NGN NCLEX 2026 · GI SYSTEM

Nasogastric Tube (NG Tube)

High-Yield Clinical Infographic · Prioritization & Clinical Judgment

GI / Surgical | Safety Priority | Placement Verification | Enteral Nutrition

DEFINITION & OVERVIEW

- Tube inserted through the **nose → esophagus → stomach** (naso + gastric)
- Used for **decompression, gavage, lavage**, and medication administration
- Most common sizes: **12–18 Fr** for adults; suction max **25 mmHg**
- Long-term tubes replaced every **2–3 weeks**

KEY USES

- **Gastric decompression** — empties stomach via suction (post-op ileus, obstruction)
- **Gavage** — enteral nutrition/feeding
- **Lavage** — continuous irrigation; used for drug overdose, gastric hemorrhage
- **Drug overdose** — gastric lavage to pump stomach

INSERTION: STEP-BY-STEP PROCEDURE

1. **Measure length:** Tip of nose → back of ear → xiphoid process
2. **Position:** Sit upright, head slightly extended until tube reaches back of throat
3. **Advance:** Ask client to mildly flex neck, swallow to guide tube downward
4. **Verify placement** (see verification section below)
5. **Secure tube** and document external length marking
6. **Oral care:** Client breathes through mouth — frequent oral hygiene is priority

PLACEMENT VERIFICATION (PRIORITY!)

Step 1 — Measure external tube length (compare to baseline)

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Step 2 — Test pH of gastric aspirate (pH ≤ 5.5 = gastric)

GASTRIC HEMORRHAGE INTERVENTION

- Irrigate with **iced tap water** — cold promotes vasoconstriction to slow bleeding
- Continue irrigation **until solution returns clear**
- Max suction: **25 mmHg** (prevents mucosal damage)
- **Salem sump tubes** preferred for decompression — vented design prevents mucosal injury

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Step 3 — Auscultate gastric air bubble (least reliable alone)

! **Always verify placement** before every feeding, medication, or irrigation — not just upon insertion.

! **Red flag:** Coffee-ground or bright red returns indicate active bleeding — notify HCP immediately.

PRIORITY NURSING INTERVENTIONS

- **Verify placement** before each use (ABCs — aspiration risk)
- **Provide oral care** frequently — client breathes through mouth
- **Measure & document** external tube length each shift
- **Monitor** I&O, bowel sounds, abdominal distension
- **Assess nares** for skin breakdown; reposition tube PRN
- **Replace** long-term NG tubes every 2–3 weeks
- After removal: **oral hygiene first, then offer water**

SIGNS OF COMPLICATIONS

Misplacement / Aspiration Risk

- Coughing, gagging, cyanosis during insertion
- Respiratory distress or decreased O2 saturation
- Unable to speak (tube in trachea)

Skin / Comfort Issues

- Naris erosion or necrosis from pressure
- Dry oral mucosa, cracked lips (mouth breathing)
- Tube obstruction (flush with 30 mL water before/after meds)

NCLEX TEST TRAPS

✗ **Wrong:** Using auscultation of air bubble ALONE to confirm placement
Correct: pH testing is most reliable; auscultation is adjunct only

✗ **Wrong:** Starting a tube feeding before verifying placement
Correct: Verify EVERY time — movement can migrate the tube

✗ **Wrong:** Client can smoke in room as long as O2 is off
Correct: O2 device must be physically removed from room

✗ **Wrong:** Giving water immediately after NG removal
Correct: Oral hygiene first, then offer water

CLINICAL JUDGMENT (NCJMM)

Phase	Application
Recognize cues	Coughing, O2 drop, no gastric aspirate, resistance during insertion
Analyze cues	Tube may be in airway or esophagus — aspiration risk is life-threatening
Priority action	**Stop feeding/irrigation → verify placement → notify HCP if misplacement suspected**
Expected outcome	Tube in stomach confirmed by pH ≤ 5.5; no respiratory distress;

✗ **Wrong:** Measuring from nose to xiphoid only
Correct: Nose → back of ear → xiphoid (NEX measurement)

	decompression/feeding proceeds safely
Evaluate	Gastric output clear/reducing; bowel sounds returning; no signs of aspiration pneumonia

MEMORY BOOSTERS & MNEMONICS

NEX MEASUREMENT

N Nose tip
E Ear (back of)
X Xiphoid process

LAVAGE VS GAVAGE

LA **La**vage = wash out (irrigation) — think *laundry*
GA **Ga**vage = give food — think *gastrointestinal*

VERIFY PLACEMENT: "PPA"

P **P**hysical length (external marking)
P **p**H test of aspirate (≤ 5.5)
A **A**uscultate air bubble (last/adjunct)

QUICK ASSOCIATIONS

- **Iced water** = hemorrhage (cold = vasoconstriction)
- **25 mmHg** = max suction (above = mucosal damage)
- **Salem sump** = decompression choice (vented)
- **Mouth breather** = oral care priority
- **After removal:** Oral hygiene → then water