

● NGN NCLEX · 2026 TEST PLAN / HIGH-YIELD REVIEW CARD / CARD № 17

Nutrition & *Tube Feedings*

Enteral & parenteral nutrition — placement, priority, and safety

System · Gastrointestinal / Nutrition

NG · OG · G-tube · J-tube · PEG

Priority · Airway + Placement Verification

NCJMM Integrated

01 Definition & Overview

WHAT & WHY

Nutrition support delivers calories, fluid, and nutrients to clients who cannot meet needs orally. **Enteral** routes (via GI tract) are preferred when the gut works — "if the gut works, use it." **Parenteral** (IV) nutrition is reserved for non-functioning GI tracts.

KEY TERMS AT A GLANCE

- **Gavage** — feeding a client through a tube
- **Lavage** — continuous irrigation of the stomach via NG
- **Decompression** — emptying stomach contents by suction
- **Enteral** — into the GI tract (NG, OG, G-tube, J-tube, PEG)
- **Parenteral (TPN)** — IV nutrition, bypasses GI tract

NG

NASOGASTRIC

OG

OROGASTRIC

G/PEG

GASTROSTOMY

J

JEJUNOSTOMY

Nose → stomach. **Short-term** use (< 4 weeks). Replace every **2–3 weeks**.

Short-term

Mouth → stomach. Used for neonates or clients with **facial trauma / skull fx**.

Short-term

Surgically placed into stomach through abdomen. **Long-term** feeding route.

Long-term

Into jejunum — used when **aspiration risk is high** or gastric emptying is impaired.

Long-term

02 Indications & Clinical Pathway

WHEN TO FEED & HOW

Decision flow when nutrition support is considered — the gut is always the first choice if functional.

STEP 01

Is the gut functional?

Assess bowel sounds, absorption, surgical status, and NPO orders.

STEP 02

Choose enteral route

Short-term → NG/OG · Long-term (> 4–6 wks) → G-tube, PEG, or J-tube.

STEP 03

Verify placement

X-ray confirms initial placement; pH + length check before every use.

STEP 04

Begin feeding

HOB 30–45°, continuous or bolus, with strict aspiration & residual monitoring.

Common Indications

- Dysphagia (stroke, neuromuscular disease)
- Post-op bowel rest / gastric decompression
- Severe anorexia, cachexia, cancer
- Gastric lavage (poisoning, hemorrhage)
- Unconscious or ventilated clients

Contraindications

- Severe facial/skull trauma — **NG contraindicated**
- Esophageal varices / strictures
- Intestinal obstruction (complete)
- GI bleeding (relative — lavage may be used)
- Severe coagulopathy (risk of trauma)

03 Complications: Signs & Symptoms

EARLY VS. LIFE-THREATENING

EARLY · MANAGEABLE

- **Nasal / skin irritation** at tube site
- **Dry oral mucosa** — client breathes through mouth
- **Mild nausea** or feelings of fullness
- **Abdominal distension** or cramping
- **Diarrhea** (formula too fast, concentrated, or cold)
- **Clogged tube** from residue or meds
- Gastric **residual 250–500 mL** — hold & reassess

RED FLAGS · PRIORITY

- **Coughing, choking, cyanosis** during insertion → *tube in airway*
- **Aspiration** — new crackles, ↓ SpO₂, fever, dyspnea
- **Tube displacement** — ↑ external length, gagging
- **Refeeding syndrome** — low K⁺, Mg²⁺, phosphate; arrhythmias
- **GI hemorrhage** — bright red or coffee-ground drainage
- **Perforation** — sudden pain, rigid abdomen, absent sounds
- **Hyperglycemia / dehydration** (especially with TPN or concentrated formula)

#1 PRIORITY CONCERN

Aspiration is the most life-threatening complication of tube feeding. Any client who coughs, becomes short of breath, or desats during/after a feeding requires **immediate stop of the feeding, elevation of HOB, and suction.** Placement must be re-verified before resuming.

04 Priority Nursing Interventions

ABCS · SAFETY · PRIORITIZATION

A·B·C Airway always wins. Placement verification and aspiration prevention are the top two NCLEX priorities for tube feedings.

01

Verify tube placement BEFORE every feeding, medication, or irrigation.

ABC

X-ray is the gold standard for initial placement. At bedside: measure external tube length, check gastric pH (≤ 5 is acidic = stomach), and assess aspirate color/appearance.

02

Elevate HOB 30–45° during and 30–60 minutes after feeding.

PRIORITY

Prevents aspiration. For continuous feeds, keep HOB elevated at all times. If HOB must be lowered, hold the feeding first.

03

Check gastric residual every 4–6 hours (continuous) or before each bolus.

SAFETY

Hold feeding if residual is > 500 mL (or per facility policy, often ≥ 250 mL). Return aspirated contents to avoid electrolyte loss unless contaminated.

04

Flush the tube with 30–60 mL warm water before & after every feeding and med.

SAFETY

Prevents clogging. Flush between each medication. Never mix meds together. Crush only appropriate forms — never crush enteric-coated or sustained-release.

05

Monitor insertion site & nares every 4–8 hours.

SAFETY

Check for skin breakdown, secretions, or tube migration. Secure tube to prevent traction. Provide oral hygiene every 2–4 hours (mouth breathing).

06

Monitor daily weight, I&O, glucose, electrolytes.

PRIORITY

Refeeding syndrome is a risk in malnourished clients — watch K^+ , Mg^{2+} , phosphate on days 1–4. Hyperglycemia may require sliding-scale insulin.

07

Administer feeding at room temperature, at prescribed rate.

SAFETY

Cold formula causes cramping & diarrhea. Never speed up a missed feeding. Change bag/tubing every 24 hours for open systems.

08

Stop feeding immediately if aspiration, displacement, or respiratory distress occurs.

PRIORITY

Elevate HOB further, suction, assess lung sounds & SpO_2 , notify provider, and re-verify placement before resuming.

VERIFY

Bedside Placement Check — Sequence

1

Measure

Confirm external length matches insertion mark.

2

Test pH

Gastric aspirate $pH \leq 5$ (acidic) = stomach.

3

Auscultate

Listen for gastric air bubble (least reliable —

never alone).

*X-ray remains the gold standard for **initial** placement confirmation before first use.*

05 Formulas & Medication Administration

WHAT GOES THROUGH THE TUBE

TYPE / DRUG	USE	KEY NURSING CONSIDERATIONS
Standard Polymeric Formula	<i>Intact proteins/carbs/fats for functioning GI tract</i>	Room temp; check expiration; 1 kcal/mL typical; hang time max 4–8 hrs open system.
Elemental Formula	<i>Pre-digested — for malabsorption or compromised gut</i>	High osmolality → risk of diarrhea; may need slower titration.
Disease-Specific	<i>Renal, hepatic, diabetic, pulmonary formulations</i>	Match to client comorbidity; verify with dietitian & provider.
Iced Tap Water	<i>Gastric lavage for hemorrhage — vasoconstriction</i>	Irrigate until return is clear. Monitor V/S & volume balance.
Activated Charcoal	<i>Gastric lavage for drug overdose (not caustics/petroleum)</i>	Via large-bore tube; HOB elevated; monitor airway closely.
Metoclopramide (Reglan)	<i>Prokinetic — promotes gastric emptying</i>	Given if high residuals; watch for EPS (tardive dyskinesia) with long-term use.
Insulin (sliding scale)	<i>Manages feeding-induced hyperglycemia</i>	Check glucose q4–6h; hold feeding → risk of hypoglycemia.

✓ Meds that CAN go through the tube

✗ NEVER crush / mix

Liquid formulations (preferred), crushed immediate-release tablets, opened capsules with water-soluble contents. Flush 15–30 mL **between** each med.

Enteric-coated (EC), **sustained/extended-release (SR, XR, CR)**, **sublingual**, or **buccal** meds. Never mix multiple meds together in the same syringe.

06 NCLEX Test Traps ⚠️

WHAT THEY ASK VS. WHAT STUDENTS PICK

TRAP 01 • PLACEMENT

"Listening for the bubble" is NOT enough

Air auscultation alone is the **least-reliable** method. The current standard is **pH check + length measurement**, with **X-ray for initial placement**.

TRAP 02 • FIRST ACTION

Client coughs during feeding → STOP FIRST

Students pick "notify provider" — but **the first action is always stop the feeding & protect the airway**. Notify after the client is safe.

TRAP 03 • RESIDUALS

Don't discard aspirated contents

Many students discard residual fluid. The correct action is to **return the residual** to prevent electrolyte and enzyme loss (unless contaminated).

TRAP 04 • POSITION

HOB lowered for bath? → Hold feeding

Feeds require **HOB 30–45°**. If the client must lie flat, **pause the feeding**; don't just continue.

TRAP 05 • MISSED FEED

Never "catch up" a missed feeding

Speeding up causes **cramping, diarrhea, hyperglycemia, dumping**. Resume at the **prescribed rate** only.

TRAP 06 • CRUSHING MEDS

EC/SR/XR = NEVER crush

Crushing destroys the delivery mechanism → toxic peak doses or GI damage. Call pharmacy for liquid form or alternate route.

TRAP 07 • FACIAL TRAUMA

NG is contraindicated with skull/facial fx

Risk of tube entering the cranium through the cribriform plate. Use the **orogastric (OG) route** instead.

TRAP 08 • REFEEDING

Malnourished client = watch phosphate

Refeeding syndrome shifts **K⁺, Mg²⁺, phosphate intracellularly**. Monitor electrolytes daily on days 1–4; advance feeds slowly.

07 Patient & Caregiver Education

HOME CARE & SAFETY

Positioning & Feeding

- Keep head of bed raised to at least 30–45° during feeding and for 30–60 min after.
- Never feed a client who is lying flat or sleepy — risk of aspiration.
- Feed at room temperature; never microwave formula.
- Resume at the prescribed rate after a missed feeding — do not double up.

Tube Care & Hygiene

- Wash hands before and after handling the tube.
- Flush with 30 mL warm water before and after every feeding and medication.
- Clean insertion site daily with soap and water; pat dry.
- Rotate tape position on nose to prevent pressure sores.
- Provide oral hygiene every 2–4 hours (mouth stays dry).

When to Call the Provider

- Coughing, choking, or trouble breathing during a feed.
- Tube comes out, slides out further, or looks different.
- Persistent nausea, vomiting, or abdominal pain.
- Fever, redness, drainage, or bleeding at insertion site.
- No stool for > 3 days, or severe diarrhea.

Medication Safety

- Give each medication separately — never mix in the same syringe.
- Flush tube between each medication.
- Do not crush enteric-coated or extended-release tablets.
- Check with pharmacy for liquid alternatives when available.
- Keep a current medication list with the tube care plan.

08 Memory Boosters

MNEMONICS & PATTERN RECOGNITION

**F • L • U • S •
H**

TUBE FEEDING SAFETY

M • A • P

PLACEMENT VERIFICATION

M Measure external length

3•3•3 Rule

EASY NUMBERS TO REMEMBER

- **30°** min. HOB elevation

- F** Flush 30 mL before & after
- L** Look at placement & residual
- U** Upright — HOB 30–45°
- S** Slow rate — never speed up
- H** Hygiene — oral & site care

- A** Aspirate & check pH (≤ 5)
- P** Provider X-ray for initial

- **30 mL** flush volume
- **30 min** upright after feed

S·T·O·P

IF ASPIRATION SUSPECTED

- S** Stop the feeding immediately
- T** Turn / elevate HOB & suction
- O** Oxygen & assess lung sounds
- P** Provider notified; verify placement

N·G

PATH REMINDER

- N** Naso → through the Nares
- G** Gastric → into the Gut (stomach)
- ✓ Measure: Nose → Ear → Xiphoid

REFEED

REFEEDING SYNDROME ELECTROLYTES

- K** Potassium — low
- M** Magnesium — low
- P** Phosphate — low (hallmark)
- ⚠ Arrhythmias & respiratory failure

09 NCJMM • Clinical Judgment Framework

HOW NCLEX THINKS ABOUT THIS TOPIC

Apply the Next Generation NCLEX Clinical Judgment Measurement Model to a client with tube feeding in progress:

PHASE 01

Recognize Cues

↑ HR, ↓ SpO₂, new crackles, cough, gagging, unexpected residual > 500 mL, ↑ external tube length, rigid abdomen, ↓ phosphate.

PHASE 02

Analyze / Prioritize

Airway & placement first. Differentiate aspiration from dislodgement from intolerance. Is this refeeding syndrome? Dumping? Obstruction?

PHASE 03

Generate Solutions & Act

Stop feed → elevate HOB → suction → O₂ → re-verify placement (pH, length, X-ray) → notify provider → draw electrolytes.

PHASE 04

Evaluate Outcomes

SpO₂ returns to baseline, lung sounds clear, tube placement confirmed, electrolytes WNL, client tolerates re-initiation of feed at ordered rate.

— *End of Card 17 · Nutrition & Tube Feedings* —

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