ER BASICS · ONE-PAGER

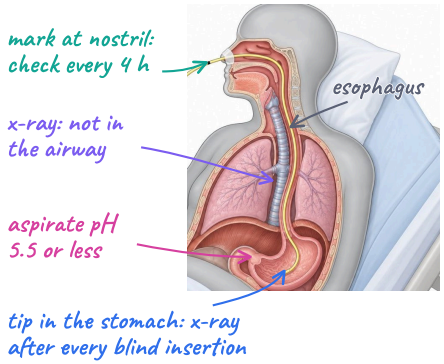
Nutrition, Tube Feeding and Medications by Tube

Tube placement checks, residuals, aspiration precautions, flushing, drugs through tubes, NG suction, PEG care, TPN basics and diets for GI symptoms for the NCLEX-RN and PN

28 sources + more detail

erbasics.com/sheets/nutrition-tube-feeding-ward.html
checked Oct 2026

ANATOMY NG tube placement checks



1 Is the tube in the stomach?

CHECK	WHEN	WHAT IT TELLS YOU
X-ray of the whole tube	After every blind insertion, before the first feeding or drug	The gold standard for a new blind insertion (ASPEN): confirms the tube is not in the airway
External mark or length	Recorded once the x-ray is read; checked every 4 h and before each use	A changed length means the tube moved: hold and report
Aspirate pH	Before use, if policy uses it	Gastric 5.5 or less in Open RN checklists (some policies use 5); acid blockers and formula raise it
Air bolus (whoosh) test	Never	Sounds the same with the tube in the esophagus or lung

⚠ SAFETY Coughing, breathlessness or a falling SpO2 during a feed, or a changed tube mark: stop the feeding and all drugs through the tube, keep the head up, notify the provider. A tube is reused only after placement is confirmed.

2 Running a feeding safely

- Head of bed 30–45° during feeds unless contraindicated; after a bolus, upright at least 30° for 1 h
- Bed must go flat: pause the continuous feed, restart when the head is back up
- Flush with water before and after each bolus and each drug, and on a schedule during continuous feeds (at least 30 mL every 4 h); count flushes as intake
- Bolus by gravity; continuous by pump at the ordered mL/h
- Hang time: open-system formula 8 h, closed system 24–48 h; never add drugs to the bag
- Trace every line from client to source; enteral (ENFit) connectors do not fit IV ports
- Regular oral care even while NPO; check the nares or stoma skin daily
- Daily weight, intake and output, glucose and electrolytes as ordered

3 Gastric residuals: NCLEX and ASPEN

ASPEN: do not stop feeding for a residual under 500 mL without other signs of intolerance; in the ICU, routine residual checks are not advised. Residuals predict aspiration poorly and checking them clogs tubes. Follow agency policy.

- If checked: 60 mL syringe; return the aspirate once placement is confirmed
- Intolerance: vomiting, distention, nausea, cramping, pain
- Residual plus distention or vomiting: hold the feed, keep the head up, assess, notify the provider

4 Medications through a tube

- Liquid form whenever possible; no liquid: crush immediate-release tablets finely
- Each drug alone, dissolved in 5–10 mL water; never mixed together or into formula
- Flush at least 15 mL water before, between drugs and after (less if fluid-restricted)
- Hold the feed for drugs that need an empty stomach or bind to formula, per pharmacy
- Suction tube: clamp 20–30 min after drugs

Check the ISMP Do Not Crush list or ask the pharmacist. Cannot be crushed: hold and ask the provider for another form.

NEVER CRUSH	WHY
Enteric-coated	The coating protects the stomach or the drug
Extended or sustained release (ER, SR, XL, CR, LA)	Whole dose released at once; can be fatal (extended-release opioids)
Sublingual or buccal	Made to absorb through the mouth lining
Hazardous or irritant drugs	Staff exposure; mucosal irritation (follow hazardous-drug policy)

5 Problems and first actions

PROBLEM	THINK	NURSE DOES
Diarrhea	Sorbitol in liquid drugs, laxatives, antibiotics, C. difficile, fast or bolus feeds	Review drugs, formula and rate first; keep feeding; skin care; report
Pump alarm, clog	Kink, thick formula, crushed pills, residual checks	Check kinks; warm water, gentle push-pull; enzyme declogger per protocol. No cola, juice or forced fluid
Vomiting, distention	Intolerance, tube moved, ileus	Hold, check the mark and abdomen, notify
PEG out, under about 4 weeks	Immature tract: leak into the abdomen	Reinsert nothing; dry dressing; hold feeds and drugs; notify now
G-tube out, mature tract	The opening starts to close	Cover the site, secure the tube, notify; a new tube is placed right away

6 NG suction and PEG site care

- Low intermittent suction as ordered (start 40–60 mm Hg, not above 80)
- Salem sump: blue vent open, above the stomach; never clamp it or irrigate through it
- Record drainage amount, color, odor, consistency; suction off to listen to bowel sounds
- Nausea or distention, or drainage stops: check kinks, mark and suction; irrigate (often 30 mL saline) only as ordered
- PEG site: clean 1–3 times a day with mild soap and water or saline, dry well; no gauze under the disc
- Report leakage, spreading redness, worse pain, bleeding, formula in the mouth

7 TPN at the bedside

- Central line (PICC or CVC) for solutions over 900 mOsm/L; a dedicated lumen used for nothing else
- Glucose every 4–6 h at first, per protocol; target under 180 mg/dL; only regular insulin goes in the bag
- Never stop it abruptly: sudden loss of concentrated dextrose causes hypoglycemia. Bag late or interrupted: check glucose, call the provider, and give a dextrose bridge only as ordered or per policy
- Do not hang a bag that leaks, has changed color, has particles, or shows separated oil
- Tubing every 24 h, strict asepsis; fever or a red, painful site: notify, expect cultures
- Daily weight, I&O, electrolytes, Mg and phos; liver tests weekly; triglycerides with lipids

8 Diets for GI symptoms

PROBLEM	TEACH
Dumping syndrome (after gastric surgery)	Six small meals; more protein, fat and fiber, few simple sugars; fluids 30 min after meals, not with them; lie down 30 min after eating
GERD, hiatal hernia	Small meals; nothing for 3 h before lying down; head of bed up 4–6 in (MedlinePlus) to 6–8 in (NIDDK), on blocks or a wedge; lose weight, stop smoking; limit alcohol, caffeine, chocolate, mint, fatty, spicy and acidic foods; loose waistbands; bend at the knees
Mucositis	Soft, bland, cool or room-temperature food; no citrus, spice, crunchy foods or alcohol (drinks or mouthwash); saline or baking-soda rinses often; soft brush
Nausea	Small frequent meals; bland starches, cold foods; sip fluids; ginger; avoid strong smells and greasy food; upright 30 min after eating
Chemotherapy diarrhea	Small low-fiber meals, plenty of fluids, salty and potassium foods; no dairy, caffeine, alcohol, fatty food or juice; report blood, fever, dizziness
Dysphagia	Upright, ordered texture and thickness only; cough or wet voice: stop and report (levels on the Therapeutic Diets page)

9 Infant feeding cue: pyloric stenosis

- Usually 3–6 weeks old: projectile, nonbilious vomiting soon after feeds; hungry again right away
- Olive-shaped mass in the upper abdomen, visible waves across it; dehydration, weight loss
- Low chloride and potassium with metabolic alkalosis; fluids and electrolytes first, then pyloromyotomy
- After surgery: small, frequent feeds within hours to a day. Green (bilious) vomiting is not this: report at once

10 LPN/VN scope

EXAM TIP The 2026 PN plan lets the LPN/VN insert, maintain and remove NG tubes, give feedings and drugs by tube and maintain central lines. The LPN collects data, reinforces teaching, waits for the x-ray reading before first use, and reports intolerance or aspiration signs after stopping the feed. Hanging TPN is limited in some states (Ohio: not by LPNs).

For education and exam preparation only. Not medical advice; follow current guidelines and your institution's protocols. ER Basics is an independent study aid not affiliated with any certifying body.