NGN NCLEX 2026 NUTRITION THERAPY HIGH-YIELD THERAPEUTIC DIETS

High-Calorie vs Low-Calorie Foods

A clinical-judgment guide to therapeutic nutrition — when to push calories, when to pull back, and how to coach the patient to do it safely. Covers oncology, burns, COPD, CF, diabetes, cardiac, and obesity care.

1

DEFINITION / OVERVIEW

Why Caloric Therapy Matters

Calorie needs are **not one-size-fits-all**. A nurse adjusts intake based on metabolic state, treatment goals, and disease process. Wrong calories = poor wound healing, longer LOS, and worse outcomes.

🔥

HIGH-Calorie Diet

Used for hypermetabolic states, malnutrition, weight loss prevention, and tissue repair.

Goal: 35–45 kcal/kg/day

⚖️

Adult Baseline

Healthy adult requires ~2,000 kcal/day; adjusted by age, sex, activity, and condition.

Avg: 25–30 kcal/kg/day

🌿

LOW-Calorie Diet

Used for weight reduction, T2DM, HTN, CAD, metabolic syndrome, and hyperlipidemia.

Deficit: ↓500 kcal/day

2

PATHOPHYSIOLOGY

The Caloric Imbalance Cascade

UNDER-Nutrition (Caloric Deficit in Sick Patients)

Hypermetabolic illness → ↑ Caloric demand → Catabolism of muscle & fat → Cachexia →

Poor healing & ↑ infection risk

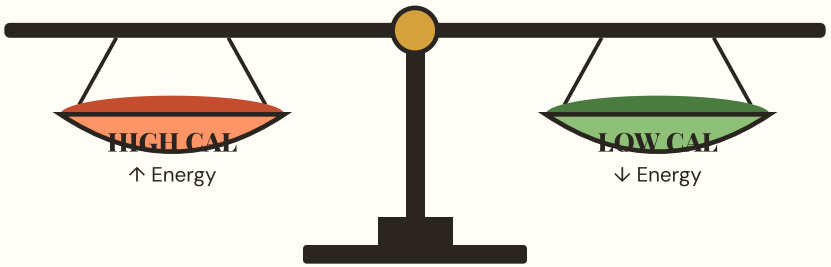
OVER-Nutrition (Chronic Caloric Excess)

Caloric surplus → Adipose storage → Insulin resistance → T2DM & metabolic syndrome →

CAD, NAFLD, stroke

CALORIC BALANCE

Match the diet to the disease



3

CLINICAL CONTEXTS

Who Needs What — Match the Patient

🔥 NEEDS HIGH-CALORIE DIET

- ▲ **Cancer / chemo / radiation** — anorexia, mucositis, hypermetabolism
- ▲ **Severe burns** — up to 5,000 kcal/day; Curreri formula
- ▲ **Cystic fibrosis** — pancreatic insufficiency & malabsorption
- ▲ **COPD** — ↑ work of breathing burns 10× more energy
- ▲ **HIV/AIDS & cachexia** — wasting syndrome
- ▲ **Hyperthyroidism** — runaway metabolism
- ▲ **Pre/post-op & wound healing** — protein + calorie demand
- ▲ **Pregnancy / lactation** — +300 to +500 kcal/day
- ▲ **Peds failure to thrive**, anorexia nervosa (refeeding cautiously)
- ▲ **Trauma, sepsis, ICU patients** — stress hypermetabolism

🌿 NEEDS LOW-CALORIE DIET

- ▼ **Obesity** (BMI ≥ 30) — primary intervention
- ▼ **Type 2 Diabetes** — weight loss improves insulin sensitivity
- ▼ **Hypertension** — paired with DASH diet
- ▼ **Coronary artery disease** — ↓ saturated fat, ↓ calories
- ▼ **Heart failure** — fluid & calorie balance
- ▼ **Hyperlipidemia** — combined with low-saturated-fat
- ▼ **Metabolic syndrome** — central obesity reduction
- ▼ **NAFLD** — weight loss reverses early disease
- ▼ **Sleep apnea (OSA)** — weight loss improves AHI
- ▼ **Sedentary lifestyle** + family hx of disease

FOOD SELECTION GUIDE

4 Pick the Right Plate

HIGH-CALORIE FOODS

CALORIE-DENSE + NUTRIENT-RICH

Healthy Fats & Oils

- Avocado
- Olive oil
- Coconut oil
- Butter
- Sunflower oil

Nuts, Seeds & Nut Butters

- Peanut butter
- Almonds
- Walnuts
- Cashews
- Pecans
- Trail mix
- Sunflower seeds

Full-Fat Dairy

- Whole milk
- Cheddar / Brie
- Cream / half-and-half
- Ice cream
- Whole-milk yogurt

Protein-Rich (Calorie-Dense)

LOW-CALORIE FOODS

HIGH-VOLUME + FILLING

Leafy Greens & Salads

- Spinach
- Kale
- Romaine
- Arugula
- Iceberg
- Swiss chard

Cruciferous & Vegetables

- Broccoli
- Cauliflower
- Brussels sprouts
- Cucumber
- Zucchini
- Bell peppers
- Tomato
- Mushrooms
- Carrots
- Celery

Fruits (Low Glycemic)

- Strawberries
- Blueberries
- Raspberries
- Watermelon
- Cantaloupe
- Orange
- Apple
- Peach

- Whole eggs
- Salmon
- Mackerel
- Beef
- Dark chicken
- Lentils & beans

Carbs & Starches

- Pasta
- Whole-grain bread
- Granola / oatmeal
- Potatoes
- Sweet potato
- Bananas
- Dried fruit
- Mango

Supplements & Snacks

- Boost / Ensure
- Dark chocolate
- Hummus
- Protein smoothie
- Bagel + cream cheese

Lean Proteins

- Egg whites
- Cod / tilapia
- Shrimp
- Skinless chicken breast
- Turkey breast
- Tofu

Low-Fat Dairy & Substitutes

- Skim milk
- Plain Greek yogurt (NF)
- Low-fat cottage cheese
- Almond milk (unsweet.)

Snacks & Beverages

- Air-popped popcorn
- Green/herbal tea
- Water
- Broth-based soup
- Pickles (low-sodium)

5

PRIORITY NURSING INTERVENTIONS

ABCs · Safety · NCLEX Prioritization

🔥 BOOST CALORIES (Hypermetabolic / Malnourished)

1. ASSESS Baseline weight, BMI, albumin, prealbumin, transferrin; calculate caloric goal.
2. IMPLEMENT **Small, frequent meals** (5–6/day) — better tolerated than 3 large meals.
3. IMPLEMENT Offer **high-calorie, high-protein** at every meal & snack.
4. IMPLEMENT Give oral supplements (Boost, Ensure) **BETWEEN** meals — not with them.
5. IMPLEMENT Limit liquids before/with meals — they cause early satiety.
6. SAFETY Position upright; check swallow; aspiration precautions for stroke/dysphagia.
7. MONITOR Daily weights (same time, same scale, same clothes), I&O, intake %.
8. REFER Registered dietitian for individualized plan & family teaching.
9. ESCALATE If oral fails → enteral (NG/PEG) → TPN per HCP order.

🌿 REDUCE CALORIES (Weight Loss / Cardiometabolic)

1. ASSESS BMI, waist circumference, food diary, readiness to change.
2. IMPLEMENT Calculate deficit: **↓500 kcal/day** = ~1 lb weight loss/week.
3. IMPLEMENT Half-plate vegetables, ¼ lean protein, ¼ whole grain.
4. IMPLEMENT Encourage **water before meals** to ↑ satiety.
5. EDUCATE Read nutrition labels — focus on serving size + added sugars.
6. SAFETY Avoid fad/crash diets — risk of electrolyte imbalance & gallstones.
7. MONITOR Weekly weights; trend BP, glucose, lipid panel.
8. PROMOTE Physical activity 150 min/week moderate-intensity.
9. REFER Dietitian + behavioral health for emotional/binge eating.

PHARMACOLOGY

6 Adjunct Medications

Drugs are second-line — diet, exercise, and patient education come first. Use these only when nutrition therapy alone fails.

APPETITE STIMULANTS (for cachexia / underweight)

Megestrol (Megace)

PROGESTIN · APPETITE STIMULANT

MOA: Stimulates appetite + ↑ weight in cancer/AIDS cachexia.
SE: ↑ Risk of **DVT/thromboembolism**, hyperglycemia, edema.
Nursing: Monitor for clots, blood glucose, fluid retention.

Mirtazapine (Remeron)

ANTIDEPRESSANT · OFF-LABEL

MOA: ↑ Norepinephrine + serotonin; sedation & appetite stim are side effects used therapeutically.
SE: Sedation, weight gain, dry mouth.
Nursing: Give at bedtime; fall precautions in elderly.

Dronabinol (Marinol)

CANNABINOID · SCHEDULE III

MOA: Synthetic THC — stimulates appetite, antiemetic.
Use: AIDS-related anorexia, chemo-induced N/V.
SE: Dizziness, euphoria, paranoia, tachycardia.

Oxandrolone

ANABOLIC STEROID

MOA: Promotes weight gain post-trauma/surgery, severe burns.
SE: Hepatotoxicity, virilization, ↑ LDL.
Nursing: Monitor LFTs, lipid panel.

WEIGHT-LOSS / ANTI-OBESITY DRUGS

Orlistat (Xenical / Alli)

LIPASE INHIBITOR

MOA: Blocks fat absorption in gut.
SE: **Oily/fatty stools**, flatulence, fecal urgency, fat-soluble **vitamin (A, D, E, K) deficiency**.

Semaglutide (Wegovy / Ozempic)

GLP-1 RECEPTOR AGONIST

MOA: Slows gastric emptying; ↑ satiety; ↓ glucagon.
SE: N/V, pancreatitis, gallstones, possible thyroid C-cell tumors (BBW).

Nursing: Take multivitamin 2 hr apart; low-fat diet to reduce GI effects.

Nursing: SubQ weekly; teach hypoglycemia signs if combined with insulin.

Liraglutide (Saxenda)

GLP-1 RECEPTOR AGONIST

MOA: Same as semaglutide; daily SubQ.
SE: N/V, pancreatitis, gallbladder disease.
Nursing: Avoid in personal/family hx of medullary thyroid CA or MEN-2.

Phentermine

SYMPATHOMIMETIC · SCHEDULE IV

MOA: Suppresses appetite via CNS stimulation.
SE: ↑ HR, ↑ BP, insomnia, dependence.
Nursing: Avoid in CAD, HTN, hyperthyroidism, MAOIs; short-term use only.

7

NCLEX TEST TRAPS

Where Students Lose Points

⚠ **"HEALTHY = LOW CALORIE"**

FALSE. **Avocado, nuts, salmon, olive oil** are healthy AND high-calorie. NCLEX expects you to choose them for cancer, CF, and burn patients.

⚠ **COPD PATIENT · 3 LARGE MEALS**

WRONG. COPD = **small, frequent meals**. Large meals push the diaphragm up & worsen dyspnea. Pick high-calorie + small portions.

⚠ **"LIMIT CALORIES" FOR BURN PATIENT**

DANGEROUS. Burns require **up to 5,000 kcal/day + high protein**. Restricting calories causes wound breakdown & infection.

⚠ **SUPPLEMENT WITH MEALS**

WRONG. Boost/Ensure given **BETWEEN meals** — taking with a meal fills the patient up & ↓ overall intake.

⚠ **"LOW FAT = LOW CALORIE"**

FALSE. Many low-fat products have **added sugar** to mask flavor — calories may be similar or higher.

⚠ **WEIGHT LOSS IN CHEMO PATIENT = "MONITOR"**

WRONG. Unintentional weight loss in cancer = **priority intervention**. Implement nutrition support, refer dietitian, stimulate appetite.

⚠ **MUCOSITIS · SERVE HOT, SPICY SOUP**

WRONG. For oral mucositis: **soft, bland, room-temp, non-acidic** foods. Cold/cool may also soothe (popsicles, smoothies).

⚠ **DIABETIC PATIENT LOSING WEIGHT = GIVE HIGH-CAL DIET**

CAUTIOUS. **Control glucose first.** Weight loss in T2DM may be from hyperglycemia/DKA — assess BG, A1C, ketones before adding calories.

⚠ **REFEEDING SYNDROME**

DANGER in severely malnourished patients. Reintroducing food too fast → **↓ phosphate, K+, Mg2+** → cardiac/respiratory failure. Start LOW, go SLOW, monitor labs.

⚠ **DYSPHAGIA · JUST GIVE SMALL BITES**

INSUFFICIENT. Need **thickened liquids, soft textures, chin-tuck, upright 30 min after**. Do swallow eval first.

8

PATIENT EDUCATION

Coach the Patient (and the Family)

GAINING / MAINTAINING WEIGHT

- ✓ Eat **every 2–3 hours**, even when not hungry.
- ✓ Add **cheese, butter, sour cream, gravies, oils** to existing dishes.
- ✓ Drink **whole milk, milkshakes, smoothies** instead of water with meals.
- ✓ Snack on **nuts, dried fruit, granola, peanut butter crackers**.
- ✓ Cook with **olive oil, butter, coconut oil** generously.
- ✓ Keep favorite, easy-to-eat foods **visible & accessible**.
- ✓ Use **oral supplements** as prescribed — between meals.
- ✓ If chemo nausea: cool/cold foods, ginger, dry crackers; avoid strong odors.
- ✓ Track weight weekly, same scale, same clothing, same time of day.
- ✓ Family role: **cook in bulk**, freeze portions, reheat easily.

LOSING WEIGHT (Sustainable)

- ✓ **Half plate veggies, ¼ protein, ¼ whole grain** (USDA MyPlate).
- ✓ Drink **8 glasses of water/day**; one before each meal.
- ✓ Limit **added sugars** (soda, juice, candy, sweetened coffee).
- ✓ **Read labels** — focus on serving size, calories, added sugars, sodium.
- ✓ Use **smaller plates** — visual portion control.
- ✓ Slow down: chew thoroughly, put fork down between bites.
- ✓ Plan meals; don't shop hungry; meal-prep on weekends.
- ✓ Aim for **1–2 lb/week** loss — slow loss = sustainable loss.
- ✓ Move: **150 min/week** moderate activity (walking counts).
- ✓ Watch for **liquid calories** — sweet tea, lattes, alcohol add up fast.

9

NCJMM · NEXT-GEN CLINICAL JUDGMENT

Six-Step Framework for Caloric Therapy

STEP 1

Recognize Cues

Weight trends, BMI, albumin/prealbumin, intake %, appetite, recent illness/surgery, mucositis, dysphagia, fluid status.

STEP 2

Analyze Cues

Is patient hypermetabolic (↑ need) or sedentary/overweight (↓ need)? Identify barriers: nausea, dentition, depression, finances.

STEP 3

Prioritize Hypotheses

#1 Aspiration risk > #2 Refeeding syndrome > #3 Caloric goal > #4 Specific deficiencies (B12, iron, vit D).

STEP 4

Generate Solutions

Choose route (PO, enteral, parenteral); set kcal/protein goals; schedule supplements between meals; refer dietitian.

STEP 5

Take Action

Implement small frequent meals or calorie restriction; aspiration precautions; daily weights; teach patient/family; titrate per response.

STEP 6

Evaluate Outcomes

Weight trending toward goal? Albumin/prealbumin improving? Wound healing? BG controlled? Adjust plan if not progressing.

10

MEMORY BOOSTERS

Mnemonics & Pattern Recognition

WHO NEEDS HIGH CAL

"BURN CFC"

Burns · **U**nderweight · **R**ecovery (post-op) · **N**eoplasm (cancer) · **C**achexia (HIV) · **F**ailure to thrive · **C**OPD & Cystic Fibrosis

HIGH-CAL FOOD GROUPS

"FAT FUEL"

Fats & oils · **A**vocados · **T**ubers (potatoes) · **F**ish (fatty) · **U**nderrated nuts · **E**ggs (whole) · **L**oaded grains

LOW-CAL FOODS

"GREEN PLATE"

Greens (leafy) · **R**oots (carrots, radishes) · **E**gg whites · **E**dible berries · **N**onfat dairy · **P**oached fish · **L**ean poultry · **A**ir-popped popcorn · **T**ea (unsweetened) · **E**verything cruciferous

CALORIE MATH

"3500"

1 lb of fat = 3,500 kcal. To lose 1 lb/week → cut **500 kcal/day**. To gain 1 lb/week → add **500 kcal/day**.

REFEEDING DANGER

"LOW PMK"

Refeeding syndrome → ↓ **P**hosphate · ↓ **M**agnesium · ↓ **K**+ → cardiac/respiratory failure. **Start LOW, go SLOW.**

COPD MEAL RULE

"PUCKER & PUFF"

Pursed-lip breathing + **5–6 small high-calorie meals/day**. Large meals push the diaphragm up & worsen dyspnea.

ORLISTAT WARNING

"ADEK"

HEALTHY PLATE

"½ ¼ ¼"

Blocks fat absorption → loses fat-soluble vitamins **A · D · E · K**. Give multivitamin **2 hours apart**.

Half plate = veggies/fruit · **Quarter** = lean protein · **Quarter** = whole grain. Plus 1 serving low-fat dairy on the side.

Diane's NGN NCLEX 2026 Study Series

High-Calorie vs Low-Calorie Foods · Nutrition Therapy · NCLEX 2026 Test Plan