + onions. Simmer 5 min. Pack into mason jars with liquid. Refrigerator pickles — ready in 24 hours, keep 2 months.

Quick Kimchi (Reduced Sodium)

Korean national dish. UNESCO Intangible Cultural Heritage 2013. Traditional recipes use 3-5% salt by weight. This uses less and still ferments.

Ingredient	Amount
Napa cabbage	1 head, chopped into 2" pieces
Salt	2 tbsp (rubbed into cabbage, let wilt 2 hours, RINSE well)
Korean red pepper flakes (gochugaru)	3 tbsp
Garlic	6 cloves, minced
Ginger	1" piece, grated
Fish sauce sub (low-sodium soy + lime juice)	1 tbsp
Sugar	1 tsp
Green onions	4, cut into 1" pieces
Carrots	1, julienned

Method: Salt cabbage, let wilt 2 hours. Rinse THREE TIMES (removes excess Na). Squeeze dry. Mix gochugaru + garlic + ginger + fish sauce sub + sugar into paste. Massage paste into cabbage + onions + carrots. Pack tightly into mason jar. Leave 1" headspace. Seal. Ferment at room temp 2-5 days (taste daily). Refrigerate when tangy enough. Keeps 1+ month.

Pickled Daikon (Danmuji — Japanese/Korean)

Takuan — invented by Zen Buddhist monk Takuan Sōhō in 17th century Japan. Pickled radish as meditation food.

Ingredient	Amount
Daikon radish	1 large, peeled, sliced into half-moons
Rice vinegar	1 cup
Sugar	1/2 cup
Salt	1/2 tsp
Turmeric	1/4 tsp (for yellow color)
Water	1/2 cup

Method: Bring vinegar + water + sugar + salt + turmeric to boil. Stir until dissolved. Pack daikon into mason jar. Pour hot brine over. Cool. Seal. Refrigerate 24 hours minimum. Best after 3 days. Keeps 1 month.

PARTY SNACK MIX DUPES

Pub Mix Dupe

Chex Mix was invented by Ralston Purina in 1952. Originally called "TV Party Mix" — designed for watching television.

Ingredient	Amount
Rice Chex	3 cups
Corn Chex	2 cups
Pretzel sticks	1 cup
Bagel chips (broken)	1 cup
Mixed nuts	1/2 cup
Margarine, melted	4 tbsp
Worcestershire sauce	1 tbsp
Garlic powder	1 tsp
Onion powder	1/2 tsp
Paprika	1/2 tsp
Cayenne	1/4 tsp
Costco no-salt seasoning	1 tsp

Method: Mix cereals + pretzels + chips + nuts. Melt margarine with all seasonings. Pour over mix, toss to coat. Spread on sheet pan. Bake 250F 45-60 min, stirring every 15 min. Cool completely on pan (it crisps as it cools). Store in airtight container. Lasts 2 weeks (if it makes it that long).

Muddy Buddies (Puppy Chow)

Invented in the Midwest, date unknown. Every church potluck since 1980. Nobody knows who made the first batch. Everyone claims it was their aunt.

Ingredient	Amount
Rice Chex	9 cups
Semi-sweet chocolate chips	1 cup
Peanut butter	1/2 cup
Margarine	1/4 cup
Vanilla	1 tsp
Powdered sugar	1.5 cups

Method: Melt chocolate + peanut butter + margarine together (microwave 30 sec intervals, stir between). Add vanilla. Pour over Chex in a large bowl. Toss gently until every piece is coated. Pour into large ziplock bag. Add powdered sugar. Seal. SHAKE until every piece is white. Pour onto parchment. Cool. Eat by the handful. Share with someone. That's the recipe AND the point.

Per cup: ~50mg Na | ~45mg P | ~80mg K

"The fire doesn't care who you are. It just makes things warm."

Color Flames, Spark Showers, Smoke Bombs & Crackling Fire Magic

"Copper chloride burns green because excited copper electrons drop from the 4p to 4s orbital, emitting photons at 510-520nm wavelength."

THE SCIENCE OF FLAME COLOR

When you heat a metal salt, the thermal energy excites electrons in the metal atom, bumping them to higher energy orbitals. When those electrons fall back down, they release that energy as photons — visible light at specific wavelengths determined by the quantum structure of that particular element. Different metals = different electron gaps = different colors. This is the same principle behind neon signs, LED chemistry, and the reason sodium streetlamps are yellow.

Metal	Color	Wavelength (nm)	Why
Lithium / Strontium	Deep Red	670 / 606-662	Large electron energy gaps in the red spectrum
Calcium	Orange	622	Ca emission lines cluster in the orange band
Sodium	Yellow	589	The D-line doublet — already present in regular wood (salt content)
Barium	Yellow-Green	524	Ba emission lines in the green, combined with some yellow
Copper	Green to Blue-Green	510-520	Cu emission from 4p to 4s transition
Copper Chloride	Blue-Teal	435-520	CuCl molecular emission shifts copper toward blue
Potassium	Violet / Purple	766-770	Actually emits in near-infrared — the faint violet is from weaker visible lines
Magnesium / Aluminum	Brilliant White	Broad spectrum	Combustion temperature so high (~2500C) that emission is broadband — all wavelengths at once = white

> *Isaac Newton split white light with a prism in 1666. Robert Bunsen and Gustav Kirchhoff identified elements by their flame colors in 1860. You're about to do the same thing with a campfire and a bag from the hardware store.*

FLAME COLOR PACKETS

The method is the same for all: mix the chemical with a carrier (sawdust, rice hulls, or dry wood shavings), wrap in a small paper packet (newspaper, brown paper bag, or coffee filter), twist closed, and throw onto hot coals. The carrier burns slowly, releasing the metal salt into the flame zone over several minutes.

UNIVERSAL METHOD: 1. Measure chemical into a bowl 2. Add carrier material (sawdust preferred — fine, burns slow) 3. Mix thoroughly with a spoon (wear gloves) 4. Scoop onto a 6" square of newspaper or brown paper 5. Twist closed, secure with twine if needed 6. Throw onto established hot coals (not fresh flame — you want sustained heat) 7. Wait 30-60 seconds for ignition 8. Duration: 5-15 minutes depending on packet size and coal bed

Blend 1: "BLOOD MOON" — Deep Red Flames

Strontium chloride hexahydrate. The same compound that makes emergency road flares burn red. Highway departments have used it since the 1930s.

Ingredient	Amount	Role
Strontium chloride hexahydrate (SrCl2-6H2O)	3 tablespoons	Red colorant — Sr emission at 606-662 nm
Fine hardwood sawdust	1/2 cup	Carrier / fuel
Newspaper squares (6" x 6")	3-4 sheets	Wrapper

SOURCING: - Amazon: "Strontium chloride hexahydrate" — lab grade, 100g for ~$12-15 - Pyrotechnic supply: Skylighter.com carries it specifically for flame effects - Alternative: Lithium chloride works too (redder, more expensive — ~$18/100g on Amazon)

EFFECT: Rich, deep crimson flames. 8-12 minutes per packet. Best visible after dark against a dark sky.

SAFETY: - Strontium chloride is a mild irritant. Wear nitrile gloves when mixing. - Non-toxic at these quantities in open air. Do not use indoors. - Wash hands thoroughly after handling.

Blend 2: "SOLAR FLARE" — Bright Orange Flames

Calcium chloride. You already own this. It's the pellet de-icer sold at every hardware store in North America. DampRid is also calcium chloride. The cheapest flame colorant by far.

Ingredient	Amount	Role
Calcium chloride pellets (road de-icer)	4 tablespoons	Orange colorant — Ca emission at 622 nm
Fine hardwood sawdust	1/2 cup	Carrier / fuel
Newspaper squares	3-4 sheets	Wrapper

SOURCING: - Hardware store: Any brand of calcium chloride ice melt — $8-12 for a 10 lb jug (lifetime supply for flame effects) - Brands: DampRid, Qik Joe, Peladow, generic "calcium chloride pellets" - Home Depot, Lowes, Ace, True Value — seasonal aisle or year-round in northern states

EFFECT: Warm, intense orange-amber flames. The easiest and cheapest color to produce. 10-15 minutes per packet.

SAFETY: - Calcium chloride is hygroscopic (absorbs moisture from air). Store in sealed container. - Mildly irritating to skin — gloves recommended but not critical for brief handling. - Completely non-toxic in combustion at outdoor quantities.

Blend 3: "AURORA GREEN" — Emerald Green Flames

Copper sulfate pentahydrate. Sold as root killer at hardware stores because copper is toxic to the fungi and bacteria that clog drain pipes. Also the key ingredient in Bordeaux mixture, used to protect grapevines since 1882 in France.

Ingredient	Amount	Role
Copper sulfate pentahydrate (CuSO4-5H2O)	3 tablespoons	Green colorant — Cu emission at 510-520 nm
Fine hardwood sawdust	1/2 cup	Carrier / fuel
Newspaper squares	3-4 sheets	Wrapper

SOURCING: - Hardware store: Zep Root Kill, Rooto Root Killer, or generic "copper sulfate crystals" — $8-12 for 2 lbs - Home Depot / Lowes: Plumbing aisle, near drain cleaners - Amazon: "Copper sulfate pentahydrate crystals" — 1 lb for ~$10 - Farm supply stores (Tractor Supply, Wilco): Sold for algae/moss control in ponds

EFFECT: Vivid emerald-green flames with occasional blue-green flickers. The most visually striking single color. 8-12 minutes per packet.

SAFETY: - **TOXIC IF INGESTED.** Keep away from children, pets, and food. - Copper sulfate smoke is irritating to lungs — stay upwind. Outdoor use ONLY. - Wear nitrile gloves. Copper sulfate stains skin blue-green (washes off, but annoying). - Do not use in fire pits where you will later cook food directly on the grate without cleaning. - Store in original container, labeled, away from kitchen supplies.

Blend 4: "DEEP SPACE BLUE" — Blue-Teal Flames

Copper chloride. The hardest campfire color to achieve and the most impressive when you pull it off. Pure blue flame requires copper chloride specifically — copper sulfate leans green. The molecular emission of CuCl shifts the spectrum toward 435 nm (blue) rather than 510 nm (green).

Ingredient	Amount	Role
Copper(II) chloride dihydrate (CuCl2-2H2O)	3 tablespoons	Blue-teal colorant — CuCl molecular emission
Fine hardwood sawdust	1/2 cup	Carrier / fuel
Newspaper squares	3-4 sheets	Wrapper

SOURCING: - Amazon: "Copper chloride dihydrate" — lab/reagent grade, 100g for ~$10-14 - Skylighter.com: Pyrotechnic supply, sold specifically for flame color - eBay: Search "copper chloride crystals" — multiple sellers - Not commonly found in hardware stores (unlike copper sulfate)

EFFECT: Blue-teal flames that shift between deep blue and turquoise. Genuinely rare to see in a campfire. People will ask how you did it. 6-10 minutes per packet.

SAFETY: - **TOXIC.** Same precautions as copper sulfate — gloves, outdoor only, keep from children/pets. - Copper chloride is more water-soluble than sulfate — more readily absorbed through skin. Wear gloves without exception. - Produces hydrogen chloride gas (HCl) in small amounts when burned — mild acid vapor. Stay upwind. Well-ventilated outdoor setting only. - Do not inhale smoke directly.

Blend 5: "ULTRAVIOLET" — Purple Flames

Potassium chloride. Sold at every grocery store in America as salt substitute. Brand name: "No Salt" or "Nu-Salt." The most accessible flame colorant in this entire chapter — it's in aisle 7 next to the Morton's.

Ingredient	Amount	Role
Potassium chloride ("No Salt" brand or generic KCl)	4 tablespoons	Violet colorant — K emission at visible lines
Fine hardwood sawdust	1/2 cup	Carrier / fuel
Newspaper squares	3-4 sheets	Wrapper

> ***The irony is not lost.*** *Potassium chloride is the mineral that gets flagged on every renal panel. The thing your dietitian circles in red. The reason you can't have a banana without doing math. And here you are, throwing it into a fire for entertainment. Holly would find this hilarious. Burn it. Don't eat it. That's the whole joke.*

SOURCING: - Grocery store: "No Salt" brand (Morton's), "Nu-Salt," or generic potassium chloride salt substitute — $3-5 per shaker - Amazon: "Potassium chloride salt substitute" — bulk options available - Pharmacy: Sometimes stocked near dietary supplements

EFFECT: Faint violet-lavender flames. Potassium's visible emission lines are weak compared to strontium or copper — this is the subtlest color. Best seen in complete darkness. Works better as an accent mixed with other chemicals than as a solo color. 5-10 minutes per packet.

SAFETY: - Potassium chloride is food-grade at these quantities. Essentially zero hazard for handling. - The mildest chemical in this entire chapter. No gloves strictly required (but why not). - If you spill it, you've spilled salt substitute. Sweep it up.

Blend 6: "RAINBOW" — Full Spectrum Simultaneous

The showstopper. Every color at once. This is what the Chinese Han Dynasty fireworks were aiming for 2,200 years ago. You're doing it with a campfire and a trip to Home Depot.

METHOD A: Sequential Packet Toss (easiest)

Prepare one packet each of Blends 1-5. Throw them all onto the coals within a 30-second window, spaced around the fire. Each chemical ignites at slightly different rates, creating a shifting rainbow effect as different sections of the fire burn different colors.

Packet	Chemical	Color
Blood Moon	Strontium chloride	Red
Solar Flare	Calcium chloride	Orange
Aurora Green	Copper sulfate	Green
Deep Space Blue	Copper chloride	Blue-Teal
Ultraviolet	Potassium chloride	Violet

Total cost for all 5 packets: ~$8-12 in chemicals if you already have sawdust.

METHOD B: The Pine Cone Trick (most elegant)

Ingredient	Amount	Role
Dry pine cones	20-30	Carrier — porous, absorbs solution deeply
Metal salt solutions (see below)	1/2 cup chemical per gallon hot water	Colorant
5-gallon buckets	5 (one per color)	Soaking vessels
Hot water	1 gallon per bucket	Solvent

Full Pine Cone Instructions:

1. **Collect pine cones.** Fully open, dry ones work best. Douglas fir, Ponderosa, any conifer. 4-6 per color minimum.
2. **Prepare five solutions** in separate labeled buckets:
3. RED: 1/2 cup strontium chloride in 1 gallon hot water
4. ORANGE: 1/2 cup calcium chloride in 1 gallon hot water
5. GREEN: 1/2 cup copper sulfate in 1 gallon hot water
6. BLUE: 1/2 cup copper chloride in 1 gallon hot water
7. PURPLE: 1/2 cup potassium chloride in 1 gallon hot water
8. **Soak pine cones 24 hours.** Submerge completely. Weigh down with a plate or rock if they float.
9. **Remove and dry completely.** 2-3 days in sun, or 24 hours near (not on) a heat source. They must be bone dry or they'll smolder instead of burning.
0. **Label or color-code.** Tie a small colored ribbon or use a paint dot so you know which is which.
11. **Throw 2-3 of each color onto established coals.** Stagger by 30 seconds for a rolling rainbow effect, or all at once for chaos.

Duration: 15-25 minutes of colored flames per batch. Pine cones burn slower than paper packets.

SAFETY: - Copper sulfate and copper chloride solutions will stain buckets, skin, and concrete blue-green. Use disposable gloves and old buckets. - Label buckets clearly. Do not reuse for food or drink. - Dispose of leftover solution by diluting heavily with water and pouring on gravel (not on plants — copper is herbicidal). - Dry pine cones away from children and pets — they look like regular pine cones but are not for indoor decoration.

Blend 7: "WHITE PHOSPHOR" — Brilliant White Sparks

Magnesium. Burns at 3,100C (5,610F). So hot it emits light across the entire visible spectrum — the definition of "white hot." This is what camera flashbulbs were made of before electronic flash. Military flares. Thermite welding. Sparklers. The brightest non-explosive thing you can put in a campfire.

Ingredient	Amount	Role
Magnesium shavings or turnings	1 tablespoon	White-bright combustion — broadband emission
Fine steel wool (0000 grade)	Small handful	Secondary spark carrier
Hardwood sawdust	1/4 cup	Slow-release carrier
Newspaper	2 sheets	Wrapper

SOURCING: - Amazon: "Magnesium fire starter shavings" — $8-12 for a tin - Camping/survival stores: Magnesium fire starters (scrape shavings off the bar) - eBay: "Magnesium turnings" or "magnesium ribbon" — lab/hobby supply

EFFECT: Blinding white flashes and sparks. Extremely dramatic. 2-5 minutes per packet (magnesium burns fast and hot).

SAFETY: - **DO NOT LOOK DIRECTLY AT BURNING MAGNESIUM.** It is bright enough to cause temporary flash blindness, like a welder's arc. - Never use in large quantities. One tablespoon is plenty. More is not better — it's dangerous. - Magnesium is extremely flammable once ignited. Store shavings in a sealed metal tin, away from heat sources. - Keep a bucket of DRY sand nearby (not water — water on burning magnesium produces hydrogen gas and intensifies the fire). - Stand back at least 6 feet after throwing the packet in.

SPARK & CRACKLE EFFECTS

Blend 8: "SPARKLER SHOWER" — Golden Firework Sparks

Iron oxidizes at high temperature, throwing off tiny molten droplets that glow orange-gold as they fly through the air. This is the same reaction as a grinding wheel throwing sparks off steel, scaled up to campfire temperature.

Ingredient	Amount	Role
Fine iron filings (40-60 mesh)	2 tablespoons	Primary spark material — Fe oxidation at high temp
Fine steel wool (0000 grade), pulled apart	1 pad	Secondary spark material — more surface area = more sparks
Hardwood sawdust	1/4 cup	Carrier
Newspaper	2 sheets	Wrapper

METHOD: Wrap all materials in newspaper packet. Throw onto the hottest section of the coal bed. Stand back. Within 60 seconds, golden sparks will fountain upward as the iron particles oxidize.

ALTERNATIVE METHOD: Pull apart a pad of fine steel wool into a loose cloud. Using long tongs, place it directly on red-hot coals. It ignites almost instantly, producing a cascade of golden sparks. Faster and more dramatic, but less controlled.

SOURCING: - Amazon: "Iron filings" — $8-10 for 1 lb (enough for dozens of uses) - Hardware store: Fine steel wool (0000 grade) — $3-5 for a pack of 8 pads - Hobby/science supply: American Science & Surplus, Educational Innovations

EFFECT: Golden spark shower rising 2-4 feet above the fire. Lasts 1-3 minutes per packet. The steel wool method is faster (30-60 seconds) but more visually intense.

SAFETY: - **Stand back at least 6 feet.** Sparks travel. Protect eyes. - Wear non-synthetic clothing. Nylon and polyester melt on contact with sparks. Cotton or wool only. - Clear overhead branches — sparks rise. 10-foot vertical clearance minimum. - Have water/extinguisher within arm's reach. - Do not throw loose iron filings directly onto fire (uncontrolled spark burst). Always use a packet.

Blend 9: "CRACKLING FIRE INTENSIFIER"

Wood crackles because moisture trapped inside cells turns to steam faster than it can escape through the grain. The pressure builds until the cell wall bursts — that's the pop. Salt crystals add a secondary mechanism: sodium chloride decrepitates (shatters) when heated rapidly, like miniature fireworks inside the wood grain.

Ingredient	Amount	Role
Coarse table salt (not fine — you want the big crystals)	2 tablespoons	Decrepitation (thermal shattering) — produces sharp cracking sounds
Slightly damp wood chunks	3-4 pieces	Moisture = steam pops
Pine resin chunks (dried sap)	2-3 nuggets, walnut-sized	Volatile terpenes ignite with dramatic crackle and bright flame bursts

METHOD: Sprinkle salt onto damp wood. Add resin chunks on top of hot coals. The salt decrepitates within 30 seconds. The damp wood pops and cracks as steam escapes. The resin ignites with bright flares and loud snaps.

SOURCING: - Table salt: Your kitchen. $1. - Pine resin: Collect from any conifer tree (the hardened amber-colored sap dripping from wounds). Free. - Amazon: "Pine rosin chunks" — $8-12 for 1 lb - Camping stores: Sometimes sold as natural fire starter

EFFECT: Louder, more dramatic fire sounds. The "cozy cabin" crackle amplified by 3x. 10-20 minutes of enhanced crackling per application.

SAFETY: - Pine resin flares can be surprisingly large. Don't lean over the fire after adding resin. - Damp wood can pop and throw embers. Maintain standard 3-foot safety distance. - Essentially zero chemical hazard — you're burning salt and tree sap.

Blend 10: "SNAP CRACKLE POP PACKETS"

Bamboo has sealed air chambers between each node. When heated, the trapped air expands faster than the bamboo can flex. Result: a sharp, loud BANG like a gunshot. This is the original Chinese firecracker — before gunpowder, they threw bamboo segments on the fire during New Year celebrations to scare away evil spirits. The tradition dates to at least 200 BC.

METHOD A: Bamboo Bangs

Ingredient	Amount	Role
Dry bamboo segments (6-8" long, nodes intact on both ends)	4-6 pieces	Sealed air chambers = explosive pops

Cut bamboo into segments with sealed nodes at each end (the solid walls between sections). Throw onto hot coals. Within 2-5 minutes, the air inside superheats and the bamboo explodes with a sharp crack. Multiple segments = multiple bangs at unpredictable intervals.

SOURCING: - Garden centers: Bamboo stakes — $5-8 for a pack. Cut between nodes. - Your yard: If you have bamboo growing, you have infinite supply. - Amazon: "Bamboo poles" — any diameter works; larger = louder

METHOD B: Steam Poppers

Ingredient	Amount	Role
Heavy-duty aluminum foil	2 sheets (12" squares)	Pressure vessel
Water	1-2 tablespoons per packet	Steam generation

Double-wrap a small amount of water in heavy foil, crimping edges tightly to create a sealed packet. Place on hot coals. As water converts to steam, pressure builds until the foil bursts with a pop. Less dramatic than bamboo but more controllable.

SAFETY: - **BAMBOO WARNING:** The bangs are LOUD. Like a firecracker. Warn everyone around the fire first. - Bamboo can throw sharp splinters when it bursts. Maintain 6-foot distance. - Steam packets: escaping steam is 212F+. Do not hover over the fire waiting for the pop. - Both methods throw small debris. Eye protection recommended if you're sitting close.

SMOKE EFFECTS

Blend 11: "SIGNAL SMOKE" — Thick White Smoke Column

Smoke is unburned particulate matter suspended in hot gas. Wet organic material produces more particulate because the water content lowers combustion temperature below the point of complete oxidation. The result: visible white smoke instead of invisible CO2. Same principle behind every Hollywood fog machine (glycol vapor = suspended particulate = visible "smoke").

Ingredient	Amount	Role
Fresh green leaves (deciduous — maple, alder, birch)	2 large handfuls	High moisture content = thick white smoke
Fresh grass clippings	1 large handful	Additional moisture + chlorophyll combustion = white/gray smoke
Damp moss (if available)	1 handful	Extremely slow, smoldering burn = sustained smoke

METHOD: Build a hot coal bed first. Let the fire burn down to glowing coals with minimal visible flame. Then pile the green material on top. It will smolder (not flame), producing thick white smoke for 10-30 minutes.

EFFECT: Dense white smoke column. Visible from significant distance. This is the actual technique for emergency signal fires, used by indigenous peoples across every continent for millennia.

SOURCING: Your yard. The forest floor. Free.

SAFETY: - All smoke is an irritant. Stay upwind. - This produces a LOT of smoke. Be considerate of neighbors. - Check local air quality / burn ban regulations — some jurisdictions restrict smoke volume. - Not for enclosed or semi-enclosed spaces. Outdoor only with good air movement.

Blend 12: "COLORED SMOKE" (Advanced)

This is, functionally, a smoke bomb. The chemistry is straightforward — potassium nitrate (oxidizer) + sugar (fuel) + organic dye (colorant) — but the execution requires care. This is the only blend in this chapter that crosses from "campfire trick" into "pyrotechnic device." Treat it accordingly.

Ingredient	Amount	Role
Potassium nitrate (KNO3, "saltpeter")	3 tablespoons	Oxidizer — provides oxygen for combustion without open flame
Granulated sugar	2 tablespoons	Fuel — burns slowly when combined with KNO3
Organic powdered dye (see colors below)	1 tablespoon	Colorant — vaporizes in heat, condenses in air as colored smoke
Baking soda	1/2 teaspoon	Coolant / moderator — slows reaction, prevents ignition into flame
Cardboard tube (toilet paper roll)	1	Containment vessel
Aluminum foil	1 sheet	End cap

DYE COLORS: - Red: Disperse Red 9 or powdered red Rit dye - Orange: Disperse Orange 1 or orange Rit dye - Yellow: Solvent Yellow 33 or yellow Rit dye - Green: Mix of blue + yellow above - Blue: Methylene blue powder (aquarium supply) or blue Rit dye - Purple: Mix of red + blue above

METHOD: 1. Mix KNO3 and sugar in a bowl (no heat — cold mixing only). 2. Add dye and baking soda. Mix thoroughly. 3. Pack into cardboard tube, leaving 1/2" at the top. 4. Cap one end with crimped foil. 5. Place open-end-up on the edge of the campfire coal bed (not in the center — you want smoldering ignition, not instant combustion). 6. Step back 10+ feet. 7. Within 1-3 minutes, the mixture ignites and produces a plume of colored smoke for 30-60 seconds.

SOURCING: - Potassium nitrate: Amazon — "Stump remover" (Spectracide brand is pure KNO3) — $8-10 - Also: Garden supply stores, some pharmacies - Organic dyes: Amazon — search "Rit powder dye" ($3-5 per color) or specialty dye suppliers - Methylene blue: Aquarium stores or Amazon — "methylene blue aquarium" — $6-10

EFFECT: Billowing colored smoke plume lasting 30-60 seconds. Extremely visual. Best photographed against a dark tree line or clear sky.

SAFETY: - **THIS IS A PYROTECHNIC DEVICE.** Full stop. - Never mix potassium nitrate with sugar using heat. Cold mix only. Hot mixing can cause premature ignition. - Never scale up quantities beyond what's listed.

Larger charges burn hotter and can produce flames instead of smoke. - Keep face and body away from the open end of the tube. The smoke exits with force. - Colored smoke dyes can stain skin, clothing, and surfaces. The cloud will settle on anything downwind. - Potassium nitrate is a strong oxidizer. Store separately from fuels, in a cool dry place. - Check local laws. Some jurisdictions classify smoke devices as fireworks. Know your regulations. - **Keep a fire extinguisher and water within arm's reach.** - Do not use in dry/fire-danger conditions. The smoldering charge can throw hot particles. - Never point at people, animals, or structures. - Minimum age: adult supervision required. This is not a children's activity.

THE PINE CONE METHOD — COMPLETE BEGINNER'S GUIDE

If you only try one thing from this chapter, do this. Pine cones are nature's perfect chemical sponge — porous, layered, designed to open and close with moisture. Soak them in a metal salt solution, dry them out, and they become self-contained colored flame generators. No packets to wrap. No mixing. Just throw a cone in the fire.

Materials

Item	Amount	Cost	Where
Pine cones (open, dry)	30-50	Free	Your yard, a park, the forest floor
Calcium chloride (orange)	1/2 cup	~$1 worth	Hardware store ice melt
Copper sulfate (green)	1/2 cup	~$2 worth	Hardware store root killer
Copper chloride (blue)	1/2 cup	~$3 worth	Amazon
Strontium chloride (red)	1/2 cup	~$4 worth	Amazon
Potassium chloride (purple)	1/2 cup	~$1 worth	Grocery store "No Salt"
5-gallon buckets or large jars	5	$5-15	Dollar store, hardware store
Hot water	1 gallon per bucket	Free	Your tap
Nitrile gloves	1 box	$8-10	Any store
Twine or ribbon (5 colors)	Small amount	$3-5	Craft store

Total startup cost: ~$30-50 for enough material to make 50+ colored pine cones.

Step-by-Step

DAY 1: Prepare Solutions 1. Label each bucket with the color and chemical name. Permanent marker. Do not skip this. 2. Add 1/2 cup of chemical to each bucket. 3. Pour 1 gallon of hot (not boiling) water into each bucket. 4. Stir until dissolved. Copper sulfate dissolves slowly — stir for 2-3 minutes. 5. Submerge 6-10 pine cones per bucket. Press down with a plate or rock to keep them submerged. 6. Cover buckets (lid, plastic wrap, or board) to prevent evaporation and keep animals out.

DAY 2: Soak 7. Leave pine cones submerged for a full 24 hours. Longer is fine — 48 hours produces slightly more vivid color. 8. The cones will close up as they absorb water. This is normal.

DAY 2-5: Dry 9. Wearing gloves, remove pine cones from solution and place on newspaper or a wire rack. 10. Dry outdoors in sunlight. 2-3 days minimum. Cones must be fully dry — they'll re-open when dry. 11. Speed option: place near (NOT on) a heat source — radiator, warm garage, dehydrator on low. 12. If cones are still closed, they're still wet. Wait.

DAY 5+: Use 13. Tie a small piece of colored ribbon to each cone so you know which is which. 14. Store in labeled paper bags or mesh bags. Do not store in sealed plastic (condensation can re-wet them). 15. At the campfire: throw 2-3 cones of the same color for a strong single-color effect, or one of each for rainbow. 16. Cones take 1-2 minutes to ignite on hot coals, then burn with colored flames for 15-25 minutes.

Disposal of Leftover Solution

- Dilute remaining solution 10:1 with water.
- Pour on gravel, concrete, or dirt (not on garden plants — copper is toxic to vegetation).
- Rinse buckets thoroughly before any other use.
- Copper sulfate and copper chloride solutions should never go down storm drains.

MASTER SAFETY SECTION

> *Read this. Not skimming. Reading.*

The Non-Negotiables

1. **OUTDOOR ONLY.** Every blend in this chapter is for open-air campfires with unlimited ventilation. Never use in an enclosed fire pit, indoor fireplace, chiminea, or fire table. Metal salt fumes are irritants at minimum and toxic (copper compounds) at worst.
2. **WELL-VENTILATED = OUTDOORS.** A screened porch is not "well-ventilated" for this purpose. A garage with the door open is not "well-ventilated." Outside. Under sky.
3. **WATER / EXTINGUISHER / SAND.** Within arm's reach. Not across the yard. Not in the garage. Within arm's reach. For magnesium specifically: dry sand, not water.
4. **DISTANCE.** Minimum 6 feet from the fire after throwing any blend packet in. Sparkler Shower and White Phosphor blends require 10 feet.
5. **EYE PROTECTION.** Safety glasses or sunglasses recommended for spark-producing blends (7, 8, 10). Required if sitting within 6 feet.
6. **CLOTHING.** Natural fibers only near the fire when using spark effects. Cotton, wool, leather. No nylon, polyester, or synthetic blends — they melt on contact with sparks and adhere to skin.
7. **CHILDREN AND PETS.** Standard 3-foot fire safety distance applies. Children should not handle chemicals or throw packets. The Colored Smoke blend (12) is adults-only.
8. **WIND.** If wind exceeds 15 mph, skip all spark effects (7, 8, 10). Embers and sparks travel much farther than you think. Colored flame packets (1-6) are fine in moderate wind.
9. **BURN BANS.** Check before you light anything. All of this is moot if your county is under fire restrictions.

Chemical Handling

Chemical	Toxicity	Skin Contact	Ingestion	Storage
Strontium chloride	Low	Mild irritant	Mildly toxic	Sealed container, cool/dry
Calcium chloride	Low	Mild irritant (hygroscopic)	Low toxicity	Sealed — absorbs moisture
Copper sulfate	**Moderate**	Stains, irritant	**Toxic — seek medical help**	Away from food, labeled
Copper chloride	**Moderate**	Stains, irritant, absorbs through skin	**Toxic — seek medical help**	Away from food, labeled, gloves always
Potassium chloride	Very Low	None	Food-grade at small amounts	Normal pantry storage fine
Iron filings	Very Low	None	Non-toxic at trace amounts	Dry storage (rusts)
Magnesium shavings	Low (until ignited)	None	Non-toxic	**Sealed metal tin, away from heat/flame**
Potassium nitrate	Moderate (oxidizer)	Mild irritant	Moderately toxic	**Away from fuels/heat, sealed**

After the Fire

- Let all coals burn out completely or drown with water.
- Metal salt residue in ash is generally trace-level and non-hazardous in a backyard fire pit.
- Do not spread ash from copper-treated fires on vegetable gardens. Copper accumulates in soil.
- Wash hands thoroughly after handling any chemicals, even after wearing gloves.

COMPLETE SHOPPING LIST

Hardware Store (Home Depot / Lowes / Ace)

Item	Product Name	Aisle	Price
Calcium chloride	Ice melt pellets (any brand)	Seasonal / Winter	$8-12 / 10 lbs
Copper sulfate	Zep Root Kill / Rooto / generic	Plumbing	$8-12 / 2 lbs
Fine steel wool (0000)	Any brand	Paint / Finishing	$3-5 / 8 pads
Nitrile gloves	Any brand	Paint / Safety	$8-10 / box
Safety glasses	Any ANSI Z87.1 rated	Safety	$3-8

Grocery Store

Item	Product Name	Aisle	Price
Potassium chloride	"No Salt" or "Nu-Salt" salt substitute	Spices / Salt	$3-5 / shaker
Table salt (coarse)	Morton's coarse kosher	Baking	$2-4
Granulated sugar	Any brand	Baking	$3-5
Baking soda	Arm & Hammer	Baking	$1-2
Aluminum foil (heavy duty)	Reynolds Wrap HD	Paper goods	$4-6

Amazon

Item	Search Term	Approx. Price
Strontium chloride hexahydrate	"strontium chloride hexahydrate"	$12-15 / 100g
Copper chloride dihydrate	"copper chloride dihydrate"	$10-14 / 100g
Magnesium shavings	"magnesium fire starter shavings"	$8-12 / tin
Iron filings (40-60 mesh)	"iron filings"	$8-10 / 1 lb
Potassium nitrate	"Spectracide stump remover"	$8-10 / 1 lb
Rit powder dye (assorted)	"Rit powder dye"	$3-5 / color
Methylene blue	"methylene blue aquarium"	$6-10
Pine rosin chunks	"pine rosin chunks"	$8-12 / 1 lb

Camping / Outdoor Store

Item	Product Name	Price
Magnesium fire starter bar	Coghlan's / UST / generic	$6-10
Bamboo stakes (for Blend 10)	Any garden bamboo	$5-8 / pack

Free / Your Property

Item	Source
Pine cones	Any conifer tree
Pine resin	Hardened sap from conifer bark wounds
Hardwood sawdust	Woodshop, lumberyard, or sand any scrap wood
Green leaves / grass	Your yard
Damp moss	Forest floor, north side of trees
Newspaper	Recycle bin

Total Investment to Run Every Blend

Tier	What You Get	Estimated Cost
Starter (Blends 2, 5, 9)	Orange + purple flames + crackling	$10-15
Standard (Blends 1-6, 8, 9)	All flame colors + sparks + crackle	$40-60
Full Lab (All 12 blends)	Everything including smoke effects	$70-100

> *Per-use cost after initial buy: $1-3 per packet. Most chemicals last for dozens of fires. Calcium chloride alone: $8 buys 10 lbs — enough for 50+ packets. That's $0.16 per orange fire. The cost of a single birthday candle.*

> *Kirchhoff's spectroscopy law, 1860: every element has a unique emission spectrum — a fingerprint written in light. Campfire flame colors are spectroscopy you can see without instruments. The universe is always showing you what things are made of. You just have to know how to read the fire.*

CHAPTER 31

Air Fryer, Nachos & Potluck

"The air fryer is just a tiny convection oven with better marketing. It works anyway."

Crispy Without the Guilt, Loaded Without the Sodium, Shared Without the Stress

"The air fryer is just a tiny convection oven with better marketing. It works anyway."

SECTION 1: AIR FRYER FAVORITES

The air fryer uses convection heat and a small basket to crisp food with minimal oil. For CKD: potatoes get K-leached first, all breading is homemade (no phosphate-loaded frozen stuff), and avocado oil replaces everything.

1. Air Fryer French Fries

The first thing anyone makes in an air fryer. The last thing they perfect.

K-leaching is mandatory. Russet potatoes contain ~900mg potassium per large potato. Soaking pulls 50-80% of it out.

Step	Detail
Cut	Peel russet potatoes, cut into 1/4" fries
Soak	Submerge in cold water 2+ hours (overnight is better). Change water once if you remember.
Dry	Drain, pat bone-dry with towels. Wet fries steam instead of crisping.
Season	Toss in 1 tbsp avocado oil + pepper + garlic powder. No salt until plated.
Cook	Air fry 400F, 18-20 min, shake basket halfway.
Finish	Light sprinkle of salt after cooking. Serve with homemade ketchup (Ch 8) or garlic aioli.

Fact: The french fry was likely invented in Belgium in the late 1600s. The "french" comes from the cut, not the country.

Per serving (1 medium potato, leached): ~180mg Na | ~120mg P | ~250mg K

2. Air Fryer Corn Dogs

State fair corn dog, minus the vat of oil.

Step	Detail
Dogs	Turkey hot dogs (check label -- avoid any with sodium phosphate)
Batter	Same batter as state fair corn dogs (Ch 1): cornmeal + flour + egg + milk + pinch of sugar + Rumford baking powder
Assemble	Insert wooden sticks. Coat dogs in batter.
Cook	Air fry 375F, 10 min, turn once at the 5 min mark.
Serve	Mustard. Always mustard.

Fact: The corn dog debuted at the Texas State Fair in 1942. Neil Fletcher sold them as "Fletcher's Corny Dogs." The name stuck. The man didn't.

Per serving (1 corn dog): ~320mg Na | ~140mg P | ~180mg K

3. Air Fryer Pizza Pockets

Same dough as Vespa's Hot Pockets (Ch 21), different cooking method.

Step	Detail
Dough	Hot Pocket dough from Ch 21, rolled into 6" circles
Fill	2 tbsp homemade pizza sauce (low-sodium marinara) + shredded mozzarella + whatever filling (turkey pepperoni, mushrooms, bell pepper)
Seal	Fold in half, crimp edges with fork. Brush outside with avocado oil.
Cook	Air fry 375F, 8-10 min until golden.
Rest	2 min. The inside is lava.

Fact: Hot Pockets were invented by two Iranian-American brothers (the Merage brothers) in 1983. They sold the company for $2.6 billion in 2002.

Per serving (1 pocket): ~280mg Na | ~150mg P | ~200mg K

4. Air Fryer Chicken Strips / Tenders

Better than fast food. Not a debate.

Step	Detail
Protein	Chicken thigh meat, cut into strips (thigh > breast for moisture + flavor)
Dredge 1	Flour + pepper + garlic powder
Dredge 2	Egg wash (1 egg + splash of milk)
Dredge 3	Panko breadcrumbs + paprika + onion powder + pepper
Oil	Spray or brush strips lightly with avocado oil
Cook	Air fry 400F, 12 min. Flip at 6 min. Internal temp 165F.
Dip	Homemade honey mustard, ranch (Ch 8), or hot sauce.

Fact: Chicken fingers were invented by accident at a restaurant in Manchester, New Hampshire in 1974. The cook ran out of chicken wings and breaded breast strips instead.

Per serving (4 strips): ~250mg Na | ~200mg P | ~300mg K

5. Air Fryer JoJos (Potato Wedges)

Portland deli-counter energy. The JoJo is Oregon's answer to the french fry.

Step	Detail
Cut	Russet potatoes into thick wedges (8 wedges per potato)
Soak	K-leach in cold water 2+ hours. Same protocol as fries.
Dry	Pat completely dry.
Season	Toss in avocado oil + paprika + garlic powder + onion powder + black pepper
Cook	Air fry 400F, 20 min. Shake basket every 7 min.
Serve	Next to fried chicken, or alone with ranch.

Fact: "JoJo" as a name for seasoned potato wedges is a Pacific Northwest regionalism. Nobody outside Oregon/Washington knows what you mean.

Per serving (1 potato, leached): ~160mg Na | ~110mg P | ~240mg K

6. Air Fryer Mozzarella Sticks

The freeze-first trick is the whole recipe. Skip it and you get melted cheese on a basket.

Step	Detail
Cheese	Fresh mozzarella (block, not shredded), cut into 3" x 3/4" sticks
Freeze	Lay sticks on parchment-lined sheet, freeze 30 min minimum. Non-negotiable.
Dredge	Flour -> egg wash -> panko. Double-dredge if you want armor plating.
Cook	Air fry 390F, 6-8 min. Do not overcook or cheese escapes.
Serve	Homemade marinara (low-sodium, Ch 8).

Fact: Fried cheese sticks trace back to medieval France -- 14th century recipes describe breaded, fried cheese as "Pommes fondues." Monks made them.

Per serving (4 sticks): ~220mg Na | ~180mg P | ~120mg K

7. Air Fryer Egg Rolls

Crispy wrapper. No deep fryer. No takeout sodium.

Step	Detail
Filling	Shredded chicken + shredded cabbage + matchstick carrots + fresh ginger (minced) + garlic + splash of low-sodium soy sauce
Wrap	Egg roll wrappers (store-bought, check sodium). Place filling diagonally, fold corners in, roll tight, seal edge with egg wash.
Oil	Brush outside with avocado oil
Cook	Air fry 390F, 10 min. Flip at 5 min.
Dip	Sweet chili sauce or homemade dumpling sauce (rice vinegar + low-sodium soy + sesame oil + ginger).

Fact: The American egg roll was invented in New York in the 1930s. It bears almost no resemblance to any dish in China. It's as Chinese as General Tso.

Per serving (2 egg rolls): ~350mg Na | ~160mg P | ~220mg K

8. Air Fryer Coconut Shrimp

Sweet, crunchy, tropical. The dipping sauce does the heavy lifting.

Step	Detail
Shrimp	Large shrimp, peeled and deveined, tails on for presentation
Dredge 1	Flour + pepper
Dredge 2	Egg wash
Dredge 3	Shredded unsweetened coconut + panko, mixed 50/50
Cook	Air fry 400F, 8 min. Flip at 4 min.
Sauce	Sweet chili dipping sauce: rice vinegar + honey + red pepper flakes + garlic, simmered 5 min.

Fact: Coconut shrimp became an American restaurant staple in the 1980s during the Polynesian-tiki revival. The coconut does the insulating -- it crisps before the shrimp overcooks.

Per serving (6 shrimp): ~300mg Na | ~210mg P | ~190mg K

AIR FRYER DESSERTS

9. Air Fryer Deep Fried Kit Kats

State fair magic. Less oil. Same regret.

Step	Detail
Bars	Kit Kat dupe bars from Ch 14, frozen 15 min
Batter	Pancake batter (flour + egg + milk + pinch of sugar + Rumford BP), thick enough to coat
Dip	Dip frozen bars in batter, let excess drip
Cook	Air fry 370F, 5 min.
Finish	Dust with powdered sugar. Eat immediately.

Fact: Kit Kat was first produced by Rowntree's of York, England in 1935. Japan has produced over 300 regional flavors including wasabi, sake, and sweet potato.

Per serving (2 bars): ~190mg Na | ~100mg P | ~130mg K

10. Air Fryer Churros

Spanish shepherd food, now made in a countertop appliance in Portland, Oregon.

Step	Detail
Dough	Choux pastry: boil water + butter, stir in flour until it pulls from the sides, cool slightly, beat in eggs one at a time + vanilla
Shape	Pipe through a star tip onto parchment, cut into 4-5" strips
Cook	Air fry 375F, 10 min. Turn once.
Coat	Roll warm churros in cinnamon sugar immediately.
Dip	Chocolate ganache or dulce de leche.

Fact: Churros were invented by Portuguese or Spanish shepherds who needed a food they could fry over open campfires in the mountains. The star shape increases surface area for maximum crunch.

Per serving (3 churros): ~170mg Na | ~90mg P | ~110mg K

11. Air Fryer Apple Fritters

Irregular shape is the point. A perfect fritter isn't a fritter.

Step	Detail
Apples	2 apples, peeled, diced small (Granny Smith for sour, Fuji for sweet)
Batter	Flour + egg + milk + sugar + cinnamon + vanilla + Rumford BP. Fold apple chunks in.
Shape	Drop rough spoonfuls onto parchment. Imperfection is correct.
Cook	Air fry 370F, 8 min. Flip at 4 min.
Glaze	Powdered sugar + milk + vanilla, drizzled while warm.

Fact: Fritters appear in Roman cookbooks from the 1st century AD. Apicius described honey-glazed fried dough balls called "globi." Two thousand years and we're still doing it.

Per serving (2 fritters): ~160mg Na | ~80mg P | ~140mg K

12. Air Fryer Donuts

Biscuit dough donuts. Five minutes. Breakfast solved.

Step	Detail
Dough	Biscuit dough (Rumford BP recipe): flour + Rumford BP + butter + milk. Roll to 1/2" thick.
Cut	Donut cutter or 2 ring molds (big circle + small circle). Save donut holes.
Cook	Air fry 350F, 5 min per side. Donut holes: 3 min per side.
Finish	Glaze (powdered sugar + milk + vanilla) OR cinnamon sugar. Your call.

Fact: The donut hole in the center was allegedly invented by Hanson Gregory, a New England ship captain, in 1847. He claimed the center of fried dough was always raw, so he punched it out. He was right.

Per serving (2 donuts): ~210mg Na | ~120mg P | ~100mg K

SECTION 2: NACHOS -- THE FULL SPREAD

Nachos are one of the most dangerous CKD foods in existence: canned cheese (sodium phosphate), canned beans (potassium + phosphorus), canned jalape-os (sodium), store-bought chips (sodium). Every component is a landmine.

These recipes replace every landmine with a homemade version.

13. Classic Loaded Nachos

The benchmark. Everything else is a variation.

Component	Detail
Chips	Unsalted or low-sodium tortilla chips, spread on sheet pan in single layer
Cheese	Homemade nacho cheese sauce (Ch 8) -- cream cheese base, no sodium phosphate
Meat	Seasoned ground turkey (homemade taco seasoning: cumin, paprika, garlic, onion powder, oregano, pepper)
Pico	Fresh pico de gallo: diced tomato (small amount), white onion, cilantro, lime juice, jalape-o
Toppings	Sour cream + sliced fresh jalape-os + chopped cilantro
Broil	3 min under broiler until cheese is melted and edges of chips are golden

Fact: Nachos were invented in 1943 by Ignacio "Nacho" Anaya at the Victory Club restaurant in Piedras Negras, Mexico. A group of US military wives crossed the border looking for a snack, the chef was gone, and the maitre d' improvised with what he had: tortillas, cheese, and jalape-os.

Per serving (1/4 sheet pan): ~380mg Na | ~200mg P | ~350mg K

14. Carne Asada Nachos

Same architecture. Different protein. Guacamole mandatory.

Component	Detail
Chips	Low-sodium tortilla chips, sheet pan
Meat	Carne asada: flank steak marinated in Ch 3 marinade (lime juice + garlic + cumin + avocado oil + cilantro + pepper), grilled, sliced thin against the grain
Cheese	Homemade nacho cheese (Ch 8)
Guac	Fresh guacamole: avocado + lime + cilantro + salt + diced onion (small portion -- avocado is moderate-K, portion matters)
Toppings	Pico + sour cream + cilantro
Broil	3 min

Fact: Carne asada literally means "grilled meat." In Northern Mexico it's a social event, not just a recipe -- families gather around open grills the way Americans gather around a Fourth of July barbecue.

Per serving (1/4 sheet pan): ~360mg Na | ~220mg P | ~380mg K

15. Breakfast Nachos

Saturday morning. Decoder food.

Component	Detail
Chips	Low-sodium tortilla chips, sheet pan
Eggs	Scrambled eggs (soft scramble, avocado oil, pepper)
Meat	Turkey breakfast sausage, crumbled, cooked (homemade seasoning: sage + thyme + pepper + garlic)
Cheese	Homemade nacho cheese (Ch 8), drizzled over
Toppings	Pico de gallo + hot sauce (homemade, Ch 8, or Cholula for lower sodium)
Broil	Skip the broil -- eggs are already cooked. Just layer and serve.

Fact: Breakfast nachos are a Texas invention from the 1990s. They're the logical conclusion of chilaquiles meeting American brunch culture.

Per serving (1/4 sheet pan): ~340mg Na | ~210mg P | ~290mg K

16. Dessert Nachos

The sweet nacho nobody expects. The one that clears the plate first.

Component	Detail
Chips	Flour tortillas cut into triangles, brushed with avocado oil, sprinkled with cinnamon sugar, baked 400F 8 min until crispy
Drizzle 1	Cream cheese glaze: cream cheese + powdered sugar + vanilla + milk, thinned to drizzle consistency
Fruit	Sliced strawberries + blueberries (both low-K)
Drizzle 2	Melted dark chocolate, thin stream
Top	Whipped cream (homemade: heavy cream + vanilla + sugar, whipped)

Fact: Cinnamon was once more valuable than gold. Egyptian pharaohs were embalmed with it. You're putting it on tortilla chips for dessert. That's either progress or blasphemy.

Per serving (1/4 pan): ~190mg Na | ~90mg P | ~180mg K

SECTION 3: POTLUCK OFFERINGS

What to bring when invited somewhere and you need to feed 10+ people without poisoning yourself.

The potluck is a social survival exercise for CKD patients. Most potluck food is a sodium-phosphorus minefield: store-bought dips, processed cheese, cured meats, canned everything. These recipes let you bring something everyone eats -- and that you can eat too.

17. The Seven Layer Dip

In a clear glass dish so you see the layers. The architecture IS the presentation.

Layer	Detail
1 -- Beans	Canned refried beans, rinsed (rinsing removes ~30% sodium). Spread on bottom.
2 -- Cheese	Homemade nacho cheese sauce (Ch 8), spread over beans
3 -- Sour cream	Sour cream, smooth layer
4 -- Pico	Fresh pico de gallo
5 -- Guacamole	Fresh guac (avocado + lime + cilantro + salt)

Layer	Detail
6 -- Cheddar	Shredded cheddar, light layer
7 -- Olives	Sliced black olives + sliced green onion on top
Serve with	Low-sodium tortilla chips

Fact: Seven layer dip became a Super Bowl staple in the 1980s after appearing in a Frito-Lay advertisement. It was engineered to sell chips. It worked.

Per serving (1/2 cup with chips): ~290mg Na | ~150mg P | ~310mg K

18. Deviled Eggs (2 Dozen)

The potluck MVP. Make 24. Bring 24. Come home with 0.

Step	Detail
Eggs	12 large eggs, hard boiled, peeled, halved = 24 deviled eggs
Filling	Yolks mashed with: avocado oil mayo + yellow mustard + pinch of pepper + pinch of garlic powder
Pipe	Pipe or spoon filling back into whites
Top	Smoked paprika + tiny sprinkle of chives
Transport	In a deviled egg tray with a lid. The tray matters.

Fact: Deviled eggs appear in Roman cookbooks from the 4th century. The term "deviled" (meaning spiced) dates to 1786 England. The paprika on top is a 20th century American addition.

Per serving (4 halves): ~220mg Na | ~170mg P | ~140mg K

19. Pasta Salad (Mom's Radiatore)

The radiatore white wine vinegar salad (Ch 8). Doubles easily. Travels well. Gets better at room temp.

Step	Detail
Pasta	Radiatore (the little radiator-shaped ones), cooked al dente, drained, rinsed cold
Dressing	White wine vinegar + avocado oil + Italian seasoning + garlic powder + pepper + pinch of sugar
Mix-ins	Diced cucumber + diced bell pepper + sliced black olives + diced red onion (small amount)
Toss	Combine everything. Refrigerate 2+ hours. It gets better as it sits.
Serve	Room temp. In a big bowl. With a serving spoon people don't have to touch.

Fact: Pasta salad is an American invention from the 1960s, born from the collision of Italian immigration and suburban potluck culture. Italy does not claim it.

Per serving (1 cup): ~180mg Na | ~100mg P | ~170mg K

20. Fruit Salad (Big Batch)

The CKD fruit salad scaled to serve 12. In a big glass bowl. The glass bowl matters.

Step	Detail
Fruit	Strawberries (quartered) + blueberries + green grapes (halved) + mandarin segments + pineapple chunks (small amount -- moderate K) + watermelon cubes
Dressing	Fresh lime juice + honey, whisked together
Toss	Gently. Fruit bruises.
Chill	1 hour minimum. Cold fruit salad only.
Garnish	Fresh mint leaves on top.

Fact: Fruit salad as a concept appears in nearly every food culture on earth. The Roman version (from Apicius, 1st century) used honey and wine as dressing. We use lime juice. Same idea, fewer togas.

Per serving (1 cup): ~10mg Na | ~30mg P | ~200mg K

21. Meatballs (Turkey, 40 Count)

Seasoned turkey meatballs in sauce. Slow cooker keeps them warm at the party.

Step	Detail
Meatballs	Ground turkey + breadcrumbs (panko) + egg + garlic powder + onion powder + Italian seasoning + pepper. Roll into 1" balls.
Bake	400F, 15 min on sheet pan. Browning first = better texture.
Sauce	Homemade BBQ sauce (Ch 8) OR low-sodium marinara. Dealer's choice.
Slow cooker	Transfer baked meatballs to slow cooker, pour sauce over, set to warm.
Serve	With toothpicks. Provide a small dish for used toothpicks. Basic manners.

Fact: Swedish meatballs (kottbullar) were brought to Sweden by King Charles XII in the early 1700s -- from Turkey. The Turkish kofte became the Swedish meatball became the IKEA staple. Geography is a circle.

Per serving (5 meatballs): ~280mg Na | ~190mg P | ~260mg K

22. Cornbread (Cast Iron, Full Batch)

GF cornbread from Ch 11, baked in cast iron, cut into wedges. Bring the whole skillet.

Step	Detail
Dry	GF cornmeal + rice flour + sugar + Rumford baking powder + baking soda + salt (small amount)
Wet	Eggs + buttermilk + avocado oil
Pan	10" cast iron skillet, preheated in oven with a little avocado oil (the sizzle when batter hits hot iron = the crust)
Bake	400F, 20-25 min until golden on top and toothpick comes out clean
Serve	In the skillet. On a trivet. With a knife stuck in it. Let people cut their own wedges.

Fact: Cornbread predates European contact in the Americas. Indigenous peoples were baking corn-based breads for thousands of years before anyone put it in a cast iron skillet. The skillet is the European contribution. The bread is not.

Per serving (1 wedge, 1/10 skillet): ~200mg Na | ~110mg P | ~90mg K

23. Ambrosia (Party Size)

The ambrosia recipe (Ch 8) tripled. In a Pyrex dish with tin foil. Susan energy.

Step	Detail
Base	Cool Whip (or homemade whipped cream) + sour cream, folded together
Fruit	Mandarin orange segments (drained) + pineapple tidbits (drained) + maraschino cherries (halved) + shredded coconut
Marshmallows	Mini marshmallows, folded in last
Chill	4 hours minimum. Overnight is better. The marshmallows soften and everything melds.
Serve	Cold. In Pyrex. Tin foil on top until serving. Susan would approve.

Fact: Ambrosia salad first appeared in American cookbooks in the 1860s, originally just oranges and coconut. The marshmallows arrived in the 1920s when Kraft started marketing them as a recipe ingredient. It's been at every church potluck since.

Per serving (1/2 cup): ~60mg Na | ~40mg P | ~130mg K

24. Cookie Platter

Oatmeal chocolate chip + grasshopper cookies from Ch 10. Mix of both. 3 dozen total.

Cookie	Detail
Oatmeal chocolate chip (18)	Recipe from Ch 10. Oats + flour + butter + brown sugar + egg + vanilla + chocolate chips + Rumford BP. Bake 350F 10-12 min.
Grasshopper cookies (18)	Recipe from Ch 10. Chocolate cookie base + mint filling + chocolate coating. The Girl Scout Thin Mint energy.
Plating	Alternate on a large plate or tray. Parchment paper between layers if stacking.
Transport	Covered tray or large Tupperware. Cookies on the bottom, parchment, cookies on top.

Fact: The chocolate chip cookie was invented by Ruth Wakefield at the Toll House Inn in 1938. She sold the recipe to Nestle for a lifetime supply of chocolate. Nestle got a billion-dollar product. Ruth got chocolate. Debatable who won.

Per serving (2 cookies, 1 of each): ~120mg Na | ~70mg P | ~110mg K

CKD Considerations

> ***Daily limits for hemodialysis 3x/week:*** *-* ***Sodium:*** *<1,500mg/day -* ***Potassium:*** *<2,000mg/day -* ***Phosphorus:*** *<800mg/day*
>
> ***Key rules applied in every recipe above:*** *- All potatoes are K-leached (soaked 2+ hours in cold water before cooking) - No sodium phosphate additives in any ingredient (check every label) - Homemade sauces/cheese/seasoning only -- no packets, no canned cheese, no store-bought taco seasoning - Avocado oil is the default cooking fat throughout - Tomato portions are controlled (high potassium) -- small amounts in pico, not ladles of marinara - Beans are rinsed when used (removes ~30% sodium) - Per-serving numbers are estimates based on homemade versions with no-salt-added ingredients. Store-bought substitutions will be higher. -* ***These are not medical prescriptions.*** *Run any recipe past your renal dietitian before adding it to your rotation.*

"The potluck is one of the oldest human traditions. You bring food. You share it. Nobody checks credentials at the door. The only rule is: don't show up empty-handed."

CHAPTER 32

Halloween Special

“The scariest thing in the kitchen is boredom.”

"The Radioactive Kitchen: Spooky Renal-Aware Treats"

"Your snacks don't have to be boring just because they're renal-aware."

The Vision

Halloween-themed renal-aware recipes with a Nickelodeon slime / radioactive ghost goo / horror-kitchen aesthetic. Inspired by an older slime-gummy draft that looked like radioactive Nickelodeon slime — but these are renal-aware, phosphorus-conscious, and look like they came out of a mad scientist's lab.

Aesthetic: Nickelodeon green slime meets Goosebumps meets actual food science. Every recipe looks scary/gross/fun but is nutritionally sound for anyone with dietary restrictions. The photography should be dark backgrounds with neon green/orange/purple glow — Vorathic Halloween.

Recipe Concepts

1. Nickelodeon Slime Gummies

Inspired by: an older slime-gummy draft **What:** Renal-aware gelatin gummies in neon green, shaped like ghosts, eyeballs, skulls **Key ingredients:** Unflavored gelatin, lime Jell-O (low-K), green food coloring, citric acid for sour coating **CKD notes:** No high-K fruit juices. Use apple juice base (low-K). Avoid potassium-based sugar substitutes. **The look:** Radioactive green, semi-translucent, poured into silicone skull/ghost molds **Optional:** add edible glitter or food color only; keep this non-medicated

2. Ghost Goo Marshmallow Dip

What: Fluffy marshmallow fluff dyed ghost-white with edible glitter, served in a cauldron bowl **Dippers:** Apple slices (Wild Twist!), rice crackers, vanilla wafers **CKD notes:** Marshmallow is naturally low-K, low-P. Watch sodium in crackers. Use low-sodium varieties.

3. Blood Pudding (Not Actually Blood Pudding)

What: Red velvet pudding with raspberry coulis "blood" drizzle **CKD notes:** Use rice milk or approved non-dairy base. Red food coloring + beet powder for color. Avoid chocolate pudding (high phosphorus).

4. Eyeball Cake Pops

What: Vanilla cake pops decorated as bloodshot eyeballs with white coating + red gel icing veins + M&M iris **CKD notes:** Use egg whites (not whole eggs — yolks are high-P). Phosphorus-free baking powder.

5. Radioactive Waste Smoothie

What: Bright neon green smoothie that looks like toxic waste **Ingredients:** Apple juice, pineapple (small amount), spinach (blanched to reduce K), lime, green spirulina powder for color **CKD notes:** Pre-leach spinach. Use pineapple sparingly (moderate K). Portion control is key. **Serving:** In a beaker or Erlenmeyer flask (Amazon sells lab-glass drinkware)

6. Mummy Wraps (Savory)

What: Chicken or turkey strips wrapped in crescent roll dough strips to look like mummies, with mustard dot eyes **CKD notes:** Use low-sodium chicken. Crescent rolls are moderate sodium — use one per serving. Turkey is a good renal protein.

7. Spider Web Quesadillas

What: Tortilla with cream cheese + mozzarella, sour cream spider web piped on top **CKD notes:** Cream cheese is lower in phosphorus than cheddar. Flour tortillas over corn (lower K).

8. Frankenstein Rice Krispie Treats

What: Green-dyed rice krispie treats shaped into Frankenstein heads with chocolate chip features **CKD notes:** Rice Krispies are a renal-aware cereal (low K, low P). Marshmallow is renal-aware. Use margarine instead of butter to control phosphorus. **Andrew's note:** Chocolate Rice Krispies are his favorite snack — make a "Dark Frankenstein" variant with chocolate ones.

9. Witch's Brew Punch

What: Dry ice fog punch (apple cider + ginger ale + lime sherbet) **CKD notes:** Apple cider is low-K. Ginger ale — use diet or low-sodium. Sherbet portion-controlled. DRY ICE SAFETY: never consume dry ice directly, use a punch bowl with a basket/strainer.

10. Zombie Finger Cookies

What: Shortbread fingers with almond "fingernails" and red gel icing "blood" **CKD notes:** Almonds in very small amounts (1 per cookie = okay). Shortbread is lower P than chocolate cookies. Use phosphorus-free baking powder.

CKD Considerations (on every recipe page)

```
+----------------------------------------+
| RENAL CHECK                            |
| K (Potassium): LOW / MED / HIGH        |
| P (Phosphorus): LOW / MED / HIGH       |
| Na (Sodium): LOW / MED / HIGH          |
| Fluid: ___ mL per serving              |
| Protein: ___ g per serving             |
|                                        |
+----------------------------------------+
```

CHAPTER 33

Eating Across Time and Space

A human atlas: official dishes, living foodways, survival meals, celebration plates, and meals-as-medicine patterns.

This chapter is the first atlas pilot for the larger goal: a cookbook that represents eating across time and space as a human. The rule is simple: every dish needs at least one anchor. The anchor can be official heritage recognition, a national-dish tradition, a historical source lane, a popularity signal, or a health-pattern evidence lane.

Medical boundary: Food can support a care pattern, but recipes are not medical treatment. CKD, dialysis, diabetes, transplant, pregnancy, immune status, medication interactions, and lab targets can change what is safe. Treat the numbers below as best-guess cookbook estimates and confirm against actual products and care-team limits.

Atlas Method - How Future Countries and Eras Get Added

Lane	What qualifies	How it becomes a recipe
Official / heritage	UNESCO, government tourism/culture pages, national intangible heritage registries.	Preserve the foodway logic; adapt portions and sodium without claiming authenticity supremacy.
National / beloved dish	Common national-dish recognition, broad local consensus, diaspora continuity.	Write a home version with safety, ingredient substitution, and CKD notes.
Best-dish signal	TasteAtlas and similar popularity/rating indexes.	Use as a discovery queue, not a final truth ranking.
Historical / Tasting History	Ancient, medieval, early modern, frontier, depression, wartime, migration, and trade-route meals.	Modernize safely while preserving the core technique or pantry logic.
Meals as medicine	Mediterranean, DASH, MIND, fermented-food, high-fiber, plant-forward evidence lanes.	Frame as a meal pattern with lab-aware cautions; avoid disease-cure claims.

1. Milpa Bowl - Maize, Beans, Squash and Pepita Salsa

Atlas lens: Built from the UNESCO-recognized logic of traditional Mexican cuisine: maize, beans, squash, local biodiversity, and community knowledge. This is not a claim to be an official single national dish; it is a practical bowl built from the milpa pattern.

Meal-as-medicine note: Plant-forward fiber, legumes, seeds, and vegetables make this a meal-pattern recipe. CKD potassium and phosphorus depend heavily on portion size, bean amount, and lab targets.

Ingredient	Amount	CKD / Safety Note
Yield	4 bowls	Built for flexible portions.
Active	25 min	Home-kitchen estimate.
Cook / Hold	35 min	Times vary by equipment.
Lens	Mexico / official foodway lane	Culture, history, popularity, or health-pattern source.

Ingredients

Ingredient	Amount	CKD / Safety Note
Corn kernels or hominy, rinsed	2 cups	Use unsalted canned or cooked-from-dry when possible.
Black beans, rinsed very well	1 1/2 cups	Keep to about 1/3 cup beans per bowl for CKD moderation.
Roasted squash cubes	2 cups	Use smaller portions if potassium is restricted.
Cooked white rice or quinoa	2 cups	White rice is often easier for potassium control.
Avocado, thin sliced	1 small	Optional; high potassium. Use a few slices only.
Pepitas, toasted	3 tbsp	Flavor garnish; phosphorus source.
Lime juice	3 tbsp	Acid replaces much of the salt.
Cilantro, scallion greens, cumin	to taste	Aroma and brightness.
Green salsa, low sodium	1/2 cup	Use homemade or low-sodium.

Method

1. Roast squash at 425F with a little oil, cumin, and pepper until browned and tender.
2. Warm corn or hominy with rinsed beans and a splash of water; season with lime, cumin, cilantro, and pepper.
3. Divide rice among four bowls, then add squash, corn-bean mix, avocado slices, pepitas, and salsa.
4. Finish each bowl with extra lime and cilantro instead of extra salt.

> ***Critical control:*** *For CKD, keep beans, avocado, squash, and pepitas measured. This bowl becomes friendlier when built on rice with smaller high-potassium toppings.*

Best-guess nutrition lane: Per bowl, rough estimate: 450-550 kcal, sodium 120-250mg before salsa brand, phosphorus moderate, potassium moderate-high. Confirm against product labels and care-team limits.

2. Peruvian Quick-Cure Ceviche with Sweet Potato and Cancha

Atlas lens: UNESCO lists the practices and meanings associated with ceviche as an expression of Peruvian traditional cuisine. This version is a small-portion home-cook plate, not a claim to replace regional cevicheria technique.

Meal-as-medicine note: Lean fish, citrus, herbs, and restrained starch can fit a heart-aware pattern. It is still raw-fish adjacent unless made with cooked seafood.

Ingredient	Amount	CKD / Safety Note
Yield	4 small plates	Built for flexible portions.
Active	25 min	Home-kitchen estimate.
Cook / Hold	15 min for sweet potato	Times vary by equipment.
Lens	Peru / UNESCO-style heritage dish lane	Culture, history, popularity, or health-pattern source.

Ingredients

Ingredient	Amount	CKD / Safety Note
Very fresh white fish, diced	12 oz	Previously frozen sushi-grade fish, or use cooked shrimp/cod for safer lane.
Lime juice	1/2 cup	Cures texture but does not sterilize fish.
Red onion, very thin sliced	1/2 cup	Rinse briefly for milder bite.
Cucumber, diced	1 cup	Adds volume without sodium.
Cilantro	1/3 cup	Fresh finish.
Aji amarillo or mild chile	1 tsp	Optional heat.
Small sweet potato, cooked and sliced	1	Keep portion small for potassium control.
Toasted corn or unsalted corn nuts	1/2 cup	Crunch garnish.
Olive oil	1 tbsp	Optional gloss.

Method

1. Chill all ingredients and serving bowls. If using raw fish, keep it cold and work quickly.
2. Toss fish with lime juice, onion, cucumber, cilantro, and chile. Rest 8-12 minutes until opaque at the edges.
3. Taste and brighten with more lime rather than salt. Add olive oil if desired.
4. Serve small portions with sweet potato slices and toasted corn on the side.

> ***Critical control:*** *Dialysis, transplant, pregnancy, immune compromise, or food-safety concern: use cooked shrimp or cooked cod instead of raw fish. Lime juice is flavor and texture, not a kill step.*

Best-guess nutrition lane: Per small plate, rough estimate: 170-230 kcal, sodium 60-180mg before added salt, phosphorus moderate from fish, potassium moderate from sweet potato.

3. Ukrainian Beet Borscht with Dill Yogurt

Atlas lens: UNESCO placed the culture of Ukrainian borscht cooking on the urgent safeguarding list in 2022. This is a CKD-aware vegetable soup adaptation that respects the dish as a living family food, not a fixed formula.

Meal-as-medicine note: Vegetable soup can support fiber and meal volume, but beets, potatoes, and tomato products can push potassium. The portion and broth choice matter.

Ingredient	Amount	CKD / Safety Note
Yield	6 cups	Built for flexible portions.
Active	25 min	Home-kitchen estimate.
Cook / Hold	45 min	Times vary by equipment.
Lens	Ukraine / urgent heritage cooking lane	Culture, history, popularity, or health-pattern source.

Ingredients

Ingredient	Amount	CKD / Safety Note
Beets, peeled and grated	2 medium	Use measured portions.
Cabbage, shredded	3 cups	Low-sodium volume.
Carrot, grated	1 small	Optional if potassium restricted.
Potato, diced and leached	1 small	Double-boil if needed for potassium control.
White beans, rinsed	1 cup	Optional; keep small.
Low-sodium vegetable broth	6 cups	Avoid regular broth.
Tomato paste	1 tbsp	Small amount for color and depth.
Vinegar or lemon juice	2 tbsp	Brightness without salt.
Dill and parsley	1/2 cup	Fresh finish.
Plain yogurt	1/2 cup	Use as garnish, 1-2 tbsp per bowl.

Method

1. Sweat beets, cabbage, carrot, and potato in a little oil for 6-8 minutes.
2. Add broth and tomato paste. Simmer until vegetables are tender, about 35 minutes.
3. Stir in beans if using, then finish with vinegar or lemon juice and herbs.
4. Serve with a small spoon of plain yogurt and extra dill.

> ***Critical control:*** *For lower potassium, reduce beets and potato, increase cabbage, and double-boil potato separately before adding.*

Best-guess nutrition lane: Per cup, rough estimate: 120-180 kcal, sodium 80-220mg depending on broth, potassium moderate, phosphorus low-moderate unless beans are increased.

4. Kimjang Rice Bowl with Reduced-Sodium Kimchi and Crisp Tofu

Atlas lens: UNESCO recognizes kimjang, the making and sharing of kimchi, as a communal seasonal practice. This bowl uses the flavor logic of kimchi while keeping the sodium portion explicit.

Meal-as-medicine note: Fermented foods can contribute flavor and microbial diversity, but kimchi is often salty. Here it is a measured condiment, not the bulk of the meal.

Ingredient	Amount	CKD / Safety Note
Yield	4 bowls	Built for flexible portions.
Active	25 min	Home-kitchen estimate.
Cook / Hold	20 min	Times vary by equipment.
Lens	Korea / fermentation and community preservation lane	Culture, history, popularity, or health-pattern source.

Ingredients

Ingredient	Amount	CKD / Safety Note
Cooked white rice	3 cups	Base portion.
Firm tofu, pressed and cubed	14 oz	Protein; phosphorus varies by coagulant.
Reduced-sodium kimchi, chopped	1 cup	1/4 cup per bowl.
Cucumber, thin sliced	1 cup	Fresh crunch.
Carrot ribbons	1/2 cup	Optional.
Scallion greens	1/4 cup	Aroma.
Sesame oil	2 tsp	Strong flavor, small amount.
Rice vinegar	1 tbsp	Brightness.
Sesame seeds	2 tsp	Garnish.
Low-sodium gochujang-style sauce	2 tbsp	Optional; label-check sodium.

Method

1. Pat tofu dry and sear in a nonstick skillet until golden on several sides.
2. Stir kimchi with rice vinegar and sesame oil to make a punchy measured topping.
3. Build bowls with rice, tofu, cucumber, carrot, kimchi, scallion greens, and sesame seeds.
4. Use sauce sparingly at the table so sodium stays visible.

> ***Critical control:*** *Measure kimchi and sauce. For stricter sodium, rinse kimchi quickly, squeeze dry, and re-brighten with rice vinegar, garlic, ginger, and chile.*

Best-guess nutrition lane: Per bowl, rough estimate: 380-480 kcal, sodium 250-550mg depending on kimchi and sauce, phosphorus moderate from tofu, potassium moderate.

5. Mediterranean Lentil-Barley Market Plate

Atlas lens: UNESCO frames the Mediterranean diet as skills, rituals, sharing, crops, fishing, processing, cooking, and eating together. NCBI clinical summaries frame the pattern as plant-forward with olive oil, legumes, whole grains, fish, and fermented dairy.

Meal-as-medicine note: This is the clearest food-as-medicine pilot: a pattern plate built around fiber, olive oil, herbs, legumes, whole grains, and optional fish. It is not a treatment plan.

Ingredient	Amount	CKD / Safety Note
Yield	4 plates	Built for flexible portions.
Active	25 min	Home-kitchen estimate.
Cook / Hold	30 min	Times vary by equipment.
Lens	Mediterranean / meal-pattern medicine lane	Culture, history, popularity, or health-pattern source.

Ingredients

Ingredient	Amount	CKD / Safety Note
Cooked lentils	1 1/2 cups	Moderate portion.
Cooked barley	2 cups	Whole grain; swap white rice if phosphorus/potassium targets require.

Ingredient	Amount	CKD / Safety Note
Cucumber and tomato, diced	2 cups	Fresh market volume.
Roasted zucchini or peppers	2 cups	Use what labs allow.
Olive oil	3 tbsp	Primary fat.
Lemon juice	3 tbsp	Salt replacement.
Parsley, mint, dill	3/4 cup	Big herb load.
Plain yogurt	1/2 cup	Optional fermented dairy garnish.
Grilled fish or chickpeas	optional	Add protein based on meal target.
Olives, chopped	2 tbsp	Use sparingly for sodium.

Method

1. Whisk olive oil, lemon juice, herbs, pepper, and a splash of water into a dressing.
2. Fold lentils and barley with half the dressing and let stand 10 minutes.
3. Add cucumber, tomato, roasted vegetables, and optional protein.
4. Plate with a small yogurt spoon and a tiny olive garnish if sodium budget allows.

> ***Critical control:*** *Keep olives and yogurt measured. For CKD, the grain/legume split can move: more rice and vegetables, fewer lentils, if phosphorus or potassium is tight.*

Best-guess nutrition lane: Per plate, rough estimate without fish: 420-520 kcal, sodium 120-300mg, phosphorus moderate, potassium moderate.

6. Ancient Roman Puls with Mushrooms, Herbs and Olive Oil

Atlas lens: Historical cooking channels such as Tasting History have made ancient recipes accessible again. This dish is a modern practical puls: grain porridge, olive oil, herbs, mushrooms, and acid, built from Roman pantry logic without copying a specific modern recipe.

Meal-as-medicine note: A humble grain bowl can be comfort food and soluble-fiber vehicle. The medicine is the pattern: whole or semi-refined grain, plants, olive oil, and restraint.

Ingredient	Amount	CKD / Safety Note
Yield	4 bowls	Built for flexible portions.
Active	15 min	Home-kitchen estimate.
Cook / Hold	35 min	Times vary by equipment.
Lens	Ancient Rome / Tasting History lane	Culture, history, popularity, or health-pattern source.

Ingredients

Ingredient	Amount	CKD / Safety Note
Pearled barley or farro	1 cup	Pearled cooks faster; whole grain has more phosphorus.
Water or low-sodium broth	4 cups	Keep sodium controlled.
Mushrooms, sliced	8 oz	Saute for umami.
Olive oil	3 tbsp	Divided.
Garlic, minced	1 clove	Optional.
Parsley, thyme, oregano	1/2 cup	Fresh herbs.
Lemon juice or wine vinegar	1 tbsp	Brightens the bowl.
Toasted walnuts or pine nuts	2 tbsp	Optional garnish; phosphorus source.
Black pepper	to taste	Salt-free lift.

Method

1. Simmer barley or farro with water or low-sodium broth until soft and porridge-like, 30-35 minutes.
2. Saute mushrooms in olive oil until browned. Add garlic briefly if using.
3. Fold mushrooms, herbs, pepper, and lemon juice into the grain.
4. Finish with a small olive-oil drizzle and measured nuts if allowed.

> ***Critical control:*** *If phosphorus is restricted, keep the nut garnish tiny and consider pearled barley or white rice for a gentler grain base.*

Best-guess nutrition lane: Per bowl, rough estimate: 300-420 kcal, sodium 40-160mg, phosphorus moderate from grain and nuts, potassium low-moderate.

National Dish Atlas I - Official, Beloved, and Best-Dish Signals

This second atlas batch widens the pilot from single foodway examples into national and regional beloved dishes. The labels are intentionally conservative: official status is named only when the source lane supports it; otherwise the dish is treated as national-beloved, regional-beloved, or popularity-signal material for future verification.

Portion policy: These recipes use best-guess portions so the cookbook can keep moving. They are not medical nutrition labels and should be checked against actual products, labs, and care-team targets before use in a CKD meal plan.

7. Egyptian Koshari with Garlic-Vinegar Tomato Sauce

Atlas lens: Koshari is treated here as a national-beloved dish and UNESCO watchlist/discovery candidate, not as a completed inscription claim. The recipe preserves the layering logic: grains, lentils, pasta, chickpeas, tomato sauce, vinegar heat, and crisp onions.

Meal-as-medicine note: This is a fiber-and-legume plate when portions are measured. For CKD, the controls are legume amount, tomato sauce potassium, fried-onion sodium, and total carbohydrate load.

Field	Value	Control
Yield	4 bowls	Best-guess home portions.
Active	35 min	Home-kitchen estimate.
Cook / Hold	45 min	Times vary by equipment and batch size.
Lens	Egypt / national-beloved street-food lane	Official where available; cautious national-beloved label where status is not formal.

Ingredients

Ingredient	Amount	CKD / Safety Note
Brown lentils, cooked	1 1/2 cups	About 1/3 cup per bowl keeps phosphorus and potassium more visible.
White rice, cooked	2 cups	Lower potassium base than many whole grains.
Small macaroni, cooked	1 1/2 cups	Use unsalted cooking water.
Chickpeas, rinsed very well	1 cup	Keep to 1/4 cup per bowl.
No-salt tomato puree	1 1/2 cups	Main potassium driver; use measured sauce.
Garlic, minced	3 cloves	Flavor without sodium.
Cumin, coriander, smoked paprika	2 tsp total	Warm spice backbone.
White vinegar	3 tbsp	Classic sharpness; lets salt stay low.
Crisp fried or baked onions	1/2 cup	Check packaged sodium; homemade is safer.
Chile flakes or harissa-style paste	to taste	Optional heat; label-check sodium.

Method

1. Cook rice, lentils, and macaroni separately so each texture stays clear.
2. Simmer tomato puree with garlic, cumin, coriander, paprika, vinegar, pepper, and chile until glossy.
3. Warm chickpeas with a splash of water and a spoon of sauce.

4. Layer rice, lentils, macaroni, chickpeas, sauce, vinegar heat, and crisp onions in bowls.
5. Serve with extra vinegar and chile at the table instead of adding more salt.

> ***Critical control:*** *Measure lentils, chickpeas, and tomato sauce. This dish gets CKD-friendlier when the base is rice and pasta with smaller legume and sauce portions.*

Best-guess nutrition lane: Per bowl, best-guess estimate: 520-680 kcal, sodium 120-350mg before packaged onions or chile paste, phosphorus moderate, potassium moderate-high depending tomato sauce and legumes. Confirm against actual brands, serving size, and care-team limits.

8. Vietnamese Pho Ga with Low-Sodium Aromatic Broth

Atlas lens: Vietnamese government reporting notes pho recognition in the national intangible cultural heritage system. This is a home pho ga-style bowl, not a claim to duplicate a specific regional shop formula.

Meal-as-medicine note: The comfort is broth, herbs, rice noodles, and lean protein. For CKD and blood pressure, broth sodium is the main hazard.

Field	Value	Control
Yield	4 bowls	Best-guess home portions.
Active	30 min	Home-kitchen estimate.
Cook / Hold	60 min	Times vary by equipment and batch size.
Lens	Vietnam / national intangible heritage lane	Official where available; cautious national-beloved label where status is not formal.

Ingredients

Ingredient	Amount	CKD / Safety Note
Low-sodium chicken broth	8 cups	Use the lowest sodium brand available or homemade unsalted.
Chicken breast or thighs	1 lb	About 3 oz cooked chicken per bowl.
Flat rice noodles	8 oz dry	Cook separately; rinse after cooking.
Onion and ginger, charred	1 onion, 2-inch ginger	Classic aroma without salt.
Star anise	2 pods	Use lightly; remove before serving.
Cinnamon stick	1 small	Broth aroma.
Coriander seed and clove	1 tsp coriander, 2 cloves	Toast briefly.
Scallion greens and cilantro	1 cup	Fresh finish.
Bean sprouts, Thai basil, lime	as desired	Add at table.
Low-sodium fish sauce	1-2 tsp optional	Measure carefully or omit.

Method

1. Toast spices until fragrant, then simmer with broth, charred onion, ginger, and chicken.
2. Remove chicken when cooked through, shred or slice, and strain the broth.
3. Cook rice noodles separately and divide among bowls.
4. Add chicken, hot broth, herbs, sprouts, lime, and chile to each bowl.
5. Use fish sauce only at the end and only if the sodium budget allows.

> ***Critical control:*** *Do not use standard pho bouillon or restaurant-strength broth for a renal-aware version. The dish succeeds or fails on sodium control.*

Best-guess nutrition lane: Per bowl, best-guess estimate: 390-520 kcal, sodium 250-650mg depending broth and fish sauce, phosphorus moderate from chicken, potassium low-moderate. Confirm against actual brands, serving size, and care-team limits.

9. Malaysian Nasi Lemak Breakfast Plate, Renal-Aware Build

Atlas lens: UNESCO recognition of breakfast culture in Malaysia provides the broader foodway anchor; nasi lemak is treated as a national-beloved breakfast plate inside that lane.

Meal-as-medicine note: The plate is satisfying because small strong components carry the rice. CKD controls are coconut milk, egg/protein portion, sambal sodium, peanuts, and anchovy-style garnish.

Field	Value	Control
Yield	4 plates	Best-guess home portions.
Active	30 min	Home-kitchen estimate.
Cook / Hold	30 min	Times vary by equipment and batch size.
Lens	Malaysia / breakfast culture and national-beloved dish lane	Official where available; cautious national-beloved label where status is not formal.

Ingredients

Ingredient	Amount	CKD / Safety Note
Jasmine rice	1 1/2 cups dry	Rinse well; sodium-free base.
Light coconut milk	1 cup	Dilute with water for lower saturated fat.
Water	1 1/2 cups	Adjust by rice brand.
Pandan leaf or bay leaf	1	Optional aroma.
Reduced-sodium sambal	1/2 cup	2 tbsp per plate keeps sodium visible.
Eggs, boiled and halved	2	Half egg per plate.
Cucumber slices	2 cups	Cooling low-sodium volume.
Toasted peanuts	1/4 cup	1 tbsp per plate; phosphorus source.
Crisp roasted mushrooms or very small anchovy garnish	1/2 cup	Use mushrooms for lower sodium; anchovies only if measured.
Lime wedges	4	Bright finish.

Method

1. Cook rice with light coconut milk, water, and pandan or bay until tender.
2. Prepare or choose a reduced-sodium sambal and keep it in a spoonable side portion.
3. Boil eggs, toast peanuts, and crisp mushrooms or a tiny anchovy garnish.
4. Plate rice on banana leaf if available, with cucumber, egg, sambal, peanuts, and garnish around it.
5. Finish with lime so the sambal can stay measured.

> ***Critical control:*** *Treat sambal, peanuts, coconut milk, egg, and anchovy-style garnish as measured flavor accents. A restaurant plate can be much saltier than this home build.*

Best-guess nutrition lane: Per plate, best-guess estimate: 460-620 kcal, sodium 150-500mg depending sambal and garnish, phosphorus moderate from egg and peanuts, potassium low-moderate. Confirm against actual brands, serving size, and care-team limits.

10. Indonesian Rendang Rice Bowl with Deep Coconut-Spice Reduction

Atlas lens: Rendang is anchored here through Indonesia national-food discovery and recurring best-dish popularity signals. This version is a home reduction, not a claim to replace Minangkabau ceremonial technique.

Meal-as-medicine note: The flavor density lets a smaller protein portion feel complete. CKD controls are protein size, coconut milk, sodium, and side portions.

Field	Value	Control
Yield	4 bowls	Best-guess home portions.

Field	Value	Control
Active	35 min	Home-kitchen estimate.
Cook / Hold	2 hr	Times vary by equipment and batch size.
Lens	Indonesia / national-food and best-dish signal lane	Official where available; cautious national-beloved label where status is not formal.

Ingredients

Ingredient	Amount	CKD / Safety Note
Lean beef chuck or chicken thighs	1 1/4 lb	About 3 oz cooked meat per bowl.
Light coconut milk	1 1/2 cups	Use light coconut milk for a gentler bowl.
Unsweetened shredded coconut	3 tbsp	Toast for kerisik-style depth; phosphorus source.
Lemongrass, bruised	2 stalks	Core aroma.
Ginger and galangal	2 tbsp minced	Use ginger if galangal is unavailable.
Garlic and shallot	4 cloves, 2 shallots	Base paste.
Turmeric, coriander, cumin	2 tsp total	Spice paste.
Kaffir lime leaf or lime zest	2 leaves or 1 tsp zest	Bright aroma.
Cooked white rice	3 cups	Base portion.
Cucumber and lime	for serving	Fresh contrast.

Method

1. Blend garlic, shallot, ginger, galangal, turmeric, coriander, cumin, and a splash of water into a paste.
2. Brown meat lightly, then add spice paste, lemongrass, lime leaf or zest, coconut milk, and toasted coconut.
3. Simmer uncovered, stirring often, until sauce is thick, dark, and clinging to the meat.
4. Serve a measured portion with rice, cucumber, and lime.
5. Hold salt until the end; the reduction concentrates every seasoning.

> ***Critical control:*** *Rendang should reduce, not swim. Because reduction concentrates sodium, start nearly salt-free and adjust only after the sauce is thick.*

Best-guess nutrition lane: Per bowl, best-guess estimate with beef: 560-760 kcal, sodium 90-300mg before added salt, phosphorus moderate-high from meat and coconut, potassium moderate. Confirm against actual brands, serving size, and care-team limits.

11. West African Jollof Rice with Tomato-Pepper Base

Atlas lens: Jollof is a regional, proudly debated foodway, so this recipe avoids ownership claims. UNESCO's Ceebu Jen entry is used as a neighboring official rice-foodway anchor, while the recipe remains a broad home jollof-style build.

Meal-as-medicine note: The tomato-pepper base makes rice feel celebratory. CKD controls are tomato/potassium load, salt, bouillon powders, and protein portion.

Field	Value	Control
Yield	6 cups rice, 4-6 servings	Best-guess home portions.
Active	30 min	Home-kitchen estimate.
Cook / Hold	45 min	Times vary by equipment and batch size.
Lens	West Africa / regional national-beloved dish lane	Official where available; cautious national-beloved label where status is not formal.

Ingredients

Ingredient	Amount	CKD / Safety Note
Long-grain parboiled rice	2 cups	Rinse until water runs mostly clear.
No-salt crushed tomatoes	1 cup	Measured for potassium control.
Roasted red bell pepper	1 large	Blends into the base.
Onion	1 medium	Base sweetness.
Garlic and ginger	2 tsp each	Aroma.
Tomato paste	1 tbsp	Small amount for color and depth.
Thyme, curry powder, bay leaf	2 tsp total plus 1 bay	Classic seasoning lane; use salt-free curry blend.
Low-sodium broth or water	2 1/2 cups	Avoid regular bouillon cubes.
Grilled chicken thigh or roasted vegetables	optional	Protein or vegetable side; keep portion measured.
Cucumber, herbs, lime	for serving	Fresh finish.

Method

1. Blend tomatoes, roasted red pepper, onion, garlic, and ginger into a smooth base.
2. Cook the base with tomato paste, thyme, curry powder, and bay until darker and reduced.
3. Stir in rinsed rice and low-sodium broth or water.
4. Cover and cook gently until rice is tender; rest 10 minutes before fluffing.
5. Serve with cucumber, herbs, lime, and optional measured chicken or roasted vegetables.

> ***Critical control:*** *Skip standard bouillon cubes unless the sodium budget explicitly allows them. Build savor with roasted pepper, ginger, onion reduction, thyme, curry spice, and bay.*

Best-guess nutrition lane: Per 1 1/2 cup serving, best-guess estimate without chicken: 330-450 kcal, sodium 80-240mg, phosphorus low-moderate, potassium moderate from tomato and pepper. Confirm against actual brands, serving size, and care-team limits.

12. Filipino Chicken Adobo with Measured Vinegar-Soy Glaze

Atlas lens: Adobo is presented as a national-beloved home dish, not a legally official national dish. The recipe leans into vinegar, garlic, bay, pepper, and measured soy for a renal-aware glaze.

Meal-as-medicine note: Vinegar and aromatics make a small amount of soy sauce carry farther. CKD controls are sodium, protein portion, and sauce quantity over rice.

Field	Value	Control
Yield	4 servings	Best-guess home portions.
Active	20 min	Home-kitchen estimate.
Cook / Hold	45 min	Times vary by equipment and batch size.
Lens	Philippines / national-beloved home dish lane	Official where available; cautious national-beloved label where status is not formal.

Ingredients

Ingredient	Amount	CKD / Safety Note
Bone-in chicken thighs or drumsticks	1 1/2 lb	About 3 oz cooked meat per serving.
White vinegar or cane vinegar	1/2 cup	Primary tang.
Low-sodium soy sauce	3 tbsp	Measured; do not pour freely.
Water	1/2 cup	Dilutes the braise.
Garlic, smashed	8 cloves	Core flavor.
Bay leaves	3	Classic aroma.

Ingredient	Amount	CKD / Safety Note
Black peppercorns	1 tsp	Use whole or cracked.
Brown sugar or honey	1 tsp optional	Rounds acidity.
Cooked white rice	3 cups	Serving base.
Cucumber or scallion greens	for serving	Fresh contrast.

Method

1. Combine vinegar, low-sodium soy sauce, water, garlic, bay, pepper, and optional sugar.
2. Add chicken and simmer gently until tender and cooked through.
3. Remove chicken, reduce sauce until glossy, then return chicken to coat.
4. Serve measured chicken with rice, a spoon of glaze, and cucumber or scallion greens.
5. Keep extra sauce on the side so sodium stays visible.

> ***Critical control:*** *The sauce is the sodium. Use low-sodium soy, dilute it, reduce only after tasting, and spoon glaze instead of flooding the rice.*

Best-guess nutrition lane: Per serving with rice, best-guess estimate: 520-700 kcal, sodium 450-750mg depending soy sauce and sauce served, phosphorus moderate from chicken, potassium low-moderate. Confirm against actual brands, serving size, and care-team limits.

National Dish Atlas I Source Packet

Source	URL	Use in atlas
UNESCO ICH files under process	https://ich.unesco.org/en/files-2025-under-process-01450	Watchlist/discovery lane for koshari-style heritage monitoring. This is not treated as a completed inscription.
Vietnam Government News - Pho recognition	https://en.baochinhphu.vn/local-noodle-soup-designated-as-national-intangible-cultural-heritage-111240813144900022.htm	Official reporting for pho in Vietnam's national intangible cultural heritage system.
UNESCO ICH - Breakfast culture in Malaysia	https://ich.unesco.org/en/RL/breakfast-culture-in-malaysia-dining-experience-in-a-multi-ethnic-society-02113	Foodway anchor for Malaysian breakfast culture; nasi lemak is treated as a national-beloved breakfast plate.
Wonderful Indonesia - 5 National Foods of Indonesia	https://www.indonesia.travel/gb/en/trip-ideas/5-national-foods-of-indonesia	Official tourism discovery lane for national-food framing, including rendang.
UNESCO ICH - Ceebu Jen, culinary art of Senegal	https://ich.unesco.org/en/RL/ceebu-jn-a-culinary-art-of-senegal-01748	Official West African rice-foodway anchor used as a comparator while avoiding ownership claims over jollof.
NCCA - Philippine national symbols facts	https://ncca.gov.ph/about-culture-and-arts/in-focus/9-facts-you-may-not-know-about-philippine-national-symbols/	Cautionary official-source lane; adobo is written as national-beloved rather than legally official.
TasteAtlas - Best dishes	https://www.tasteatlas.com/best/dishes	Popularity and discovery signal only, not treated as final culinary truth.

Heritage Foodways Atlas II - UNESCO-Recognized Cooking Practices

This third atlas batch moves from broad national-dish discovery into officially recognized foodways: communal rice, couscous knowledge, balanced dietary culture, pizza craft, flatbread practice, and bread culture. Each recipe is a practical home adaptation with CKD-aware controls and conservative source language.

Portion policy: These are best-guess cookbook portions, not medical nutrition labels. Sodium, potassium, phosphorus, fluid, and protein must be checked against actual products and care-team targets.

13. Senegalese Ceebu Jen-Inspired Fish and Red Rice Plate

Atlas lens: UNESCO recognizes Ceebu Jen as a culinary art of Senegal. This is a renal-aware home plate inspired by the fish-rice-vegetable logic, not a claim to replace the formal communal foodway.

Meal-as-medicine note: A rice-and-fish plate can support lean protein and vegetable variety. CKD controls are tomato-pepper concentration, fish portion, salty dried seafood, and bouillon.

Field	Value	Control
Yield	4 plates	Best-guess home portions.
Active	35 min	Home-kitchen estimate.
Cook / Hold	55 min	Times vary by equipment and batch size.
Lens	Senegal / UNESCO culinary art lane	Official foodway source with renal-aware home adaptation.

Ingredients

Ingredient	Amount	CKD / Safety Note
Broken jasmine rice or long-grain rice	2 cups	Rinse well; white rice keeps potassium lower.
White fish fillets	1 lb	About 3 oz cooked fish per plate.
No-salt crushed tomatoes	1 cup	Measured potassium source.
Roasted red pepper	1 large	Blends into the red base.
Onion, garlic, ginger	1 onion, 3 cloves, 1 tbsp	Aroma without salt.
Cabbage wedges	2 cups	Low-sodium volume.
Carrot sticks	1 cup	Measured vegetable portion.
Eggplant or zucchini	1 cup	Use allowed vegetables.
Low-sodium broth or water	2 3/4 cups	Avoid regular bouillon cubes.
Lime, parsley, chile	for serving	Bright finish.

Method

1. Blend tomato, roasted pepper, onion, garlic, ginger, and chile into a red cooking base.
2. Simmer the base until darker and glossy, then add broth or water.
3. Poach cabbage, carrot, and eggplant or zucchini until tender; remove and hold warm.
4. Poach fish gently in the seasoned liquid, then remove before it flakes apart.
5. Stir in rinsed rice, cover, and cook until tender. Plate rice with fish, vegetables, lime, and herbs.

> ***Critical control:*** *Skip standard bouillon and salted dried seafood in the renal-aware lane. Build depth with roasted pepper, onion reduction, ginger, garlic, and lime.*

Best-guess nutrition lane: Per plate, best-guess estimate: 430-580 kcal, sodium 90-280mg before added salt, phosphorus moderate from fish, potassium moderate from tomato and vegetables. Confirm against actual brands, serving size, and care-team limits.

14. Maghrebi Couscous with Chickpeas and Stewed Vegetables

Atlas lens: UNESCO recognizes knowledge, know-how, and practices pertaining to the production and consumption of couscous across multiple Maghrebi countries. This recipe is a home foodway adaptation with measured legumes and vegetables.

Meal-as-medicine note: Couscous can carry vegetables and spices with less sodium than many packaged grain meals. CKD controls are chickpea portion, tomato use, broth sodium, and optional meat.

Field	Value	Control
Yield	4 bowls	Best-guess home portions.

Field	Value	Control
Active	30 min	Home-kitchen estimate.
Cook / Hold	45 min	Times vary by equipment and batch size.
Lens	Algeria, Mauritania, Morocco, Tunisia / UNESCO couscous lane	Official foodway source with renal-aware home adaptation.

Ingredients

Ingredient	Amount	CKD / Safety Note
Plain couscous	1 1/2 cups dry	Use unsalted; fluff carefully.
Low-sodium broth or water	1 3/4 cups	Control sodium.
Chickpeas, rinsed well	1 cup	1/4 cup per bowl.
Carrots	1 cup	Measured portion.
Zucchini	1 1/2 cups	Tender vegetable volume.
Turnip or peeled squash	1 cup	Use lab-appropriate vegetable.
Cabbage	2 cups	Low-sodium volume.
Ras el hanout-style salt-free spice	2 tsp	Warm spice without salt.
Olive oil	2 tbsp	Flavor and mouthfeel.
Harissa-style chile paste	2 tbsp optional	Serve on side; label-check sodium.

Method

1. Steam or hydrate couscous with unsalted hot broth or water, then fluff with olive oil.
2. Simmer carrots, turnip or squash, cabbage, zucchini, chickpeas, and spices until tender.
3. Keep the vegetable broth light and spoonable rather than salty.
4. Plate couscous as a mound and arrange vegetables and chickpeas over it.
5. Serve harissa on the side so heat and sodium remain optional.

> ***Critical control:*** *Measure chickpeas and harissa. For tighter phosphorus or potassium targets, reduce chickpeas and increase cabbage or zucchini.*

Best-guess nutrition lane: Per bowl, best-guess estimate: 400-540 kcal, sodium 80-300mg depending broth and harissa, phosphorus moderate from chickpeas, potassium moderate. Confirm against actual brands, serving size, and care-team limits.

15. Japanese Washoku Tray: Rice, Soup, Fish, and Seasonal Sides

Atlas lens: UNESCO recognizes Washoku, traditional dietary cultures of the Japanese, especially around New Year. This home tray uses the rice-soup-sides balance rather than copying a ceremonial menu.

Meal-as-medicine note: The health value is portion architecture: rice, modest protein, soup, vegetables, and restraint. CKD controls are miso sodium, pickles, fish portion, and potassium-rich squash or greens.

Field	Value	Control
Yield	4 trays	Best-guess home portions.
Active	35 min	Home-kitchen estimate.
Cook / Hold	35 min	Times vary by equipment and batch size.
Lens	Japan / UNESCO traditional dietary culture lane	Official foodway source with renal-aware home adaptation.

Ingredients

Ingredient	Amount	CKD / Safety Note
Cooked white rice	3 cups	About 3/4 cup per tray.
Salmon fillets or firm tofu	12 oz	About 3 oz per tray; tofu phosphorus varies.
Low-sodium miso-style soup	4 cups	Use less miso and more kombu-free vegetable aroma if potassium limits require.
Kabocha or carrot, simmered	1 1/2 cups	Measured potassium source.
Cucumber quick pickle	1 cup	Use vinegar-heavy, salt-light pickle.
Greens with sesame	1 cup	Sesame is a small garnish.
Scallion greens	1/4 cup	Aroma.
Rice vinegar	2 tbsp	Brightens sides.
Sesame oil	1 tsp	Strong flavor; small amount.
Low-sodium soy sauce	1 tsp optional	Use drops, not pours.

Method

1. Cook rice and keep warm.
2. Grill or pan-sear salmon, or crisp tofu, without a salty marinade.
3. Make a light soup with low-sodium broth and a small measured amount of miso-style paste.
4. Prepare one simmered seasonal side and one vinegar-forward cucumber side.
5. Arrange rice, soup, protein, and sides as separate small dishes on a tray.

> ***Critical control:*** *Miso, soy sauce, and pickles can dominate sodium. Make the meal visually abundant through small dishes while keeping salty items measured.*

Best-guess nutrition lane: Per tray with salmon, best-guess estimate: 460-620 kcal, sodium 350-750mg depending miso and pickle, phosphorus moderate, potassium low-moderate to moderate. Confirm against actual brands, serving size, and care-team limits.

16. Neapolitan-Style Margherita Pizza, Lower-Sodium Home Dough

Atlas lens: UNESCO recognizes the art of Neapolitan Pizzaiuolo as craft and social practice. This is a home oven adaptation focused on dough handling, hot bake, tomato restraint, and measured cheese.

Meal-as-medicine note: Pizza is usually a sodium trap. This version keeps the structure but controls dough salt, cheese amount, tomato sauce, and portion size.

Field	Value	Control
Yield	2 pizzas, 4 servings	Best-guess home portions.
Active	30 min plus dough rest	Home-kitchen estimate.
Cook / Hold	6-10 min per pizza	Times vary by equipment and batch size.
Lens	Naples / UNESCO pizzaiuolo craft lane	Official foodway source with renal-aware home adaptation.

Ingredients

Ingredient	Amount	CKD / Safety Note
Bread flour	500 g	Dough base.
Water	325 g	65% hydration.
Instant yeast	2 g	Slow rise flavor.
Salt	4 g	Lower than traditional dough; adjust only if allowed.
No-salt crushed tomatoes	1 cup	Measure sauce.
Fresh mozzarella, drained	4 oz	1 oz per serving.
Basil leaves	12	Fresh finish.
Olive oil	2 tsp	Light drizzle.
Semolina or flour	for launching	Use lightly.
Red pepper flakes	optional	Salt-free heat.

Method

1. Mix flour, water, yeast, and salt; rest, fold, and refrigerate overnight if possible.
2. Divide into two dough balls and let come to room temperature.
3. Heat oven and stone or steel as hot as practical.
4. Stretch dough thin in the center with a puffy rim; top lightly with tomatoes and mozzarella.
5. Bake until the rim blisters and cheese melts. Finish with basil and a tiny olive-oil drizzle.

> ***Critical control:*** *Pizza becomes renal-risky through cheese, salty dough, cured toppings, and large portions. Keep it Margherita-style and cap at two slices or half a small pizza per serving.*

Best-guess nutrition lane: Per serving, best-guess estimate: 430-600 kcal, sodium 250-500mg depending cheese and dough salt, phosphorus moderate from cheese and flour, potassium moderate from tomato. Confirm against actual brands, serving size, and care-team limits.

17. Armenian Lavash Wraps with Herbs, Yogurt, and Grilled Vegetables

Atlas lens: UNESCO recognizes lavash preparation, meaning, and appearance as an expression of culture in Armenia. This recipe uses lavash as a practical shared bread with measured fillings.

Meal-as-medicine note: Flatbread turns small amounts of protein and vegetables into a full meal. CKD controls are bread sodium, yogurt portion, bean or meat amount, and potassium-rich fillings.

Field	Value	Control
Yield	4 wraps	Best-guess home portions.
Active	30 min	Home-kitchen estimate.
Cook / Hold	20 min	Times vary by equipment and batch size.
Lens	Armenia / UNESCO lavash bread lane	Official foodway source with renal-aware home adaptation.

Ingredients

Ingredient	Amount	CKD / Safety Note
Lavash sheets	4	Choose lower-sodium if available.
Grilled zucchini and peppers	2 cups	Use lab-appropriate vegetables.
Cooked chicken or lentils	12 oz chicken or 1 cup lentils	Pick one protein lane; lentils raise phosphorus/potassium.
Cucumber	1 cup	Fresh crunch.
Parsley, mint, dill	1 cup	Big herb volume.
Plain yogurt	1/2 cup	2 tbsp per wrap.
Garlic	1 small clove	Optional sauce aroma.
Lemon juice	2 tbsp	Bright sauce.
Pomegranate seeds	2 tbsp optional	Garnish only.
Olive oil	2 tsp	Brush vegetables lightly.

Method

1. Grill or roast vegetables until browned and tender.
2. Stir yogurt with lemon, garlic, herbs, and pepper.
3. Warm lavash briefly so it folds without cracking.
4. Fill each sheet with vegetables, chicken or lentils, cucumber, herbs, and measured yogurt sauce.
5. Roll or fold, then slice and serve with extra herbs.

> ***Critical control:*** *Check lavash sodium. If using lentils, keep the filling smaller and use more cucumber and herbs to preserve volume.*

Best-guess nutrition lane: Per wrap with chicken, best-guess estimate: 380-520 kcal, sodium 250-650mg depending bread, phosphorus moderate, potassium moderate from vegetables and yogurt. Confirm against actual brands, serving size, and care-team limits.

18. French Baguette Supper with Vegetable Soup and Herb Omelet

Atlas lens: UNESCO recognizes artisanal know-how and culture of baguette bread. This supper treats bread as the meal anchor, paired with soup and simple protein instead of processed meats and salty cheeses.

Meal-as-medicine note: The bread is not the whole meal; soup, herbs, egg or bean spread, and vegetables create balance. CKD controls are bread sodium, soup potassium, butter/cheese, and protein choice.

Field	Value	Control
Yield	4 suppers	Best-guess home portions.
Active	25 min	Home-kitchen estimate.
Cook / Hold	30 min	Times vary by equipment and batch size.
Lens	France / UNESCO baguette craft lane	Official foodway source with renal-aware home adaptation.

Ingredients

Ingredient	Amount	CKD / Safety Note
Baguette, sliced	1 medium	About 1/4 baguette per supper; check sodium.
Low-sodium vegetable soup	6 cups	Use cabbage, carrot, green beans, and herbs; limit tomato if needed.
Eggs	4	One-egg herb omelet per supper, or share two larger omelets.
Parsley, chives, tarragon	1/2 cup	Flavor without salt.
Radishes and cucumber	2 cups	Fresh low-sodium crunch.
Unsalted butter or olive oil	2 tbsp	Measured fat.
White bean spread	1 cup optional	Use small portions; phosphorus source.
Lemon juice	1 tbsp	Brightens spread or soup.
Black pepper	to taste	Salt-free lift.
Garlic	1 clove optional	For soup or spread.

Method

1. Simmer a low-sodium vegetable soup until vegetables are tender but not mushy.
2. Whisk eggs with herbs and pepper; cook thin omelets in a lightly oiled skillet.
3. Slice baguette and warm briefly so the crust is crisp.
4. Plate soup, baguette slices, herb omelet, radishes, cucumber, and optional small white bean spread.
5. Use unsalted butter or olive oil sparingly at the table.

> ***Critical control:*** *Avoid turning baguette supper into cured-meat and cheese supper. The renal-aware version uses soup, egg, herbs, and fresh vegetables to carry the bread.*

Best-guess nutrition lane: Per supper, best-guess estimate: 420-620 kcal, sodium 300-650mg depending bread and soup, phosphorus moderate from egg and bread, potassium low-moderate to moderate. Confirm against actual brands, serving size, and care-team limits.

Heritage Foodways Atlas II Source Packet

Source	URL	Use in atlas
UNESCO - Ceebu Jen, a culinary art of Senegal	https://ich.unesco.org/en/RL/ceebu-jn-a-culinary-art-of-senegal-01748	Official foodway anchor for the Senegalese fish-and-rice recipe lane.
UNESCO - Knowledge, know-how and practices pertaining to couscous	https://ich.unesco.org/en/RL/knowledge-know-how-and-practices-pertaining-to-the-production-and-consumption-of-couscous-01602	Official multi-country Maghrebi couscous foodway anchor.

Source	URL	Use in atlas
UNESCO - Washoku, traditional dietary cultures of the Japanese	https://ich.unesco.org/en/RL/washoku-traditional-dietary-cultures-of-the-japanese-notably-for-the-celebration-of-new-year-00869	Official traditional dietary culture anchor for the balanced tray format.
UNESCO - Art of Neapolitan Pizzaiuolo	https://ich.unesco.org/en/RL/art-of-neapolitan-pizzaiuolo-00722	Official craft and social-practice anchor for pizza handling and bake logic.
UNESCO - Lavash in Armenia	https://ich.unesco.org/en/RL/lavash-the-preparation-meaning-and-appearance-of-traditional-bread-as-an-expression-of-culture-in-armenia-00985	Official lavash bread foodway anchor.
UNESCO - Artisanal know-how and culture of baguette bread	https://ich.unesco.org/en/RL/artisanal-know-how-and-culture-of-baguette-bread-01883	Official baguette craft and food culture anchor.

Medicine Patterns Atlas III - Evidence-Informed Meals Without Cure Claims

This fourth atlas batch adds meals-as-medicine pattern recipes. The goal is practical: translate recognized dietary patterns into real plates while keeping medical limits visible. These recipes do not treat, cure, or prevent disease by themselves.

Clinical boundary: CKD, diabetes, hypertension, transplant status, immune status, medications, potassium/phosphorus targets, and sodium limits can all change what is safe. The numbers below are best-guess cookbook estimates, not medical nutrition labels.

19. DASH Citrus Chicken Plate with Rice, Green Beans, and Yogurt Herb Sauce

Atlas lens: The DASH lane emphasizes vegetables, fruits, grains, lean proteins, low-fat dairy, and sodium awareness. This plate is a home dinner built from that pattern, not a medical prescription.

Meal-as-medicine note: Useful as a blood-pressure-aware meal pattern only when sodium is actually controlled. CKD changes potassium, phosphorus, protein, and dairy limits.

Field	Value	Control
Yield	4 plates	Best-guess home portions.
Active	30 min	Home-kitchen estimate.
Cook / Hold	25 min	Times vary by equipment and batch size.
Lens	NHLBI DASH eating pattern lane	Evidence-pattern recipe; not a disease treatment claim.

Ingredients

Ingredient	Amount	CKD / Safety Note
Boneless skinless chicken breast	1 1/4 lb	About 3-4 oz cooked per plate.
Lemon juice and zest	1 lemon	Acid carries flavor without salt.
Olive oil	2 tbsp	Divided.
Garlic, pepper, dill, parsley	to taste	Salt-free aromatics.
Cooked rice	3 cups	Use white or brown depending potassium/phosphorus targets.
Green beans	3 cups	Low-sodium vegetable volume.
Carrot coins	1 1/2 cups	Measured vegetable portion.
Cucumber and onion salad	2 cups	Vinegar-forward side.
Plain yogurt	1/2 cup	2 tbsp per plate; phosphorus and potassium vary.
Orange segments	1 orange	Optional fruit garnish; potassium varies.

Method

1. Marinate chicken with lemon, olive oil, garlic, pepper, dill, and parsley for 15-30 minutes.
2. Grill or sear chicken until cooked through, then rest and slice.
3. Steam green beans and carrots until just tender; dress cucumber salad with vinegar and herbs.
4. Stir yogurt with lemon zest, dill, parsley, and pepper.
5. Plate rice, chicken, vegetables, fruit, and a measured spoon of sauce.

> ***Critical control:*** *DASH only helps the cookbook goal if sodium stays visible. Do not use salty marinades, bouillon rice, or packaged seasoning blends.*

Best-guess nutrition lane: Per plate, best-guess estimate: 430-590 kcal, sodium 120-320mg before added salt, phosphorus moderate from chicken and yogurt, potassium moderate depending rice and fruit. Confirm against actual brands, serving size, medication context, labs, and care-team limits.

20. MIND-Style Blueberry Walnut Oats with Cinnamon Yogurt

Atlas lens: The MIND lane combines Mediterranean and DASH-style food groups with emphasis on leafy greens, berries, nuts, whole grains, beans, fish, poultry, and olive oil. This breakfast uses the berry, nut, whole-grain, and low-sugar logic without cure claims.

Meal-as-medicine note: This is a cognition-aware food-pattern recipe, not a dementia prevention guarantee. CKD controls are oats, nuts, yogurt, and berry portions.

Field	Value	Control
Yield	4 bowls	Best-guess home portions.
Active	10 min	Home-kitchen estimate.
Cook / Hold	25 min	Times vary by equipment and batch size.
Lens	MIND diet evidence-pattern lane	Evidence-pattern recipe; not a disease treatment claim.

Ingredients

Ingredient	Amount	CKD / Safety Note
Steel-cut oats or barley	1 cup dry	Whole grain; phosphorus varies.
Water	3 cups	Unsalted cooking liquid.
Plain yogurt	1/2 cup	2 tbsp per bowl.
Blueberries	1 cup	Berry anchor.
Strawberries, sliced	1 cup	Berry anchor.
Walnuts, chopped	1/4 cup	1 tbsp per bowl; phosphorus source.
Ground flax	2 tbsp	Optional fiber/fat; phosphorus source.
Cinnamon	1 tsp	Sweetness without sugar.
Lemon zest	1 tsp	Brightness.
Baby spinach side salad	optional small side	Use only if potassium limits allow leafy greens.

Method

1. Simmer oats or barley in water until tender and creamy.
2. Stir yogurt with cinnamon and lemon zest.
3. Divide grain among bowls and top with berries, walnuts, flax, and yogurt swirl.
4. Keep added sweetener optional and minimal.
5. Serve a small greens side only when potassium targets allow it.

> ***Critical control:*** *Walnuts, flax, yogurt, and whole grains raise phosphorus load. For CKD, keep toppings measured and use a smaller bowl if labs are tight.*

Best-guess nutrition lane: Per bowl, best-guess estimate: 300-430 kcal, sodium 20-90mg, phosphorus moderate, potassium low-moderate to moderate depending grain and greens. Confirm against actual brands, serving size, medication context, labs, and care-team limits.

21. Diabetes Plate Turkey Taco Bowl with Vegetable-Forward Build

Atlas lens: The diabetes plate method lane uses non-starchy vegetables as the visual anchor, with measured protein and carbohydrate sections. This bowl keeps that proportion visible without using in-image labels.

Meal-as-medicine note: This is a meal-planning structure, not a glucose guarantee. Medication, insulin, activity, and individual carbohydrate tolerance still matter.

Field	Value	Control
Yield	4 bowls	Best-guess home portions.
Active	25 min	Home-kitchen estimate.
Cook / Hold	20 min	Times vary by equipment and batch size.
Lens	CDC diabetes healthy eating / plate method lane	Evidence-pattern recipe; not a disease treatment claim.

Ingredients

Ingredient	Amount	CKD / Safety Note
Lean ground turkey	1 lb	About 3 oz cooked per bowl.
Salt-free taco seasoning	2 tbsp	Use cumin, chile, paprika, oregano, garlic.
Romaine, cabbage, peppers, cucumber	6 cups	Half-bowl non-starchy vegetable anchor.
Pico-style salsa	1 cup	Use low-sodium; tomato potassium varies.
Cooked brown rice, white rice, or corn	2 cups	1/2 cup carbohydrate portion per bowl.
Avocado	1 small	A few slices only; high potassium.
Lime	2	Acid finish.
Cilantro and scallion greens	1/2 cup	Aroma.
Plain yogurt	1/2 cup optional	Sour-cream lane; phosphorus varies.
Olive oil	2 tsp	For turkey or vegetables.

Method

1. Brown turkey with salt-free seasoning and a splash of water until saucy but not salty.
2. Fill half of each bowl with lettuce, cabbage, peppers, cucumber, and herbs.
3. Add a measured quarter-bowl of turkey and a quarter-bowl of rice or corn.
4. Top with pico, lime, avocado slices, and optional yogurt.
5. Keep chips, cheese, and bottled sauce off the default build unless specifically budgeted.

> ***Critical control:*** *The vegetables need to dominate the bowl. Carbohydrate and avocado portions are measured, and bottled taco sauces can erase the sodium control quickly.*

Best-guess nutrition lane: Per bowl, best-guess estimate: 430-620 kcal, sodium 150-450mg depending salsa, carbohydrate 35-55g, phosphorus moderate, potassium moderate-high if avocado and tomato are increased. Confirm against actual brands, serving size, medication context, labs, and care-team limits.

22. CKD-Aware Lemon Dill Cod with Rice, Cabbage, and Green Beans

Atlas lens: The CKD lane keeps sodium, potassium, phosphorus, protein, and fluid visible. This plate uses lower-potassium vegetables and measured lean protein, but individual lab targets still decide fit.

Meal-as-medicine note: This is the most explicitly renal-aware recipe in the batch. It is not a substitute for a renal dietitian plan.

Field	Value	Control
Yield	4 plates	Best-guess home portions.
Active	25 min	Home-kitchen estimate.
Cook / Hold	18 min	Times vary by equipment and batch size.
Lens	NIDDK CKD eating and nutrition lane	Evidence-pattern recipe; not a disease treatment claim.

Ingredients

Ingredient	Amount	CKD / Safety Note
Cod fillets	1 1/4 lb	About 3-4 oz cooked fish per plate.
Lemon juice and zest	1 lemon	Bright salt replacement.
Dill and parsley	1/2 cup	Fresh finish.
Cooked white rice	3 cups	A lower-estimated-mineral base that may fit some individualized plans.
Green beans	3 cups	Lower-potassium vegetable lane.
Cabbage, shredded and sauteed	3 cups	Lower-potassium volume.
Cucumber salad	2 cups	Vinegar-forward side.
Olive oil	2 tbsp	Divided.
Garlic powder, pepper	to taste	Check blends for sodium.
Herb oil	4 tsp	Measured finishing sauce.

Method

1. Season cod with lemon, dill, parsley, pepper, garlic powder, and a little olive oil.
2. Bake at 400F until fish flakes and reaches safe doneness.
3. Steam green beans and saute cabbage lightly with pepper and herbs.
4. Dress cucumber with vinegar and dill.
5. Plate cod with rice, vegetables, cucumber, and a measured spoon of herb oil.

> ***Critical control:*** *Avoid salt substitutes unless a clinician approves; many are potassium chloride. Keep protein measured and verify fish, rice, and vegetable portions against the current renal plan.*

Best-guess nutrition lane: Per plate, best-guess estimate: 360-520 kcal, sodium 80-220mg before added salt, phosphorus moderate from fish, potassium low-moderate. Confirm against actual brands, serving size, medication context, labs, and care-team limits.

23. Fermented-Fiber Barley Bowl with Yogurt, Cucumber, Dill, and Chickpeas

Atlas lens: The fermented-food lane is framed cautiously: yogurt and kefir-style foods can be part of a diet pattern, but probiotic effects vary and safety can matter for immune-compromised people.

Meal-as-medicine note: This bowl emphasizes fiber, fermented dairy, herbs, and measured legumes. It should not be described as a gut-health cure.

Field	Value	Control
Yield	4 bowls	Best-guess home portions.
Active	25 min	Home-kitchen estimate.
Cook / Hold	35 min	Times vary by equipment and batch size.

Field	Value	Control
Lens	NCCIH probiotic safety plus high-fiber pattern lane	Evidence-pattern recipe; not a disease treatment claim.

Ingredients

Ingredient	Amount	CKD / Safety Note
Cooked barley	3 cups	Whole grain; phosphorus varies.
Plain yogurt or kefir-style sauce	1 cup	1/4 cup per bowl; check potassium/phosphorus.
Cucumber	2 cups	Fresh low-sodium volume.
Roasted carrots	1 1/2 cups	Measured vegetable portion.
Chickpeas, rinsed well	1 cup	1/4 cup per bowl.
Pickled red onion, low salt	1/2 cup	Vinegar-forward garnish.
Dill, mint, parsley	1 cup	Big herb load.
Lemon juice	2 tbsp	Brightens yogurt.
Toasted seeds	2 tbsp optional	Measured garnish; phosphorus source.
Olive oil	2 tbsp	Divided.

Method

1. Cook barley until tender and cool slightly.
2. Whisk yogurt with lemon, dill, mint, parsley, pepper, and a little olive oil.
3. Build bowls with barley, cucumber, roasted carrots, chickpeas, and pickled onion.
4. Spoon yogurt sauce over the top and add a measured seed sprinkle if allowed.
5. Serve chilled or room temperature.

> ***Critical control:*** *For transplant, immunosuppression, or severe immune compromise, discuss live-culture foods with the care team. For CKD, measure barley, chickpeas, yogurt, and seeds.*

Best-guess nutrition lane: Per bowl, best-guess estimate: 390-540 kcal, sodium 100-350mg depending pickles and yogurt, phosphorus moderate-high if seeds and chickpeas are increased, potassium moderate. Confirm against actual brands, serving size, medication context, labs, and care-team limits.

24. Okinawan-Inspired Sweet Potato, Tofu, Greens, and Mushroom Bowl

Atlas lens: The Okinawan lane is treated as a traditional plant-forward pattern: sweet potatoes, soy foods, vegetables, herbs, and modest portions. This is inspiration, not a longevity promise.

Meal-as-medicine note: The bowl is plant-forward and high in color and fiber. CKD controls are sweet potato potassium, tofu phosphorus, greens, mushrooms, and seaweed sodium/iodine.

Field	Value	Control
Yield	4 bowls	Best-guess home portions.
Active	30 min	Home-kitchen estimate.
Cook / Hold	30 min	Times vary by equipment and batch size.
Lens	Okinawan longevity diet research lane	Evidence-pattern recipe; not a disease treatment claim.

Ingredients

Ingredient	Amount	CKD / Safety Note
Sweet potato wedges	2 cups cooked	Measured portion; high potassium.
Firm tofu	14 oz	Protein; phosphorus varies by coagulant.
Bok choy or allowed greens	3 cups	Use lab-appropriate greens.
Shiitake mushrooms	2 cups	Umami vegetable lane.
Cooked rice	2 cups	1/2 cup per bowl.
Ginger and scallion greens	1/2 cup	Aroma.
Low-sodium soy sauce	2 tsp optional	Use sparingly or omit.
Rice vinegar	2 tbsp	Bright sauce base.
Sesame oil	1 tsp	Strong flavor, tiny amount.
Seaweed sprinkle	1 tsp optional	Sodium and iodine can be high; use tiny garnish.

Method

1. Roast or steam sweet potato wedges and keep the portion modest.
2. Press tofu, cube it, and sear until golden.
3. Saute mushrooms and greens with ginger, scallion greens, vinegar, and a tiny amount of sesame oil.
4. Build bowls with rice, tofu, vegetables, sweet potato, and a tiny seaweed garnish if allowed.
5. Use low-sodium soy as drops, not a sauce flood.

> ***Critical control:*** *This bowl can become high potassium quickly. Keep sweet potato measured, choose greens based on labs, and treat seaweed as a tiny garnish.*

Best-guess nutrition lane: Per bowl, best-guess estimate: 420-620 kcal, sodium 120-420mg depending soy and seaweed, phosphorus moderate from tofu, potassium moderate-high from sweet potato and greens. Confirm against actual brands, serving size, medication context, labs, and care-team limits.

Medicine Patterns Atlas III Source Packet

Source	URL	Use in atlas
NHLBI - DASH Eating Plan	https://www.nhlbi.nih.gov/education/dash-eating-plan	Blood-pressure-aware dietary pattern lane for the citrus chicken plate.
CDC - Healthy Eating for Diabetes	https://www.cdc.gov/diabetes/healthy-eating/index.html	Plate-method and diabetes meal-planning lane for the turkey taco bowl.
NIDDK - Eating and Nutrition for Chronic Kidney Disease	https://www.niddk.nih.gov/health-information/kidney-disease/chronic-kidney-disease-ckd/eating-nutrition	Renal nutrition control lane: sodium, potassium, phosphorus, protein, and fluid.
NCCIH - Probiotics: What You Need To Know	https://www.nccih.nih.gov/health/probiotics-what-you-need-to-know	Fermented-food and probiotic safety caution lane.
Rush - MIND diet may help prevent Alzheimer's	https://www.rush.edu/news/mind-diet-may-help-prevent-alzheimers	MIND diet discovery and cognition-pattern lane; used without cure claims.
PubMed - Okinawan diet health implications	https://pubmed.ncbi.nlm.nih.gov/20234038/	Okinawan traditional diet research lane for plant-forward bowl inspiration.

Source Packet for This Pilot

Source	URL	Use in chapter
UNESCO Intangible Cultural Heritage lists	https://ich.unesco.org/en/lists	Foodway and heritage-dish discovery surface, including ceviche and other food traditions.
UNESCO - Mediterranean diet	https://ich.unesco.org/en/RL/mediterranean-diet-00884	Shared meals, crops, harvesting, processing, cooking, and social exchange as a foodway model.
UNESCO - Traditional Mexican cuisine	https://www.unesco.org/en/articles/traditional-mexican-cuisine-living-heritage-societies-and-planets-wellbeing	Milpa logic: maize, beans, squash, local knowledge, biodiversity, community cooks.

Source	URL	Use in chapter
UNESCO - Kimjang, making and sharing kimchi	https://ich.unesco.org/en/RL/kimjang-making-and-sharing-kimchi-in-the-republic-of-korea-00881	Fermentation, seasonality, sharing, and community preservation lens.
UNESCO - Culture of Ukrainian borscht cooking	https://ich.unesco.org/en/USL/culture-of-ukrainian-borscht-cooking-01852	Borscht as living heritage and crisis-preserved culinary identity.
TasteAtlas - Best dishes in the world	https://www.tasteatlas.com/best/dishes	Popularity/rating signal only; not treated as final culinary truth.

Source	URL	Use in chapter
NCBI Bookshelf - Mediterranean Diet	https://www.ncbi.nlm.nih.gov/books/NBK557733/	Evidence-based meal-pattern framing for plant-forward, olive-oil, legume, fish, and fermented dairy meals.
NHLBI - DASH Eating Plan	https://www.nhlbi.nih.gov/education/dash-eating-plan	Blood-pressure-aware pattern reference: fruit, vegetables, grains, low-fat dairy, lean proteins, sodium limits.
Tasting History with Max Miller	https://www.tastinghistory.com/	Historical-cooking lane inspiration only; no recipes copied.

CHAPTER 37 · CLINICAL CULINARY SCIENCE & MULTI-CONDITION EXPANSION

Hyperpalatable Healing & Multi-Condition Wellness

"Therapeutic food cannot heal if nobody wants to eat it. Flavor chemistry, umami synergy, textural shatter, and aromatic brightness are not luxuries—they are the front-line dignity of healing."



Chapter 37 Master Showcase: Multi-condition wellness gastronomy uniting kidney protection, cardiovascular health, glycemic stability, and hyperpalatable culinary excellence.

THE MULTI-CONDITION CULINARY SCIENCE SUITE:

When clinical conditions intersect—dialysis with diabetes, cardiac restriction with GI sensitivity—traditional dietary lists collapse into contradictory restrictions. This chapter applies rigorous sensory biophysics and food chemistry to construct *hyperpalatable*, deeply satisfying meals within strict metabolic boundaries:

- **Umami Stacking Without Sodium:** Synergy between natural glutamate donors and inosinate/guanylate ribonucleotides (toasted yeast extracts, flash-seared mushrooms in controlled micro-doses, slow-caramelized leached alliums) creates a savory intensity that compensates completely for absent table salt.
- **Trigeminal & Acid Salivation Triggers:** Cold-pressed citrus peel oils (volatile limonene), sumac berries, raw unfiltered fruit vinegars, and tamarind stimulate salivary flow, amplifying perceived salinity without adding a single milligram of sodium.
- **Phosphate-Zero Leavening & Protein Quality:** 100% elimination of inorganic phosphate preservatives (SALP, sodium polyphosphate, monocalcium phosphate). Proteins prioritize high-biological-value (HBV) albumin, wild-caught white fish, and lean poultry to rebuild post-dialysis muscle tissue while keeping digestive waste minimal.
- **Cross-Condition Boundary Matrix:** Every recipe below carries explicit clinical indicators for **ESRD / Dialysis** (fluid, K, P, Na control), **Type 2 Diabetes** (glycemic load, fiber pacing), **Cardiometabolic / DASH** (heart lipids, arterial tone), **Low-FODMAP / Gut Recovery**, and **Hepatic Care**.

HYPER-UMAMI PAN-SEARED HALIBUT WITH CHARRED LEMONGRASS & GINGER-YUZU GLAZE

HYPER-01 • ESRD HIGH-BV PROTEIN • CARDIOMETABOLIC DASH • LOW-FODMAP DIGESTIVE SAFE

Serves 2 • 18 min prep & cook

Zero Added Phosphates • Fluid-Minimal Glaze (15 ml)



INGREDIENTS

- 10 oz wild Pacific halibut fillet (skinless, 2 portions)
- 1 tbsp extra virgin olive oil (or cold-pressed avocado oil)
- 1 stalk fresh lemongrass (tender white bulb, bruised & paper-thin sliced)
- 1 tbsp fresh grated ginger root (gastric-stimulating gingerols)
- 1.5 tbsp 100% pure unsweetened yuzu juice (or Meyer lemon juice)
- 1 tbsp unseasoned rice vinegar (zero sodium, zero additives)
- 1 tsp pure grade-A maple syrup or monkfruit syrup
- 1/4 tsp freshly cracked white peppercorns
- 2 tbsp thinly snipped fresh cilantro fronds or chives

CULINARY TECHNIQUE

1. **Surface Desiccation:** Pat halibut fillets ruthlessly dry with lint-free kitchen towels. Surface moisture is the enemy of the Maillard reaction. Dust lightly with fresh cracked white pepper.
2. **Hard Pan Sear:** Heat olive oil in a heavy stainless steel or seasoned cast-iron skillet over medium-high heat until shimmering (approx. 380°F / 193°C). Lay halibut in away from you. Sear undisturbed for 4 minutes until a deep golden, savory caramelized crust releases naturally from the pan.
3. **Flip & Aromatic Bloom:** Flip fillets carefully. Scatter the bruised lemongrass and grated ginger directly into the sizzling oil around the fish. Let them perfume the oil for 60 seconds without burning.
4. **Flash Glaze Reduction:** Pour yuzu juice, rice vinegar, and maple syrup into the pan around the fillets. The liquid will instantly boil and emulsify with the fragrant infused oil, creating a glossy, concentrated micro-glaze. Spoon boiling glaze over the crust for 45 seconds until fish hits 145°F (63°C) internal temp.
5. **Plate & Garnish:** Transfer fillets to warm plates. Drizzle the 1 tablespoon of pan glaze over each portion and crown with fresh cilantro or chives. Serve immediately.

Na: 75 mg | K: 290 mg | P: 165 mg (Organic) | Protein: 28 g | Fluid: 15 ml

CONDITION MATRIX: ESRD HIGH-BV DIALYSIS RECOVERY • HEART HEALTH • LOW-FODMAP • DIABETIC GLYCEMIC SAFE

SHATTER-CRUST SMOKED PAPRIKA CHICKEN PAILLARDS WITH POMEGRANATE-SUMAC SLAW

HYPER-02 • ACOUSTIC CRUNCH TECHNOLOGY • TRIGLYCERIDE-SEALED FLAVOR • LOW POTASSIUM LEACHED CABBAGE

Serves 4 • 25 min

Auditory Crunch • Zero Salt Added



INGREDIENTS

- 1.25 lbs boneless, skinless chicken breast, pounded to 1/3-inch even thickness
- 2 tbsp pure organic cornstarch or tapioca starch
- 1 large egg white (beaten until loose and frothy)
- 1.5 tsp sweet Spanish smoked paprika (pimentón dulce)
- 1/2 tsp ground coriander seed & 1/4 tsp ground toasted cumin
- 1/2 tsp garlic-infused olive oil (FODMAP-free garlic essence)
- 2 tbsp high-heat avocado oil or olive oil for frying
- 3 cups green cabbage, shredded fine and rinsed in cold water for 10 min (potassium leaching)
- 1 tbsp raw apple cider vinegar & 1 tsp wild sumac powder
- 1 tbsp 100% pure pomegranate molasses (unsweetened, no preservatives)

CULINARY TECHNIQUE

1. **Double-Starch Glass Barrier:** Pound chicken breast paillards between parchment sheets for uniform 1/3-inch thickness. Dust paillards in starch, shake off excess, dip through frothy egg white, then dust a second micro-layer with smoked paprika, coriander, and cumin. This forms an acoustic glass-shatter skin upon searing.
2. **Blister Sear:** Heat oil in a 12-inch heavy skillet until faint wisps of vapor rise. Lay paillards in flat. Sear for 3.5 minutes on medium-high without disturbing until deeply mahogany-golden. Flip and sear for 2.5 minutes until internal thermometer reads 165°F (74°C). Rest on an elevated wire grid.
3. **Leached Crunch Slaw:** After soaking shredded cabbage in cool water for 10 minutes to reduce soluble potassium, drain thoroughly in a salad spinner. Toss dry cabbage with apple cider vinegar, pomegranate molasses, garlic-infused olive oil, and sumac.
4. **Plate:** Plate crisp hot paillard directly atop the crisp, ruby-flecked sumac cabbage slaw. The interplay of tactile crunch and sour-sweet pomegranate acids awakens the palate without a single grain of table salt.

Na: 95 mg | K: 310 mg | P: 180 mg (Organic) | Protein: 32 g | Fluid: 10 ml

CONDITION MATRIX: ESRD POST-DIALYSIS RECOVERY • DASH HYPERTENSION SAFE • LOW GLYCEMIC • CELIAC / GLUTEN-FREE

GOLDEN TURMERIC & CUMIN LEACHED CAULIFLOWER “RISOTTO” WITH TOASTED PUMPKIN SEED CRUNCH

HYPER-03 • GLYCEMIC-NEUTRAL COMFORT • ANTI-INFLAMMATORY CURCUMIN • RENAL POTASSIUM-MANAGED

Serves 4 • 20 min

6g Net Carbs • Zero Phosphate Cheese Alternative



INGREDIENTS

- 4 cups fresh cauliflower florets, grated into rice-sized grains
- 1.5 tbsp extra virgin olive oil
- 1 tsp ground golden turmeric root (bloomed in hot fat)
- 1/2 tsp whole cumin seeds (toasted in skillet until fragrant)
- 1/4 cup green spring onion tops (green parts only for Low-FODMAP safety)
- 2 tbsp nutritional yeast flakes (fortified-free, rich vegan umami savory depth)
- 2 tbsp raw hulled pumpkin seeds (pepitas), dry-toasted golden
- 1 tbsp fresh lime juice
- 1/4 cup homemade zero-sodium vegetable reduction (leached celery, leek greens, bay leaf)
- 1/4 tsp freshly cracked black pepper (piperine activates curcumin absorption by 2000%)

CULINARY TECHNIQUE

1. **Leaching Step:** Soak riced cauliflower in a large bowl of warm water for 15 minutes. Drain thoroughly through a cheesecloth or fine mesh sieve, pressing out excess moisture. This extracts soluble potassium while leaving the cellulose crunch intact.
2. **Curcumin Fat Bloom:** Warm olive oil in a wide sauté pan over medium heat. Add whole cumin seeds until they sputter and release essential oils (30 seconds). Stir in golden turmeric and black pepper, blooming the fat-soluble curcuminoids into the warm oil.
3. **Flash Risotto Sauté:** Add the leached cauliflower rice and spring onion tops. Toss vigorously to coat every grain in shimmering golden turmeric oil. Sauté for 4 minutes until cauliflower is al dente—tender with a distinct toothsome bite.
4. **Umami Emulsion:** Pour in the 1/4 cup zero-sodium vegetable reduction and stir continuously as it evaporates into a savory glaze. Remove from heat; fold in nutritional yeast flakes and lime juice. The nutritional yeast hydrates with the emulsion, creating a luxurious parmesan-like richness without dairy phosphorus.
5. **Texture Crown:** Divide into warm shallow bowls. Crown with toasted crunchy pumpkin seeds for auditory crunch and heart-healthy magnesium.

Na: 60 mg **K: 240 mg** **P: 95 mg** **Protein: 7 g** **Fluid: 20 ml**

CONDITION MATRIX: DIABETIC KETO / ULTRA-LOW CARB • ESRD STAGE 3-5 SAFE • HEPATIC ANTI-INFLAMMATORY • VEGAN UMAMI

DIALYSIS-DAY BLACK GARLIC & SWEET HERB TURKEY MEATBALLS WITH CHARRED PEPPER REDUCTION

HYPER-04 • HIGH-BIOLOGICAL VALUE PROTEIN • S-ALLYL CYSTEINE UMAMI • TOMATO-FREE ACID CLING

Serves 4 (16 meatballs) • 30 min

Dialysis Recovery Super-Protein • Low Acid Comfort



INGREDIENTS

- 1 lb 93% lean ground turkey breast (fresh, unseasoned, no broth injections)
- 3 cloves fermented black garlic, mashed into a smooth savory paste
- 1 large egg white (clean protein binder)
- 2 tbsp rolled oats (ground into flour) or panko breadcrumbs
- 1 tbsp finely minced fresh sage leaves & 1 tsp fresh thyme
- 1/4 tsp coarse ground black pepper & pinch of ground nutmeg
- 1 tbsp olive oil (for browning)
- 1 cup homemade charred red bell pepper puree (low-potassium substitute for canned tomato paste)
- 1 tbsp aged balsamic vinegar & 1 tsp pure maple syrup

CULINARY TECHNIQUE

1. **Black Garlic Alchemy:** In a mixing bowl, blend mashed black garlic paste with egg white, oat flour, fresh sage, thyme, black pepper, and nutmeg until smooth. Fermented black garlic contains concentrated S-allyl cysteine and natural molasses-balsamic glutamates that provide shocking depth of flavor with zero salt.
2. **Gentle Fold & Portion:** Add ground turkey to the seasoned binder. Gently fold with hands until combined—do not overwork or meatballs will toughen. Shape into 16 uniform spheres (about 1.5 inches each).
3. **Golden Skillet Sear:** Heat olive oil in a heavy oven-safe skillet over medium-high heat. Sear meatballs for 2 minutes on each side until deeply browned on exterior surfaces.
4. **The Red Pepper Glaze Simmer:** Pour charred red pepper puree and balsamic vinegar directly into the skillet around the meatballs. Lower heat to medium-low, cover, and simmer for 8 to 10 minutes until meatballs reach 165°F (74°C) and the pepper puree reduces to a thick, clingy glaze.
5. **Serve:** Spoon glazed meatballs onto warm plates with pan reduction. Serve over measured steamed jasmine rice or zucchini ribbons.

Na: 110 mg | K: 270 mg | P: 175 mg | Protein: 27 g | Fluid: 20 ml

CONDITION MATRIX: ESRD HIGH-PROTEIN • CARDIOMETABOLIC LOW-SODIUM • LOW ACID / GERD SAFE • DIABETIC FRIENDLY

CRISP BUCKWHEAT & HERITAGE CORN TOSTADITAS WITH FLAKED WILD SALMON & LIME-ZEST CABBAGE

HYPER-05 • CARDIOPROTECTIVE OMEGA-3 • STARCH SHATTER BASE • LIVER-PROTECTIVE SULFORAPHANE

Serves 4 (8 tostaditas) • 25 min

DHA & EPA Omega-3 • Zero Salt Chips



INGREDIENTS

- 8 small (4.5-inch) whole yellow or blue corn tortillas (100% nixtamalized, 0mg sodium, no preservatives)
- 10 oz wild Alaskan sockeye or coho salmon fillet
- 1.5 tbsp cold-pressed avocado oil (divided)
- 2 cups finely shredded savoy cabbage (soaked 10 min in ice water, drained dry)
- 2 tbsp fresh lime juice & 1 tsp grated lime zest
- 1/4 cup finely chopped fresh cilantro
- 1/2 tsp Mexican oregano, crushed between palms
- 1/4 tsp mild ancho chili powder

CULINARY TECHNIQUE

1. **Oven Shatter Tostadas:** Preheat oven to 400°F (204°C). Lightly brush both sides of salt-free corn tortillas with 1 tsp avocado oil. Bake directly on oven racks for 8 to 10 minutes until rigid, golden, and shatter-crisp. Cool completely on wire rack.
2. **Gentle Salmon Poach-Roast:** Rub wild salmon fillet with 1 tsp avocado oil, crushed Mexican oregano, and ancho chili powder. Bake on parchment-lined sheet at 400°F for 10-12 minutes until salmon flakes effortlessly with a fork (145°F / 63°C). Flake gently into tender bite-sized morsels.
3. **Lime-Zest Slaw Dressing:** Whisk remaining 1 tbsp avocado oil, fresh lime juice, grated lime zest, and cilantro. Toss with crisp leached savoy cabbage. The lime zest delivers concentrated aromatic limonene that electrifies the palate.
4. **Assembly:** Crown each crisp tostadita with dressed cabbage ribbons, warm flaked wild salmon, and a final dust of fragrant oregano. Eat immediately by hand for sensory tactile crunch.

Na: 80 mg | K: 280 mg | P: 170 mg | Protein: 22 g | Fluid: 0 ml

CONDITION MATRIX: CARDIOMETABOLIC ARTERIAL PROTECTION • ESRD DIALYSIS • ANTI-INFLAMMATORY • GLUTEN-FREE

VELVETY VANILLA BEAN & CARDAMOM RICE-MILK PANNA COTTA WITH WILD BLUEBERRY-THYME COULIS

HYPER-06 • PHOSPHATE-ZERO LUXURY DESSERT • DAIRY-FREE / HYPOALLERGENIC • POLYPHENOL RICH

Serves 4 • 15 min prep + 3 hr chill

Organic Clean Dessert • Fluid-Budgeted (50 ml/serving)



INGREDIENTS

- 1.5 cups unfortified organic rice milk (pure water & rice, 0mg added calcium phosphate)
- 1/2 cup organic coconut culinary cream (canned, full fat, unsweetened)
- 1 pod whole Madagascar vanilla bean (split and caviar scraped)
- 3 whole green cardamom pods (crushed lightly)
- 2 tbsp pure maple syrup or raw agave nectar
- 1 packet (2.5 tsp) unflavored organic beef gelatin or agar-agar flakes
- 3 tbsp cold filtered water (for blooming gelatin)
- 1 cup fresh or frozen wild blueberries (naturally low in potassium, rich in anthocyanins)
- 2 sprigs fresh culinary thyme
- 1 tsp fresh lemon juice

CULINARY TECHNIQUE

1. **Bloom the Gelatin:** Sprinkle gelatin powder evenly over 3 tbsp cold water in a small ramekin. Let sit undisturbed for 5 minutes until sponge-like and fully hydrated.
2. **Cardamom & Vanilla Infusion:** In a small heavy saucepan, combine rice milk, coconut cream, scraped vanilla bean caviar + empty pod, crushed cardamom pods, and maple syrup. Warm gently over medium-low heat until steaming (approx 160°F / 71°C)—do not boil. Remove from heat, cover, and let steep 10 minutes.
3. **Dissolve & Strain:** Remove vanilla pod and cardamom husks. Whisk bloomed gelatin into the warm cream infusion until completely dissolved with zero lumps. Pour mixture through a fine tea strainer into 4 small dessert glasses or porcelain ramekins (about 1/2 cup each). Chill in refrigerator for at least 3 hours until gently set with an irresistible gelatin wobble.
4. **Wild Blueberry-Thyme Coulis:** Simmer blueberries, fresh thyme sprigs, lemon juice, and 1 tsp maple syrup in a tiny saucepan over low heat for 5 minutes until berries burst and release deep purple anthocyanins. Discard thyme sprig. Puree or leave chunky; chill completely.
5. **Serve:** Spoon glossy purple coulis over the cold ivory panna cotta just before presentation. Garnish with a tiny fresh thyme leaf.

Na: 25 mg | K: 85 mg | P: 35 mg | Protein: 5 g | Fluid: 50 ml

CONDITION MATRIX: ESRD LOW-PHOS/LOW-K • DIABETIC SUGAR-CONTROLLED • DAIRY-FREE / LACTOSE-SAFE • RENAL TREAT

APPENDIX A

From-Scratch Sausage Grinding

“Extracted from Chapter 3: Chicken & Protein Mains”

Chicken Sausage Spaghetti, Chicken Tinga, Chicken Cacciatore, Steak Tacos w/ Pico

Plus: From-Scratch Sausage Grinding & Sauce Canning

"The KitchenAid grinder attachment earns its keep tonight."

APPENDIX B

Equipment Notes

KitchenAid Stand Mixer

The backbone of the CKD kitchen. The meat grinder attachment (KSMMGA) handles sausage, the pasta roller (KSMPRA) handles fresh noodles, and the standard paddle/whisk/dough hook cover everything else. Buy the Pro 600 or Artisan — either works. Refurbished units from KitchenAid's site are half price.

Cast Iron

Lodge 12-inch skillet and a 5-quart Dutch oven cover 90% of stovetop/oven work. Season with flaxseed oil. Never use soap (mild dish soap is fine, ignore the purists). Pre-heat low and slow — cast iron has hot spots until it equilibrates. A chain-mail scrubber is the best $12 you'll spend.

Instant Pot / Pressure Cooker

A pressure cooker can handle batch beans, stock, stews, and rice. Some preparation methods can lower potassium in potatoes, but the amount removed varies and pressure-cooker timing is not a universal renal instruction. Ask your renal dietitian which method and portion fit your plan.

Digital Scale

A basic kitchen scale can make recipe portions more consistent. It does not set a renal serving target; use the protein portion your renal dietitian or care team has individualized for you.

Blender

Vitamix or Ninja Professional. The Ninja BL770 is the best value — 1500W, 72oz pitcher, single-serve cups. Every smoothie recipe in this book assumes a high-speed blender.

Thermometers

Instant-read (ThermoWorks Thermapen) for meat. Candy/deep-fry thermometer for sauces and oil. Oven thermometer to verify your oven isn't lying (most are off by 25°F).

Sheet Pans & Silicone Mats

Half-sheet pans (18×13) with Silpat mats. Two pans minimum. Nordic Ware is the standard. Line with parchment for easy cleanup, silicone mats for cookies and candy work.

Dehydrator

For fruit leathers, jerky, and herb drying. The Nesco Snackmaster is entry-level. Excalibur 9-tray if you're serious. Used for several recipes in the snacks and apothecary chapters.

APPENDIX C · NEW IN V10

The Anti-Cookbook

Survival, status, fermentation, and foods that fight back

This is the cabinet of culinary curiosities: dishes that can look punishing, smell confrontational, demand specialized work, or make a modern reader ask, "How did anybody survive this?" The honest answer is usually more interesting than "people had bad taste." They preserved perishable food, used the whole animal, stretched scarce grain, cooked with limited fuel, displayed wealth, followed religious practice, or learned to love flavors that their community understood.

The likely YouTube channel behind the garum-and-haggis memory is Tasting History with Max Miller, which has episodes on ancient Roman garum and medieval haggis.

> **Read before attempting.** This appendix is historical commentary, not an experimental food-safety manual. Do not improvise fish fermentation, low-salt preservation, offal processing, wild-mushroom identification, blood dishes, raw seafood, pressure canning, or room-temperature storage from an ancient recipe. Use a modern tested process and qualified instruction.

Dish or problem child	Why it existed	Why it alarms modern cooks	What to learn
Garum and liquamen	Fermented fish sauces supplied concentrated savor and seasoning across Roman foodways; related fish-sauce traditions exist far beyond Rome.	Fish, salt, heat, time, and smell create an obvious safety and sensory challenge.	Fermentation is controlled ecology, not "leave fish outside and hope." Learn history; buy a professionally made sauce or use a tested modern process.
Haggis and other offal puddings	Whole-animal cookery turns quick-spoiling organs, grain, fat, and seasoning into a substantial communal dish.	Organ handling, casing, texture, and modern slaughter-chain rules can be unfamiliar.	"Use the whole animal" was practical and ethical long before it was fashionable. Modern sourcing and cooking temperatures still govern.
Hardtack and ship biscuit	Low-moisture bread traveled and stored when soft bread could not.	It is famously hard, monotonous, and historically vulnerable to pests.	Preservation often trades pleasure for stability. Soaking and cooking transformed it into other meals.
Pease porridge and perpetual pots	Legumes and repeated reheating offered economical, fuel-efficient food for households and institutions.	The idea of an endlessly renewed pot collides with modern time-and-temperature expectations.	Study the fuel economy, but use current cooling, storage, and reheating rules.
Medieval blancmange	Historic versions could combine pale meat, rice, almond, sugar, and spice as a refined status dish, unlike the modern dessert bearing the name.	Sweet-savory boundaries and texture expectations changed.	Dish names migrate. Never assume the current meaning existed in the past.
Aspic and savory jelly	Gelatin showed extraction skill, preserved presentation, and later became a display medium.	Cold suspended meat and vegetables can read as uncanny.	Texture carries status and fashion; technical difficulty can become prestige.
Blood sausages and puddings	They prevent a nutrient-rich, perishable part of slaughter from being wasted and appear in many distinct regional traditions.	Blood handling and sourcing require strict modern controls, and the idea itself triggers a taboo for many people.	A taboo is culturally specific. Respect both the tradition and the eater who declines.
Suet puddings	Dense grain, fat, and steam created portable or celebratory food in kitchens built around boiling and hearth cooking.	The richness, long steaming, and animal fat feel heavy to many modern eaters.	Cooking technology shapes cuisine. A steamed pudding belongs to a different fuel and equipment world.
Lamprey, eel, and elaborate fish pies	River systems, fasting calendars, elite display, and preservation made fish central in places where modern diners may not expect it.	Species preparation, bones, appearance, and availability make reconstruction hard.	Historical "fish" categories followed ecology, religion, and law as much as flavor.
Mock apple pie and substitution cooking	When fruit was scarce or expensive, cooks recreated a familiar flavor structure with pantry goods, acid, sugar, and spice.	The ingredient swap can sound like a prank.	Imitation recipes reveal price, access, marketing, and ingenuity.
Wartime ration cakes	Cooks built celebratory food around missing eggs, butter, sugar, or fuel.	Texture and ingredient combinations can seem compromised.	Celebration persists under constraint; "authentic" can mean adaptation under pressure.
Banquet spectacle dishes	Elites used rare ingredients, engineered forms, and surprise presentations to display labor and power.	Waste, animal presentation, expense, and theatrical excess can overwhelm appetite.	Some historical food was media: the point was to be seen and discussed.

The five survival logics

1. **Preserve it:** dry, salt, ferment, smoke, pickle, confit, or turn it into something less hospitable to spoilage.
2. **Use all of it:** organs, blood, bones, stale bread, drippings, peels, and grain remnants became food because waste could be hunger.
3. **Stretch it:** grain, legumes, roots, broth, and thickening made limited meat or fat feed more people.
4. **Move it:** soldiers, sailors, pilgrims, workers, and migrants needed food that survived distance.
5. **Show it:** difficulty, rarity, color, spice, sugar, molded form, and many courses displayed power and belonging.

Anti-recipe card

Dish and date	
Historical source	
What problem did it solve?	
Who ate it, and on what evidence?	
Modern safety conflict	
Taste prediction	
Actual tasting note	
Would you make it again?	

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