

Sodium & Salt Reduction in CKD

Your most powerful daily choice for kidney protection — sodium targets, hidden salt in Filipino foods, and practical cooking swaps.

Tailored for Filipino patients.

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< 2,300 mg

Daily Sodium Target

1 tsp

Salt Equivalent

80%

Filipinos Exceed Limit

↓ BP

Main Benefit in CKD

1 Why Sodium Harms CKD Kidneys

In healthy kidneys, excess sodium is filtered and excreted in urine with no lasting effect. In CKD, this filtering capacity is reduced — so sodium accumulates in the bloodstream, pulling water with it. The result is a chain reaction: **fluid retention** → **higher blood volume** → **elevated blood pressure** → **increased shear stress on glomeruli** → **faster kidney damage**.

Sodium also directly stimulates the renin-angiotensin-aldosterone system (RAAS) — the very pathway that ACE inhibitors and ARBs block. A high-sodium diet partially overrides the benefit of these kidney-protecting medications. Reducing sodium amplifies their effect without changing your dose.

In proteinuric CKD, excess sodium increases urinary protein leakage — proteinuria is itself a driver of progression. Studies show sodium restriction can reduce proteinuria by 20–30% independently of blood pressure changes. In dialysis patients, high interdialytic sodium intake causes excessive fluid gain between sessions, raising the risk of pulmonary edema and cardiovascular death.

Blood Pressure

Sodium raises BP by expanding blood volume. Every 1 g reduction in daily sodium lowers systolic BP by ~2–3 mmHg in CKD patients — more than in the general population.

Fluid Retention

1 g of sodium retains ~150 mL of water. A 3 g sodium excess = ~450 mL extra fluid — ankles swell, lungs become congested, dialysis sessions become harder.

Proteinuria Reduction

Low-sodium diet reduces urinary protein loss by 20–30% in proteinuric CKD — slowing the scarring that drives kidney function decline.

2 Daily Sodium Targets by CKD Stage

CKD Stage	eGFR	Daily Sodium Limit	Rationale
Stage 1–2	> 60 mL/min	< 2,300 mg	Blood pressure control; preserve residual kidney function
Stage 3	30–59 mL/min	< 2,000 mg	Proteinuria reduction; slow progression of kidney scarring
Stage 4–5 (pre-dialysis)	15–29 mL/min	1,500–2,000 mg	Fluid and BP control; reduce urgency for dialysis start
Hemodialysis	on HD	1,500–2,000 mg	Minimize interdialytic fluid gain between sessions
Peritoneal Dialysis	on PD	1,500–2,300 mg	Ultrafiltration preservation; avoid high-strength glucose bags

1 Teaspoon of Table Salt = 2,300 mg Sodium — Your Entire Daily Limit

Most Filipino condiments deliver this in just 2–3 tablespoons: **patis (fish sauce)** has 1,190 mg per tablespoon; **toyo (soy sauce)** has 920 mg; **bagoong (shrimp paste)** has 1,600 mg. Many Filipinos consume 4,000–6,000 mg of sodium daily — 2–3× the CKD limit — primarily through condiments and processed foods used during cooking.

For educational use only. This guide does not replace individualized dietary advice from your physician or dietitian.

References: KDIGO 2024 CKD Guidelines · WHO Sodium Guidelines 2023 · Philippine NKT1 Dietary Recommendations · Saran et al., CJASN 2017.

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DAILY SODIUM TARGETS — WHY THEY MATTER IN CKD

YOUR DAILY SODIUM BUDGET — 2,000 mg / DAY

1 WHAT 2000 mg LOOKS LIKE.

- ≈ 1 teaspoon of table salt.
- ≈ 2 tablespoons patis (fish sauce).
- ≈ 3 tablespoons toyo (soy sauce).

Use these to flavor the whole day — not per meal.

2 LABEL READING.

- 5% Daily Value = LOW.
- 20% Daily Value = HIGH.
- Look for sodium content, not just salt.
- Salt-free ≠ sodium-free.



≧ FILLS UP FAST! ≧



TOTAL BUDGET 2,000 mg PER DAY

ONE DAY. ONE BUDGET. STAY WITHIN 2,000 mg.

3 LOW-SODIUM WINS.

- Fresh vegetables
- Fresh meat
- Eggs
- Plain rice / bread
- Calamansi, garlic, onion, ginger — season without salt.

4 HIDDEN SODIUM TRAPS.

- Instant noodles 1,800 mg
- Canned sardines 400 mg per can
- Fast food burger 1,000–1,500 mg

One serving often exceeds your limit.



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 Fig. 1 — Daily sodium targets by CKD stage and the physiological reasons why sodium restriction matters: fluid retention, hypertension, proteinuria, progression, and cardiovascular risk. As kidney function declines, the ability to excrete excess sodium diminishes — making dietary restriction increasingly important at every stage. Page 2

Food	Serving	Sodium	Notes for CKD Patients
HIGH SODIUM — AVOID OR SEVERELY LIMIT (> 500 MG PER SERVING)			
Patis (fish sauce)	1 tbsp (15 mL)	1,190 mg	Most used Filipino condiment — most dangerous source in CKD
Bagoong (shrimp paste)	1 tbsp	1,600 mg	Extreme — avoid completely in CKD; also very high phosphorus
Instant mami / pancit canton	1 pack	1,800–2,200 mg	Entire day's limit in one meal — never eat in CKD
Chicken / beef bouillon cube (Magic Sarap)	1 cube	950 mg	Hidden in most Filipino home cooking — major underestimated source
Toyo (soy sauce)	1 tbsp	920 mg	Switch to low-sodium soy sauce (Kikkoman Less Sodium: ~575 mg/tbsp)
Dried fish — tuyo, danggit, dilis	1 piece / handful	600–1,000 mg	Extremely high — avoid in CKD; fresh fish is always the better choice
Spam / luncheon meat	½ can (85 g)	790 mg	Also very high in phosphorus additives — double threat in CKD
Hotdog / longganisa	1 piece (60 g)	500–700 mg	Processed meat — also high in phosphorus additives and saturated fat
Lechon / crispy pata	100 g	700–900 mg	Also high in potassium and phosphorus; avoid on feast days especially
MODERATE — USE CAREFULLY (100–500 MG PER SERVING)			
Oyster sauce	1 tbsp	490 mg	Use sparingly; reduce other sodium sources on same meal
Canned sardines (undrained)	½ can (55 g)	380 mg	Rinse canned sardines 3× under water to reduce sodium by ~200 mg
Cheese — Eden, quick-melt (1 slice)	1 slice (20 g)	290 mg	Also high in phosphorus — limit in CKD 3–5
Instant oatmeal (flavored packet)	1 pack	250 mg	Use plain unflavored oats — 0 mg sodium and much more kidney-friendly
Ketchup (banana ketchup)	1 tbsp	190 mg	Also high in sugar; use in moderation
White bread / pandesal	1 piece	160 mg	Hidden sodium — adds up quickly when eating 3–4 pieces at breakfast
LOW SODIUM — SAFE CHOICES (< 100 MG PER SERVING)			
Fresh bangus / tilapia (raw)	100 g	60–80 mg	Excellent protein source — cook without added salt or patis
Fresh chicken (raw, no marinade)	100 g	75 mg	Avoid pre-marinated commercial chicken (often ~400–600 mg sodium)
Fresh eggs	1 large	70 mg	Good low-sodium protein; cook without added salt
Rice (cooked, plain)	1 cup	0 mg	Sodium-free staple — do not cook rice with salt
All fresh vegetables	1 cup	5–30 mg	Naturally very low sodium — cook without salt, season with calamansi
Kamote, gabi, cassava	1 serving (100 g)	10–30 mg	Naturally low sodium; boil without salt; check potassium in CKD 4–5
Sukang paombong (native vinegar)	1 tbsp	0 mg	Excellent safe flavor substitute — use generously in dipping and cooking
Calamansi	1 piece	0 mg	Best natural flavor enhancer in Filipino cooking — zero sodium
Garlic, onion, ginger (fresh)	1 tsp	0–2 mg	Use generously as salt-free flavor base — the CKD cook's best friends

Sources: FNRI Philippine Food Composition Tables 2023 · USDA FoodData Central · Philippine FDA Nutrition Label Database 2024. All values are approximates per standard Philippine serving size.

FILIPINO FOODS — SODIUM CONTENT MAP



HIGH-SODIUM

FILIPINO FOODS — KNOW YOUR RISKS

<p>1</p> <p>INSTANT NOODLES (Lucky Me/Pancit). 1,500–2,000mg per pack. Often the entire day's budget in one meal.</p>	<p>2</p> <p>BAGOONG / PATIS. 400–600mg per tablespoon. These make your food taste great but quietly exceed your limit.</p>	<p>3</p> <p>CANNED SARDINES (Ligo). 400–500mg per small can. Add fresh tomato and cook without added salt instead.</p>
<p>4</p> <p>SINIGANG MIX (powdered). 800–1,200mg per sachet. Use real sampaloc and calamansi instead.</p>	<p>5</p> <p>TOCINO / LONGGANISA. 600–900mg per serving. Salt-cured meats — swap for fresh chicken or fish.</p>	<p>6</p> <p>SOY SAUCE (toyo). 900mg per tablespoon. Use small amounts + calamansi to reduce both sodium and acidity.</p>



Replace one high-sodium food per week — you will not miss the salt, but **your kidneys will thank you.**

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Fig. 2 — Filipino foods ranked by sodium content per standard serving, color-coded by CKD safety. Red = avoid, yellow = limit carefully, green = safe choices. Patis, bagoong, and instant noodles are the biggest sodium threats in the Filipino diet. Often used together in a single meal, pushing sodium intake to 3x the daily CKD limit. Fresh fish, eggs, rice, and vegetables are naturally very low in sodium. williamriveromd.com Page 4

Sodium-Saving Cooking Swaps

Instead of →	Use This	Sodium Saved
Patis (1 tbsp · 1,190 mg)	Calamansi + garlic + black pepper	~1,190 mg
Toyo / soy sauce (1 tbsp · 920 mg)	Low-sodium soy sauce, ½ tbsp (Kikkoman)	~630 mg
Magic Sarap / chicken cube (1 cube · 950 mg)	Homemade ginger-garlic-onion broth base	~900 mg
Instant mami / pancit canton (1 pack · 2,000 mg)	Home-cooked bihon with fresh ingredients, no cube	~1,600 mg
Bagoong (1 tbsp · 1,600 mg)	Tiny sautéed shrimp with garlic + calamansi	~1,400 mg
Table salt (1 tsp · 2,300 mg)	Tanglad (lemongrass), dahon ng laurel, pandan, herbs	~2,300 mg
Canned sardines undrained (380 mg)	Rinse canned sardines 3x under cold water	~200 mg
Processed cheese / Eden (290 mg/slice)	Avocado (in moderation) or fresh coconut cream	~250 mg
Oyster sauce (1 tbsp · 490 mg)	Diluted low-sodium soy sauce + a drop of sesame oil	~350 mg

Hidden Sodium Sources

The Sneaky Sources Most CKD Patients Never Suspect

Instant coffee (Kopiko 3-in-1): 120 mg per sachet — drinking 3 cups = 360 mg before food. | Pandesal: 160 mg each — 4 pieces for breakfast = 640 mg. | Commercial kakanin (puto, suman, bibingka): 100–300 mg per piece from baking powder and salt. | Powdered juice drinks (Tang, Zesto): 30–80 mg per glass. | Restaurant meals: Jollibee palabok ~2,100 mg · McDonald's burger ~800 mg · carinderia nilaga (commercial broth base) ~1,200 mg. | Bread / tasty: 190 mg per slice — a baon sandwich = 380 mg before fillings.

Eating Out — Sodium Survival Guide

Jollibee / Fast Food

- **Order:** plain rice + grilled chicken (no sauce) + side salad (dressing on side)
- **Avoid:** palabok, spaghetti, gravy, burgers, fries (all > 800 mg)
- **Ask for:** sauce served separately; no salt on fries
- **Drink:** water or plain iced tea — NOT softdrinks (some have sodium)

Carinderia / Turo-Turo

- **Order:** plain rice + fried fish (not marinated) + pinakbet (without bagoong if possible)
- **Avoid:** adobo (very high soy sauce), kare-kare with bagoong, sinigang (ask for less patis)
- **Ask for:** no patis in your dish; calamansi instead
- **Best choice:** tinola (ginger broth, low sodium if no cube used)






Home Cooking Tips

- **Cook:** Use garlic, ginger, onion, calamansi, and vinegar as primary flavor builders
- **Replace:** every recipe calling for 1 cube = use fresh aromatics + tiny pinch of low-sodium soy
- **Taste last:** season at the very end — you use far less when added at the end
- **Remove:** salt shaker from the dining table permanently

SMART COOKING SWAPS — KEEPING FILIPINO FOOD FLAVORFUL

LOW-SODIUM COOKING — SMART SWAPS FOR THE FILIPINO KITCHEN

FLAVOR WITHOUT SALT

-  Calamansi + garlic + onion + ginger = full flavor base.
-  Use vinegar (sukà) to add brightness without sodium.
-  Toast and dry-fry spices to intensify flavor.
-  Marinate in citrus and herbs instead of soy sauce.
-  Cook rice without salt — add a pandan leaf instead.

INGREDIENT SWAPS

Patis (1 tbsp, 600mg)	→	Calamansi juice + herbs (0mg)
Salt + MSG	→	Garlic powder + lemon zest
Canned tomatoes	→	Fresh tomatoes
Instant bouillon cube	→	Homemade broth (unsalted)
Soy sauce	→	Reduced-sodium toyo (use half)
Bagoong	→	Skip entirely — use anchovy-free sampaloc broth

 Taste evolves — after 2–4 weeks, salty foods will taste too salty. **Your palate adjusts.**

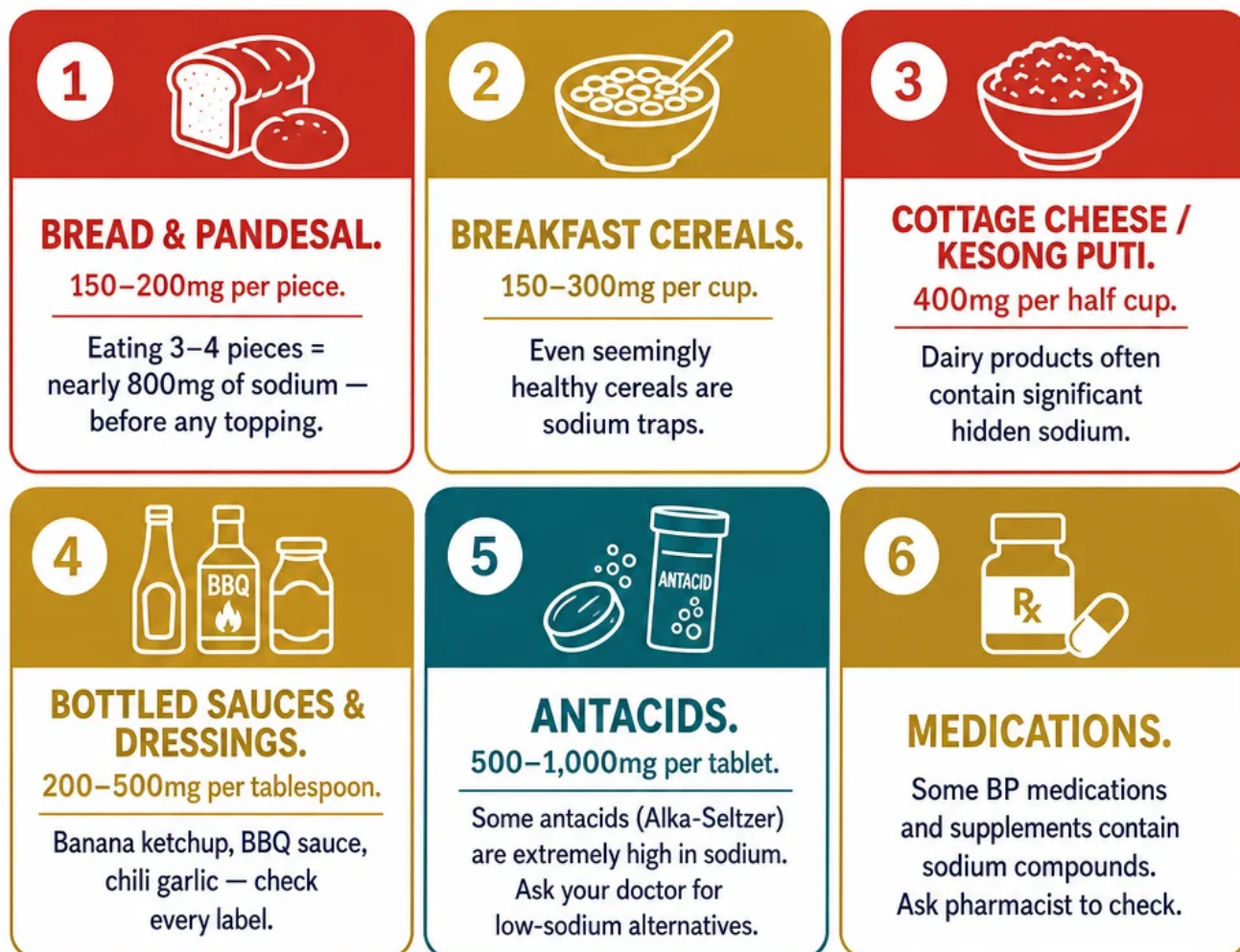


Fig. 3 — Practical cooking swaps that preserve Filipino food flavor while dramatically reducing sodium. Calamansi, garlic, ginger, sukang paombong (native vinegar), bawang putih (garlic), and fresh herbs are your best friends. The goal is not a bland diet — it is a flavorful diet built on aromatics rather than salt. Filipino cuisine has an incredibly rich aromatic tradition; sodium is a crutch, not a requirement. williamriveromd.com Page 6

HIDDEN SODIUM SOURCES — THE ONES PATIENTS MISS



HIDDEN SODIUM — FOODS THAT DON'T TASTE SALTY



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Fig. 4 — Hidden sodium sources in the Filipino diet that patients rarely suspect — instant coffee sachets, pandesal, commercial kakanin (puto, suman), powdered rice drinks, and commercially used as cooking bases rather than table condiments. Reading labels for "sodium" (not just "salt") is essential. Sodium is added to bread, instant drinks, and even kakanin as a preservative and flavor enhancer, making it invisible to patients who think they are "not adding salt."

7-Day Sodium Reduction Plan — One Change per Day

Day	Goal	Action
1	Remove salt shaker from table	Replace with calamansi halves + freshly ground black pepper at every meal. Taste food before reaching for any seasoning.
2	No patis today	Flavor all food with fresh garlic, ginger, calamansi, and sukang paombong. Notice how much flavor is already in properly cooked food.
3	Switch to low-sodium soy sauce	Buy Kikkoman Less Sodium or similar. Use only ½ tablespoon maximum per dish. Keep the regular toyo out of reach.
4	Cook sabaw / soup without bouillon cube	Use a ginger-garlic-onion broth base: simmer aromatics in water 20 minutes for full flavor. No Magic Sarap, no Knorr cube today.
5	Check every label for sodium	Read every packaged food: target < 200 mg per serving. Calculate how many servings you actually eat — often 2–3× the label serving.
6	No instant noodles — cook bihon instead	Home-cook bihon with fresh vegetables, a little chicken, garlic-onion base, and low-sodium soy. Saves ~1,600 mg of sodium.
7	Family sodium audit	Review the week with your family: which change was hardest? Which tasted surprisingly good? Plan which swaps to keep permanently.

Reading Nutrition Labels — 3 Things to Check

① Sodium per serving

Always check sodium per 100 g for honest comparison between products. A "low sodium" label means < 120 mg per 100 g. "Reduced sodium" means 25% less than the original product — which may still be very high.

② What counts as one serving?

Philippine food labels often list a "serving size" that is smaller than what people actually eat. A pack of instant noodles may say "2 servings" — but most Filipinos eat the whole pack. Always multiply the sodium value by actual servings consumed.

③ Look for hidden names

Sodium hides under many names: monosodium glutamate (MSG), sodium bicarbonate (baking soda), sodium benzoate (preservative), disodium phosphate. All count toward your daily limit. If sodium appears in the first 5 ingredients, the food is high in sodium.

Critical Safety Warnings

Salt Substitutes (KCl) Are Dangerous in CKD — Do NOT Use Without Nephrologist Approval

Products like NuSalt, NoSalt, and local potassium chloride (KCl) salt substitutes replace sodium with potassium. In CKD patients — especially stages 4–5 and dialysis — impaired potassium excretion means this extra potassium accumulates rapidly in the blood, potentially causing life-threatening **hyperkalemia (high potassium)**: irregular heartbeat, cardiac arrest, and death. **Do NOT use any salt substitute without explicit approval from your nephrologist.** This warning applies even if you see them sold in health food stores or recommended for "heart health."

MSG (Vetsin / Ajinomoto) Is NOT a Safe Sodium Substitute in CKD

MSG contains approximately 12% sodium by weight — compare to table salt at 39% sodium. While MSG allows you to use less salt for the same flavor intensity, 1 teaspoon of MSG still contributes approximately **492 mg sodium**. It is not a free flavor enhancer in CKD. Some recipes use both salt AND MSG together, dramatically exceeding sodium limits. Use fresh aromatics (garlic, ginger, calamansi, tanglad) instead — these have zero sodium and superior flavor complexity.