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## **Gastroesophageal Reflux Disease (GERD)**

*Patient and family information, brought to you by the Education Committee of APSA*

### **Overview - “What is it?”**

Gastroesophageal reflux disease (GERD) is a digestive issue due to a problem in the stomach and the esophagus (tube that carries food from the mouth to the stomach). GERD means that stomach fluid and acid flow backwards into the esophagus, causing many symptoms. GERD is not the same as “simple reflux”. Gastroesophageal reflux (GER) or “simple reflux” (spit-ups) of formula or breastmilk is very common in infants. GER is harmless and most often goes away by 12 months of age. GERD is more severe and can lead to damage of the esophagus, difficult or painful swallowing, and breathing symptoms.

### **Signs and Symptoms - “What are the symptoms?”**

Symptoms of GERD vary with age and may also be seen with other medical and developmental issues. All symptoms should be talked about with your child’s doctor.

- **Infants**

- Poor weight gain or “failure to thrive”
- Feeding problems: Fussiness, back-arching, pulling legs up to chest, eating less, frequent spit-ups or vomiting, lack of interest and/or difficulty transitioning to solids.
- Aspiration: Stomach acid and liquid flow backwards from the stomach up into the esophagus and then enters the lungs by mistake – this can occur without any visible symptoms and is called “silent aspiration”
- Frequent pneumonias (infections of the lungs), or esophagitis (inflammation of the esophagus)
- Stridor (high-pitched, whistling or squeaky sound when breathing in or out) caused by narrowing of upper airway from inflammation due to reflux

- **Preschool children**

- Poor weight gain or “failure to thrive”
- Eating or drinking less due to discomfort
- Double swallowing / gagging
- Cough while laying down or sleeping
- Many pneumonias or esophagitis

- **Older children and teens**

- Complaints of heartburn, chest pain, burning in throat

- Regurgitation (food comes back up and is swallowed again or spit out), dysphagia (trouble swallowing foods or liquids), sour taste in mouth
- Nausea, pain in upper belly
- Hoarse voice
- Breathing issues or wheezing, cough while laying down

### Diagnosis - “What tests are needed?”

GERD is often diagnosed by symptoms and a physical examination. Tests may be needed if symptoms are severe or happen often.

- **Upper Gastrointestinal (GI) Series:** A special type of painless x-ray test to look at the upper part of the digestive or GI tract which includes the esophagus, stomach and duodenum (the first part of the small bowel).
  - Your child drinks a special contrast liquid that coats the GI tract to make it easier to see on x-ray
  - Many x-ray pictures (like a movie) are taken to look at the movement of contrast liquid through the GI tract
- **Upper Endoscopy (EGD):** A test done under anesthesia to look inside the GI tract including throat, esophagus, stomach and the duodenum.
  - A thin, flexible tube with a camera (called an endoscope) is placed through the mouth down through the GI tract
  - The camera sends pictures to a screen that the doctor can see
  - Small tissue samples (biopsies) are taken for more information
- **pH Impedance Probe:** A test to measure how often and what amount of acid or non-acid reflux comes up from the stomach into the esophagus over a 24-hour period.
  - A thin, flexible tube with sensors is placed through the nose down into the esophagus
  - The sensors on the tube measure acid level and movement of liquid and air
  - The tube is connected to a small recording device
  - Your child eats, drinks, and sleeps with the probe in place and parents write symptoms in a diary
  - After 24 hours, the tube comes out and the data is reviewed
  - Acid blocking medicine may be stopped before this test
- **Esophageal manometry:** A test to check how well the muscles in the esophagus work.
  - A thin, flexible tube with pressure sensors is inserted through the nose down into the esophagus
  - Your child swallows small sips of water to measure how well the muscles contract
  - Helps to understand if the esophagus is moving food along properly
  - Checks the sphincter valves at the top and bottom of the esophagus to see if they are opening and closing normally

## Treatment - “What can be done to help improve symptoms?”

GERD can be well managed with lifestyle changes, medicines, and possibly surgery.

### Lifestyle Changes

Lifestyle changes may improve mild GERD symptoms but will not reverse reflux damage to the esophagus.

- Changes to Diet
  - Try smaller feeds or meals more often
  - Thicken formula or breastmilk with infant cereals or commercial thickening agents
  - Avoid common diet triggers: Spicy, fried or fatty foods, chocolate, peppermint, carbonated or acidic drinks, caffeine, and any foods that you’ve noticed make symptoms worse
  - Eat slowly and chew well to help digestion
  - Chew gum or suck on throat drops
  - Drink lots of fluids
- Timing and Positioning
  - Hold infants upright for 20-30 minutes after each feeding
  - Sit or stand for at least 2 hours after meals
  - Finish eating at least 2-3 hours before bedtime
  - Elevate head of bed or sleep with extra pillows
- Lifestyle Habits
  - Keep a healthy body weight
  - Teens should avoid smoking or drinking alcohol

### Medicines

Medicines are used to treat GERD with frequent symptoms. There are 3 common types of medicines to treat GERD:

- Histamine type 2 receptor agonists (H2 blockers) lower acid level of stomach fluid
- Proton pump inhibitors (PPIs) lower the amount of acid made by the stomach
- Over-the-counter antacids may also help if symptoms are mild or don’t happen often
- Children that have slow emptying of the stomach are at increased risk for GERD and may be treated with additional medications to help move food and fluids through the GI tract more quickly

### Fundoplication Surgery

Surgery may be a needed for severe GERD or those with:

- Symptoms that do not get better with lifestyle changes and medicine
- Life-threatening complications:

- Frequent and severe lung infections or repeat aspiration pneumonias
- Apnea (pauses in breathing) or bradycardia (abnormally low heart rate)
- Feeding problems with poor weight gain
- Severe esophagitis (damage to esophagus) or stricture (narrowing of esophagus) from acid exposure
- Nervous system problem with feeding issues due to high risk for aspiration

**Fundoplication** is the most common surgery for GERD. A part of the stomach is wrapped around the esophagus to make the lower valve in the esophagus stronger and prevent acid from flowing backwards. Certain children also benefit from inserting a stomach feeding tube at the time of the fundoplication.

- Benefits
  - Fewer GERD symptoms
  - Better quality of life
  - Decreased need for long-term medicine use
- Risks and complications
  - Gas bloat
  - Wrap failure (wrap comes undone)
  - Dysphagia (swallowing problem)
- Benefits of feeding tube placement
  - Helps improve nutrition for children with long-term feeding problems or poor weight gain
  - Ensures safe feeding in children with nervous system problems who have a high risk for aspiration
  - Helps decrease gas bloat by allowing venting (release of air) from the stomach

Pediatric GERD is a health issue with many treatment options. Children may experience GERD symptoms but with proper care and support from the medical team, most children will continue to grow and thrive.

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