

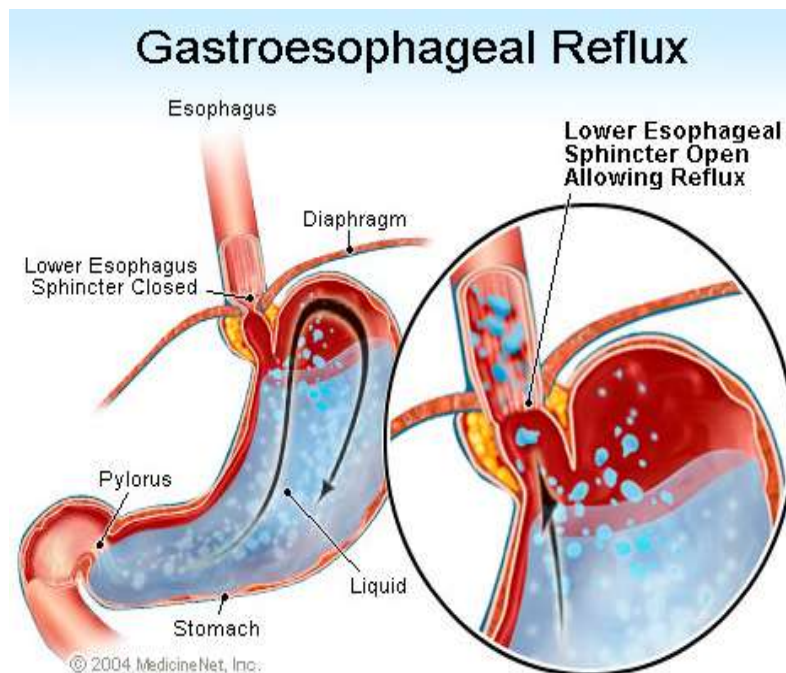
Gastroesophageal Reflux Disease

Gastroesophageal reflux (GERD) is a potential trigger of asthma. GERD symptoms are more prevalent in asthma patients compared to the general population. GERD should be considered as a potential trigger in all patients with asthma.

Gastroesophageal reflux (GERD), is a condition in which the contents of the stomach including acid back up into the esophagus and/or throat. It occurs because the ring of muscles that separates the top of the stomach from the esophagus is not working properly. When this ring (**LES-lower esophageal sphincter**) is weak and does not close tightly, stomach contents can leak back up.

This constant leaking can irritate the esophagus (the tube between the stomach and the throat), causing a constant burning sensation and discomfort. If the stomach contents back up all the way to the throat, there is frequent spitting up or vomiting. Vocal Cord irritation can occur if reflux is sufficiently high. The contents also can enter the airway and cause choking, coughing and difficulties with breathing.

GERD is among the five most prevalent and costly gastrointestinal (GI) disease in the United States, with 19.6 million cases. GERD has a substantial negative impact on quality of life and sense of well-being in adults. GERD is particularly common in premature infants. GERD has been observed in 20% to 40% of children six months of age or younger.



Gastroesophageal Reflux Disease

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Consuming large meals and wearing tight clothing can increase reflux symptoms.

Symptoms of GERD may include any of the following:

Chronic cough or sore throat
Hoarseness
Wheezing
Asthma
Apnea
Dental erosions
Bad breath
Laryngitis
Sinusitis
Otitis media
Vocal Cord Dysfunction
Belching

Many patients with GERD do not have classic reflux symptoms such as heartburn. Your/your child's symptoms can include cough, clearing of the throat, problems swallowing, the feeling that food is stuck in your throat, or pain in the chest.

Laryngopharyngeal reflux (LPR) refers to the backflow of food or stomach acid all the way back up into the larynx (the voice box) or the pharynx (the throat). LPR can occur during the day or night, even if an individual who has LPR has not eaten anything during the previous 2 – 3 hours.

Some foods can cause the pressure of the sphincter between the stomach and the esophagus to decrease, making it easier for stomach contents to backflow into the esophagus. These foods are:

Chocolate
Caffeine
Peppermint
Alcohol
Fatty foods

The relationship between nighttime reflux and asthma is a topic of discussion for both adults and children. Anti-reflux medicine in patients with asthma, often reduces the amount of medicine needed to control their asthma. Commonly, a 2 – 3 month trial of anti-reflux therapy is used to determine if GERD is triggering asthma.

Management of GERD:

High protein diet, low fat (45 gm)
Omit acidic foods
Limit eating and drinking between meals and 2 hours before bed and exercise
Avoid foods that lower LES pressure
Raise head of bed 4 inches
Avoid tobacco smoke – 1st and 2nd hand

Gastroesophageal Reflux Disease

(Cont'd)

Medications for treatment of GERD

1. **Antacids:** for symptomatic relief between meals and bedtime
2. **Acid Suppression:**
 - H2 antagonists partially block the gastric receptor
 - Proton Pump Inhibitors directly inhibit gastric secretion
3. **Prokinetic Agents:** improve esophageal contractility, increase LES pressure and gastric emptying

Gastrointestinal Testing to Diagnose Reflux

May be diagnosed by one of the following tests:

Upper GI series or Barium Swallow

Milk scan

Sleep study and pH probe; 24 hour esophageal pH monitoring is a reliable test for diagnosing GERD with a sensitivity and specificity of >90%.

Endoscopy with biopsies

Symptoms of GERD in Infancy

Arching

Coughing

Poor Appetite

Failure to thrive

Vomiting and regurgitation

Gastroesophageal Reflux Disease
(Cont'd)

GERD in Children

- 1. Keep the child's head above the stomach when stomach is full:**
 - a.) Keep the child sitting in an upright position for at least one hour after eating.
 - b.) Do not feed the child one hour before going to bed or taking a nap.

- 2. Keep the child's head above the stomach 30 – 45 degrees while sleeping:**
 - a.) Raise the head of the crib or bed 30 – 45 degrees. The mattress can be raised by shock blocks, blankets, etc.
 - b.) Check the child while asleep to be sure that he/she does not slip down or turn upside down. A blanket roll can be placed under the child's feet or beside him/her to discourage slipping down or turning.

- 3. Thicken the infant's feedings:**
 - a.) Add progressive amounts of rice cereal to thicken formula to a maximum of one tablespoon of cereal to each 3 ounces of formula. You may have to enlarge the nipple to allow easy drinking. Thicken juices by adding applesauce.
 - b.) Young infants should not drink large amounts at a time. Small frequent feedings are preferable.

- 4. Medicines**
 - a.) Some medications may worsen G-E reflux. Please tell us what medicines your child is taking. Medications to buffer stomach acid, decrease acid production or effect, or decrease reflux may be prescribed.