NGN NCLEX 2026 · PEDIATRICS / GASTROINTESTINAL

Pediatric *GERD*

Teaching & nursing care for gastroesophageal reflux disease across infancy, childhood, and adolescence — feeding, positioning, pharmacology, and family education aligned to the NCJMM six-step clinical judgment framework.

HIGH-YIELD | FEEDING & NUTRITION | POSITIONING SAFETY | H2 BLOCKERS · PPIS | FAMILY EDUCATION | NCJMM ALIGNED

§ SOURCE TRANSPARENCY

This topic was not present in the uploaded personal notes. Content has been compiled from standard NCLEX references including **Saunders Comprehensive Review for the NCLEX-RN (2026)**, **ATI Nursing Care of Children**, **Lippincott Pediatric Nursing**, and clinical guidelines from the **American Academy of Pediatrics (AAP)** and the **North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN)**.

1 Definition & Overview

WHAT IT IS · WHY IT MATTERS

CORE DEFINITION

Gastroesophageal Reflux Disease (GERD) is the involuntary passage of gastric contents into the esophagus that produces *troublesome symptoms* or complications — distinguishing it from physiologic reflux.

WHY IT MATTERS

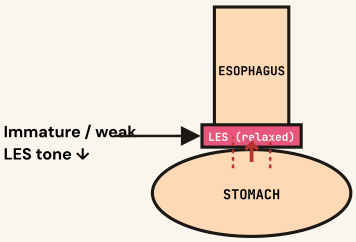
GERD is the most common esophageal disorder in children. Untreated, it can cause **failure to thrive (FTT)**, aspiration pneumonia, apnea, esophagitis, and dental erosion.

GER VS. GERD — KNOW THE DIFFERENCE

GER (physiologic)	GERD (pathologic)
"Happy spitter"	Poor weight gain / FTT
Normal weight gain	Esophagitis, pain
No complications	Respiratory symptoms
Resolves by 12–18 mo	Persists past infancy
No treatment needed	Requires intervention

2 Pathophysiology

MECHANISM · WHY INFANTS ARE VULNERABLE



STEP 1
Immature / incompetent LES (lower esophageal sphincter)

→

STEP 2
Transient LES relaxation + ↑ intra-abdominal pressure

→

STEP 3
Gastric acid refluxes into esophagus

STEP 4
Esophageal mucosal injury · inflammation · pain

→

STEP 5
Feeding refusal · poor weight gain · aspiration

→

STEP 6
FTT · esophagitis · respiratory complications

WHY INFANTS ARE ESPECIALLY VULNERABLE

Infants have a **short, narrow esophagus**, **delayed gastric emptying**, **predominantly liquid diet**, and spend most of the day **recumbent (lying down)** — all of which favor reflux. Most physiologic GER resolves by 12–18 months as the LES matures.

3 Signs & Symptoms

AGE-SPECIFIC PRESENTATION · RED FLAGS

Infants (0–12 mo)

- Frequent regurgitation / "spitting up"
- Irritability, fussiness during/after feeds
- Arching of the back (Sandifer syndrome)
- Poor weight gain / FTT
- Feeding refusal, food aversion
- Excessive crying, hiccups
- Wet burps, chronic cough
- Choking, gagging at feeds

Toddlers / Children (1–12 yr)

- Vomiting, regurgitation
- Abdominal pain, epigastric pain
- Chronic cough, recurrent pneumonia
- Halitosis (bad breath)
- Reactive airway / asthma flares
- Dental enamel erosion
- Sleep disturbance
- Picky eating, food refusal

Adolescents (12+)

- Heartburn (substernal burning)
- Regurgitation of sour contents
- Dysphagia / odynophagia
- Chest pain (rule out cardiac)
- Chronic sore throat, hoarseness
- Belching, bloating
- Nocturnal cough / wheezing
- Worse with caffeine, spicy, fatty foods

RED FLAGS — Escalate Immediately

- ✕ **Hematemesis** or coffee-ground emesis
- ✕ **Apnea** or brief resolved unexplained event (BRUE)
- ✕ Projectile / bilious vomiting (rule out pyloric stenosis, obstruction)
- ✕ Recurrent aspiration pneumonia
- ✕ **Melena** or blood in stool
- ✕ **Cyanosis** during or after feeds
- ✕ Persistent weight loss or crossing growth percentiles downward
- ✕ Severe dehydration · sunken fontanelle · ↓ wet diapers

4 Diagnostics

WORKUP · CONFIRMATION STUDIES

FIRST-LINE · CLINICAL DIAGNOSIS

Most pediatric GERD is diagnosed by **history and physical exam** alone. Diagnostic testing is reserved for atypical, severe, or refractory cases.

- **Upper GI series (UGI)** — barium swallow; rules out anatomic abnormalities (malrotation, pyloric stenosis, hiatal hernia). NOT diagnostic for GERD alone.
- **24-hr esophageal pH probe** — gold standard for acid reflux quantification.
- **Multichannel intraluminal impedance (MII)** — detects both acid and non-acid reflux events.
- **Upper endoscopy (EGD) with biopsy** — visualizes esophagitis, strictures, Barrett's; rules out eosinophilic esophagitis.
- **Gastric emptying scintigraphy** — assesses delayed gastric emptying.
- **Empiric PPI trial** — symptom response supports diagnosis in older children/adolescents.

5 Priority Nursing Interventions

ABC FRAMEWORK · SAFETY · NCLEX PRIORITIZATION

A

AIRWAY

Assess for stridor, wheezing, apnea, cyanosis, choking. **Position upright** during and 30 min after feeds. Have **suction equipment** at bedside for infants. Monitor SpO_2 in symptomatic infants.

B

BREATHING

Monitor respiratory rate, effort, and breath sounds. Watch for aspiration pneumonia (crackles, fever, decreased breath sounds). Report apnea or BRUE events immediately.

C

CIRCULATION & NUTRITION

Daily weights on the same scale; plot on growth chart. Monitor I&O, hydration status (fontanelle, mucous membranes, urine output). Assess feeding tolerance.

FEEDING INTERVENTIONS (INFANTS)

- **Small, frequent feeds** — avoid overfeeding (volume → ↑ reflux)
- **Thicken formula** with rice cereal (1 tbsp per oz) when prescribed; widen nipple opening
- **Burp frequently** — every 1–2 oz during and after feeds
- **Hold upright** for at least 30 min after feeding
- Consider **hypoallergenic formula** trial (extensively hydrolyzed or amino-acid based) if milk-protein allergy suspected
- For breastfed infants: continue breastfeeding; mother may trial dairy-free diet

POSITIONING (CRITICAL SAFETY)

- **SLEEP: Always supine ("Back to Sleep")** — even with GERD. AAP guidance overrides reflux concerns; SIDS risk > reflux risk.
- **AWAKE & supervised:** upright or prone tummy time
- Elevate HOB 30° for older children
- Avoid car seats / infant swings immediately after feeds (slumped position ↑ reflux)
- **NO wedges, positioners, or inclined sleepers** — suffocation risk
- Older children: avoid lying flat for 2–3 hr after meals

6 Pharmacology

DRUG CLASSES · MECHANISMS · NURSING CONSIDERATIONS

DRUG / CLASS	MECHANISM	KEY SIDE EFFECTS	NURSING CONSIDERATIONS
Famotidine (Pepcid) *H_2 Receptor Antagonist*	Blocks H_2 receptors on parietal cells → ↓ gastric acid secretion	Headache, dizziness, constipation/diarrhea, thrombocytopenia (rare)	Give 30 min before meals & HS; tolerance may develop over weeks; safer profile in infants vs PPIs
Omeprazole (Prilosec) *Proton Pump Inhibitor*	Irreversibly blocks H^+/K^+ ATPase pump → potent acid suppression	Headache, abdominal pain, ↑ infection risk (pneumonia, C. diff), ↓ Mg/Ca, ↓ B12 long-term	Give 30 min BEFORE meals (empty stomach); do not crush capsules; reserve for moderate/severe GERD; limit duration
Lansoprazole (Prevacid) *Proton Pump Inhibitor*	Same as omeprazole; FDA-approved age 1+	Diarrhea, headache, nausea	Available as orally disintegrating tab (helpful for kids); give before breakfast
Esomeprazole (Nexium) *Proton Pump Inhibitor*	S-isomer of omeprazole	Similar to other PPIs	Granule packets can be mixed with water/applesauce; do not chew
Metoclopramide (Reglan) *Prokinetic*	D_2 antagonist → ↑ gastric emptying, ↑ LES tone	**BLACK BOX:** tardive dyskinesia, extrapyramidal symptoms (EPS), restlessness, drowsiness	Use limited / second-line; monitor for involuntary movements; not routinely recommended in infants
Antacids (Maalox, Mylanta) *Acid Neutralizer*	Neutralize existing gastric acid	Constipation (aluminum) or diarrhea (magnesium); not recommended for infants	Short-term symptom relief only in older children; avoid chronic use; separate from other meds by 2 hr

⚠ KEY PHARMACOLOGY PRINCIPLES

PPIs > H2 blockers for moderate-severe GERD, but H2 blockers are often first-line in infants. **Stepwise approach:** lifestyle/feeding modifications → H2 blocker → PPI → surgical (fundoplication) only for severe refractory disease. **Avoid prolonged PPI therapy** in children when possible due to infection and nutrient malabsorption risks.

7 NCLEX Test Traps

COMMON ERRORS · PRIORITY CONFUSION

× WRONG ANSWER	→	✓ RIGHT ANSWER
"Place the infant prone or side-lying for sleep to reduce reflux."	→	Place infant **supine ("Back to Sleep")** per AAP. SIDS risk outweighs reflux benefit. Prone allowed ONLY when awake and supervised.
× WRONG ANSWER	→	✓ RIGHT ANSWER
"Increase feeding volume so the infant goes longer between feeds."	→	Provide **small, frequent feeds**. Larger volumes ↑ gastric distention and ↑ reflux episodes.
× WRONG ANSWER	→	✓ RIGHT ANSWER
"Give omeprazole with the largest meal of the day."	→	Administer PPIs **30 minutes BEFORE meals on an empty stomach** — they must be present before food activates proton pumps.
× WRONG ANSWER	→	✓ RIGHT ANSWER
"Use an infant sleep wedge or inclined positioner to keep the head elevated overnight."	→	**NEVER use wedges, positioners, or inclined sleepers** — FDA/AAP warn of suffocation risk. Flat, firm surface only.
× WRONG ANSWER	→	✓ RIGHT ANSWER
"Reassure the parent that vomiting blood after feeds is normal for GERD."	→	**Hematemesis is a RED FLAG.** Report immediately — suggests esophagitis, ulceration, or non-GERD pathology requiring workup.
× WRONG ANSWER	→	✓ RIGHT ANSWER
"Confirm GERD diagnosis with an upper GI series."	→	UGI series **rules out anatomic abnormalities** (malrotation, pyloric stenosis) — it does NOT diagnose GERD. **pH probe** is the gold standard.
× WRONG ANSWER	→	✓ RIGHT ANSWER
"Teach the parent to add honey to thicken formula for an 8-month-old."	→	**NO honey under age 1** — infant botulism risk. Use **rice cereal** as the thickening agent (1 tbsp per oz formula).

8 Patient & Family Education

TEACHING PRIORITIES BY DEVELOPMENTAL STAGE

Infant Caregiver Teaching

- ✓ Hold infant upright 30 min after feeds
- ✓ Burp every 1–2 oz; use slow-flow nipple
- ✓ Thicken formula with rice cereal only if prescribed
- ✓ Always place on BACK to sleep (firm flat surface)
- ✓ No wedges, positioners, or inclined sleepers
- ✓ Avoid car seats/swings right after feeding
- ✓ Track wet diapers (≥6/day), weight gain
- ✓ Report bloody emesis, apnea, poor feeding

Toddler / School-Age Family Teaching

- ✓ Small, frequent meals — avoid overfilling stomach
- ✓ Avoid lying down 2–3 hr after eating
- ✓ Identify and limit trigger foods
- ✓ Maintain healthy weight (obesity ↑ reflux)
- ✓ Elevate HOB 30° at night
- ✓ Encourage water with meals; avoid carbonation
- ✓ Give meds exactly as prescribed (timing matters)
- ✓ Notify provider if symptoms persist or worsen

Adolescent Self-Care Teaching

- ✓ **Avoid:** caffeine, chocolate, mint, spicy/fatty foods, citrus, tomato-based foods, carbonated beverages
- ✓ **Avoid:** alcohol, tobacco — both relax LES
- ✓ No eating within 3 hr of bedtime
- ✓ Maintain healthy BMI
- ✓ Wear loose-fitting clothing (no tight waistbands)
- ✓ Manage stress (worsens symptoms)
- ✓ Take PPI 30 min before breakfast
- ✓ Don't self-medicate with chronic OTC antacids

When to Call the Provider

- ✓ Vomiting blood or coffee-ground material
- ✓ Blood in stool / black tarry stools
- ✓ Persistent weight loss or poor weight gain
- ✓ Difficulty / pain with swallowing
- ✓ Apnea, cyanosis, or BRUE
- ✓ Recurrent pneumonia or wheezing
- ✓ Severe abdominal pain
- ✓ Signs of dehydration (no tears, sunken fontanelle)

9 Memory Boosters

MNEMONICS · PATTERN RECOGNITION

"REFLUX" — Care Priorities

- **R** — **Raise** the HOB · upright 30 min after feeds
- **E** — **Eat** small, frequent meals
- **F** — **Formula** thickened with rice cereal (if Rx)
- **L** — **Lay** infant on BACK to sleep (always)
- **U** — **Upright** for play, avoid car seat after feeds
- **X** — **eXamine** weight, diapers, growth daily

"BURPS" — Trigger Foods to Avoid

- **B** — **Beverages** — caffeine, carbonation, alcohol
- **U** — **Unhealthy fats** — fried & fatty foods
- **R** — **Red sauce** — tomato, citrus, spicy
- **P** — **Peppermint** & chocolate (relax LES)
- **S** — **Smoking** & secondhand smoke

PATTERN RECOGNITION · QUICK ASSOCIATIONS

"Happy spitter" = GER (physiologic) · weight gain OK · no treatment
"Failure to thrive + spitting" = GERD (pathologic) · needs intervention
Sandifer syndrome = back arching + GERD (mimics seizures, but it's reflux)
PPI timing = "Pump-Pre-meal" — 30 min before breakfast on empty stomach
Reglan = "Re-watch for EPS" — black box tardive dyskinesia warning

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NCJMM Clinical Judgment Scenario

SIX-STEP FRAMEWORK · NEXT GEN NCLEX APPLICATION

Scenario:

A 4-month-old male, breast- and bottle-fed, is brought to the pediatric clinic by his mother. She reports the infant "spits up after every feeding," cries inconsolably for 30–60 min after meals, and arches his back. His weight today is 5.2 kg, down from the 25th percentile to the 5th percentile over 2 months. Vital signs: HR 158, RR 42, SpO_2 96%, T 36.8°C. The mother states he had a coughing/choking episode last night that "scared her." She has been giving him 6 oz bottles every 4 hours and lying him on his side after feeds because she "read it helps with reflux."

1 RECOGNIZE CUES

What information is most relevant?

Concerning cues: weight crossing percentiles downward (25th → 5th = FTT), back arching (Sandifer syndrome), inconsolable crying after feeds (esophageal pain), recent choking event (aspiration risk), large-volume feeds (6 oz q4h), side-lying sleep (unsafe position). **Reassuring cues:** SpO_2 96%, afebrile, alert.

2 ANALYZE CUES

What do these cues mean together?

Pattern points to **GERD with failure to thrive** — not physiologic GER. Weight loss, pain behaviors, and Sandifer-type posturing distinguish GERD from a "happy spitter." Large feed volumes (6 oz at 4 mo is excessive) and improper sleep positioning (side-lying ↑ SIDS risk) are **modifiable risk factors** contributing to symptoms.

3 PRIORITIZE HYPOTHESES

What is the highest priority concern?

Priority #1: Safety — unsafe sleep position (SIDS risk) + recent choking episode (potential BRUE, aspiration). **Priority #2: Nutrition/growth** — FTT requires immediate feeding modification and growth monitoring. **Priority #3: Symptom management** — pain, esophagitis, possible need for pharmacologic therapy.

4 GENERATE SOLUTIONS

What interventions should the nurse plan?

Teach **"Back to Sleep"** (supine, firm flat surface, no positioners). Reduce feed volume to **3–4 oz every 2–3 hr**; burp every 1–2 oz; hold upright 30 min post-feed. Coordinate with provider for possible **thickened feeds, H2 blocker trial (famotidine)**, and growth chart documentation. Refer to lactation/feeding specialist. Schedule weight check in 1–2 weeks. Provide written education and red-flag list.

5 TAKE ACTION

Implementation priorities (in order)

1) **Stop unsafe sleep practice immediately** — teach supine sleep before mother leaves. 2) Demonstrate **proper feeding technique** (volume, pacing, burping, post-feed positioning). 3) Administer/educate on prescribed **famotidine 30 min before feeds**. 4) Plot weight on growth chart and document. 5) Provide **red-flag teaching**: bloody emesis, apnea, cyanosis, no wet diapers → call 911 or seek immediate care.

6 EVALUATE OUTCOMES

How will the nurse know interventions worked?

Expected outcomes: Infant gains weight (returns toward 25th percentile within 4–6 weeks); ↓ frequency of regurgitation and back arching; mother demonstrates correct supine sleep positioning and feeding technique; no recurrent choking episodes; mother verbalizes red flags. If FTT persists or red flags develop → escalate to pediatric GI for endoscopy/pH probe and consider PPI therapy.