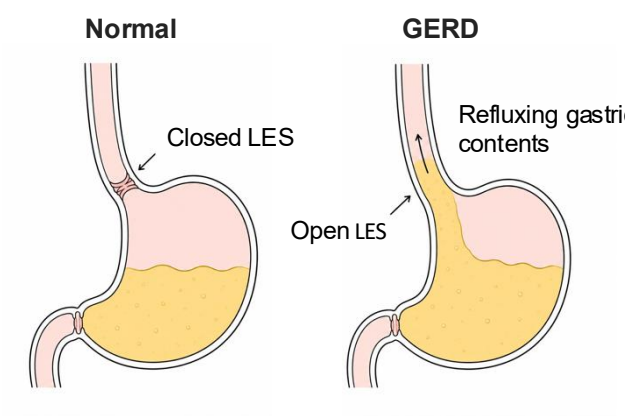
Gastroesophageal Reflux Disease

Gastroesophageal reflux (GER) is defined as the passage of gastric contents from the stomach to the esophagus (with or without regurgitation/emesis). GER is a normal physiologic process: it occurs in up to 41% of healthy infants at 3-4 months of age and typically declines by 1 year.

Gastroesophageal reflux disease (GERD) is GER which causes symptoms that affect daily living or lead to complications (e.g. esophagitis, strictures, faltering growth).

PRESENTATION

- **General/feeding**: irritability or discomfort; feeding difficulties or refusal; arching with feeds; poor weight gain/failure to thrive; sleep disturbances
- **Gastrointestinal**: recurrent regurgitation/emesis; hematemesis; dysphagia; odynophagia; epigastric/retrosternal pain
- **Respiratory/Airway**: chronic cough; wheezing; stridor; hoarseness; apnea; recurrent respiratory symptoms, particularly when associated with aspiration
- **Oral**: dental erosion
- **Neurological/behavioural**: dystonic neck posturing (Sandifer syndrome)
- **Complications**: reflux esophagitis; esophageal stricture; Barrett's esophagus; iron deficiency anemia; aspiration-related lung disease; recurrent otitis media



RED FLAG SYMPTOMS

- Bilious emesis
- Hematemesis or hematochezia
- Progressively worsening or forceful emesis
- Failure to thrive/weight loss
- Persistent diarrhea or constipation
- Fever or toxic appearance
- Bulging fontanelles or other neurological abnormalities
- Abdominal tenderness or distension

Any of the above symptoms should prompt additional investigations

PATHOPHYSIOLOGY

Immature/weak lower esophageal sphincter (LES) +/- transient LES relaxations → Retrograde flow of gastric contents into the esophagus → Impaired acid clearance → Mucosal breakdown → Complications (esophagitis, strictures, growth faltering)

DIAGNOSIS

GERD is a clinical diagnosis and should not require additional investigations unless there are red flag symptoms or concerns for an alternative diagnosis.

MANAGEMENT

- **Anticipatory guidance:** reassurance that GER is common and usually self-limited in otherwise healthy infants
- **Feeding behaviours:** avoid overfeeding with smaller, more frequent meals; thickened feeds
- **Cow's milk elimination:** maternal dairy elimination for breastfed infants or hydrolyzed formula for formula-fed infants
- **Pharmacologic treatment:** avoid empirically treating otherwise healthy infants with uncomplicated GER with acid suppression. If there is evidence of erosive esophagitis (e.g. failure to thrive, hematemesis, failure to feed), consider a 2-4 week trial of proton pump inhibitors (PPIs); use a histamine-2 receptor antagonists if PPIs are contraindicated
- **If refractory to the above** OR **any red flag symptoms:** Refer to pediatric gastroenterology. Consider anti-reflux surgery (fundoplication) if refractory AND severe complications from GERD

**Note: For sleep, infants should be positioned supine to prevent SIDS; this outweighs the benefits from left lateral positioning/head elevation for GERD*

November 2026
Lauren McMillan (Medical Student, University of Alberta), Dr. Jackie Lee (General Pediatrician, University of Alberta) for www.pedscases.com