

NUTRITION · FLUID & ELECTROLYTE · NCLEX 2026



High Sodium vs. Low Sodium Foods

Dietary management for HF, HTN, CKD, cirrhosis, SIADH, and Addison's — what to limit, what to eat, and how to read a label.

1 Definition & Why It Matters

- ▶ **Sodium (Na^+)** is the major **extracellular cation** — it controls fluid balance, blood pressure, nerve conduction, and acid-base balance.
- ▶ **Normal serum sodium:** 135–145 mEq/L. **Recommended daily intake:** < 2,300 mg/day (general); < **1,500–2,000 mg/day** for HF, HTN, CKD, and cirrhosis.
- ▶ **Why it matters for NCLEX:** Diet teaching is a core test point. Excess sodium → fluid retention → ↑BP, edema, pulmonary congestion. Too little → hyponatremia → seizures, ↓LOC.

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Pathophysiology — How Sodium Drives Fluid

"Where Sodium Goes, Water Follows"



Restricting Na⁺ pulls water out of the vasculature → ↓preload → ↓BP → ↓workload on heart & kidneys

3 High Sodium vs. Low Sodium Foods — At a Glance

HIGH SODIUM LIMIT / AVOID



Processed / Cured Meats

Bacon, ham, sausage, hot dogs, deli meat, salami, pepperoni



Canned Foods

Soups, broths, vegetables, ravioli, beans (unless "no salt added")



Pickled / Fermented

Pickles, olives, sauerkraut, kimchi, relish



Salty Snacks

Chips, pretzels, salted nuts, popcorn, crackers



Fast Food & Frozen Meals

Pizza, burgers, fries, TV dinners, frozen entrées



Cheese

American, processed, parmesan, *cottage cheese*, blue cheese



Condiments & Sauces

Soy sauce, ketchup, BBQ, mustard, salad dressings, gravy



Smoked / Cured Fish

Anchovies, sardines, smoked salmon, lox, canned tuna

LOW SODIUM ENCOURAGE



Fresh Fruits

Apples, bananas, berries, oranges, melon, grapes



Fresh Vegetables

Leafy greens, broccoli, cauliflower, peppers, carrots



Fresh / Unprocessed Meats

Chicken, turkey, fresh fish, lean beef, pork (unsalted)



Whole Grains (Unsalted)

Oats, brown rice, quinoa, plain pasta, unsalted bread



Eggs & Plain Dairy

Eggs, plain milk, plain yogurt (in moderation)



Unsalted Nuts & Seeds

Almonds, walnuts, sunflower seeds (raw / unsalted)



Dried Beans & Legumes

Lentils, chickpeas, black beans (cooked from dry)



Herbs & Spices (Salt Substitutes)

Garlic, onion powder, lemon, basil, oregano, pepper



Commercial Baked Goods

Biscuits, muffins, pancake mix, breads, bagels



Surprising High-Na

Buttermilk, tomato/V8 juice, bouillon, MSG-rich foods



Healthy Fats

Olive oil, avocado, unsalted butter



Hydration

Plain water, herbal tea (no added salt)



RED FLAG — Salt Substitutes: Most "salt substitutes" contain **POTASSIUM CHLORIDE (KCI)**. They are **CONTRAINDICATED** in clients with CKD, those on ACE inhibitors / ARBs / spironolactone (Aldactone), or anyone at risk for hyperkalemia. Always check the order before recommending.

4 Priority Nursing — When to Restrict vs. Replace Sodium

⊘ RESTRICT Sodium (Low-Na Diet)

- ▶ **Heart Failure** — prevents fluid overload & pulmonary edema
- ▶ **Hypertension** — DASH diet, ↓BP
- ▶ **CKD / ESRD** — kidneys can't excrete Na⁺
- ▶ **Cirrhosis with ascites** — minimize 3rd spacing
- ▶ **SIADH** — fluid & sodium restriction
- ▶ **Cushing's syndrome** — Na⁺ retention
- ▶ **Corticosteroid therapy** — Na⁺ & water retention

✅ REPLACE / INCREASE Sodium

- ▶ **Addison's disease** — adrenal insufficiency, Na⁺ wasting
- ▶ **Hyponatremia** (Na⁺ < 135) — esp. dilutional
- ▶ **Cystic fibrosis** — high sweat sodium loss
- ▶ **Excessive sweating / heat illness**
- ▶ **Severe vomiting / diarrhea / NG suction**
- ▶ **Diuretic-induced hyponatremia**
- ▶ **Diabetic ketoacidosis (DKA) recovery**

Nursing Actions (ABC + Safety Priority)

- ▶ **ASSESS:** Daily weights (best indicator of fluid status — **1 kg = 1 L fluid**), I&O, lung sounds, edema, BP, serum Na⁺ & K⁺.
- ▶ **MONITOR:** For pulmonary edema (crackles, dyspnea, frothy pink sputum) and signs of hypo/hypernatremia.
- ▶ **EDUCATE:** Reading food labels, cooking from fresh, herb/spice substitutes, restaurant survival tips.
- ▶ **ADMINISTER:** Diuretics as ordered (loop / thiazide / K-sparing) — monitor electrolytes closely.
- ▶ **COLLABORATE:** Refer to dietitian for individualized teaching plan.

5 Pharmacology Connections

Drug / Class	Sodium Implication	Key Nursing Note
Loop diuretics (Furosemide / Lasix)	Excrete Na^+ , K^+ , Cl^- → risk of hyponatremia & hypokalemia	Monitor K^+ ; teach K^+ -rich foods (bananas, oranges)
Thiazide diuretics (HCTZ)	Excrete Na^+ & K^+ → hyponatremia, hypokalemia	Same K^+ teaching as loops
K-sparing (Spironolactone / Aldactone)	Excretes Na^+ , retains K^+ → risk of hyperkalemia	AVOID salt substitutes (KCl); take with meals
ACE inhibitors (-prils) / ARBs (-sartans)	Retain K^+ → hyperkalemia risk	Avoid salt substitutes; monitor K^+ & creatinine
Lithium	↓ Sodium intake → ↑ Lithium toxicity	Maintain steady Na^+ intake; never restrict abruptly
Corticosteroids (Prednisone)	Cause Na^+ & water retention → edema, ↑BP	Low-Na diet; monitor weight, glucose, K^+
3% Hypertonic Saline	Treats severe symptomatic hyponatremia	ICU only; correct slowly to prevent osmotic demyelination
Tolvaptan / Conivaptan	Vasopressin antagonists — treat SIADH hyponatremia	Monitor Na^+ closely — risk of overcorrection

6 NCLEX Test Traps ⚠️

Trap #1 — "Healthy" foods that are actually high sodium

Cottage cheese, buttermilk, V8/tomato juice, canned tuna (water-packed), and deli turkey LOOK healthy but are sodium bombs. Don't be fooled by "lean" or "low-fat" labels.

Trap #2 — Salt substitutes ≠ safe for everyone

Salt substitutes contain

potassium chloride

. NEVER recommend for clients on ACE inhibitors, ARBs, spironolactone, or with CKD → hyperkalemia risk.

Trap #3 — Frozen vegetables — read the label

Plain frozen vegetables = LOW sodium ✅. Frozen vegetables *with sauce, butter, or seasoning* = HIGH sodium ❌.

Trap #4 — Lithium & sodium

A client on Lithium who suddenly restricts sodium will develop

Lithium toxicity

(Li⁺ and Na⁺ compete for reabsorption in the kidneys). Teach *consistent* sodium intake — not low.

Trap #5 — Canned vs. fresh vs. "no salt added"

Canned = high. "Reduced sodium" = still moderate. "No salt added" / "Low sodium" = the safest choice. Rinsing canned vegetables can cut sodium by ~40%.

Trap #6 — Bread is the #1 sodium source in the US diet

Not pretzels —

bread & rolls

are the top dietary sodium source because Americans eat so much. Watch portion size.

Trap #7 — Daily weights, not I&O, are the BEST indicator of fluid status

1 kg gain = 1 L of fluid retained. A 2-lb gain overnight in a HF client = call the provider.

7 Patient & Family Education

How to Read a Nutrition Label for Sodium

- ▶ **Low sodium** = ≤ 140 mg per serving
- ▶ **Very low sodium** = ≤ 35 mg per serving
- ▶ **Sodium-free** = < 5 mg per serving
- ▶ **Reduced sodium** = 25% less than the original (still may be HIGH)
- ▶ **% Daily Value:** 5% or less = low; 20% or more = high
- ▶ **Watch for hidden words:** "sodium," "soda," "Na," MSG, baking soda/powder, brine, broth, cured

Practical Teaching Points

- ▶ **Cook fresh:** Fresh and frozen (plain) foods have far less sodium than canned or processed.
- ▶ **Flavor without salt:** Use lemon juice, garlic, onion, herbs (basil, oregano, rosemary), pepper, vinegar, and citrus zest.
- ▶ **Take the salt shaker off the table.** Don't add salt during cooking once accustomed — taste buds adjust in 2–4 weeks.
- ▶ **Restaurant survival:** Order sauces "on the side," request "no added salt," avoid soups, deli, and Asian/Mexican fast food (high MSG/soy).
- ▶ **Rinse canned foods** (beans, vegetables, tuna) under running water to reduce sodium by ~30–40%.
- ▶ **Daily weights:** Same scale, same time (AM after voiding), same clothing. Report > 2 lb in 24 hr or 5 lb in 1 week.
- ▶ **Check with HCP before** using salt substitutes or OTC antacids/laxatives (many contain sodium).

8 Memory Boosters & Mnemonics

The "6 C's" of HIGH SODIUM Foods



- ▶ Canned foods (soups, vegetables, beans)
- ▶ Cured / processed meats (bacon, ham, deli, hot dogs)
- ▶ Cottage cheese (and hard cheeses)
- ▶ Convenience / fast / frozen meals
- ▶ Condiments (soy sauce, ketchup, dressings, gravy)
- ▶ Chips & salty snacks (pretzels, popcorn, crackers)

"FRESH is BEST" — Low Sodium Memory

Fruits · Raw vegetables · Eggs · Simple grains (oats, rice) · Herbs & spices

If it grew, it's true. *If it came in a box, can, or wrapper — read the label.*

"SALT" — Conditions Requiring LOW Sodium

SIADH · Ascites (cirrhosis) · Liver / kidney failure · Ticker (heart failure / HTN)

Pattern Recognition: "Where Sodium Goes, Water Follows"

↑ Na⁺ intake → ↑ water retention → ↑ blood volume → ↑ BP & edema → ↑ cardiac workload. Restrict Na⁺ to reverse the cycle.

NCJMM Clinical Judgment Snapshot

1. Recognize Cues

Weight gain, edema, crackles, ↑BP, low-grade SOB, food diary showing canned/processed intake.

2. Analyze Cues

Connect ↑ Na⁺ intake to fluid overload picture in HF / CKD / cirrhosis client.

3. Prioritize Hypothesis

Fluid volume excess r/t excessive sodium intake is the highest priority diagnosis.

4. Generate Solutions

Sodium & fluid restriction, daily weights, diuretics, dietitian consult, label-reading teaching.

5. Take Action

Teach the 6 C's to avoid; review label cutoffs (≤140 mg = low); demonstrate salt-free seasoning.

6. Evaluate Outcomes

Stable weight, ↓edema, BP at goal, serum Na⁺ 135–145, client verbalizes label reading.

Diane's NGN NCLEX 2026 Study Series · High Sodium vs. Low Sodium Foods

Always individualize teaching to the client's prescribed diet, comorbidities, and current medications.