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Patient information: Acid reflux (gastroesophageal reflux disease) in adults (Beyond the Basics)

Author

Peter J Kahrilas, MD

Section Editor

Nicholas J Talley, MD, PhD

Deputy Editor

Shilpa Grover, MD, MPH

GASTROESOPHAGEAL REFLUX OVERVIEW

Gastroesophageal reflux, also known as acid reflux, occurs when the stomach contents reflux or back up into the esophagus and/or mouth. Reflux is a normal process that occurs in healthy infants, children, and adults. Most episodes are brief and do not cause bothersome symptoms or complications.

In contrast, people with gastroesophageal reflux disease (GERD) experience bothersome symptoms as a result of the reflux. Symptoms can include heartburn, regurgitation, vomiting, and difficulty or pain with swallowing. The reflux of stomach acid can adversely affect the vocal cords causing hoarseness or even be inhaled into the lungs (called aspiration).

This topic review discusses the symptoms, causes, diagnosis, and treatment of adults with gastroesophageal reflux disease. A discussion of gastroesophageal reflux in infants, children, and adolescents is available separately. (See "[Patient information: Acid reflux \(gastroesophageal reflux disease\) in children and adolescents \(Beyond the Basics\)](#)" and "[Patient information: Acid reflux \(gastroesophageal reflux\) in infants \(Beyond the Basics\)](#)".)

WHAT IS GASTROESOPHAGEAL REFLUX?

When we eat, food is carried from the mouth to the stomach through the esophagus, a tube-like structure that is approximately 10 inches long and 1 inch wide in adults ([figure 1](#)). The esophagus is made of tissue and muscle layers that expand and contract to propel food to the stomach through a series of wave-like movements called peristalsis.

At the lower end of the esophagus, where it joins the stomach, there is a circular ring of muscle called the lower esophageal sphincter (LES). After swallowing, the LES relaxes to allow food to enter the stomach and then contracts to prevent the back-up of food and acid into the esophagus.

However, sometimes the LES is weak or becomes relaxed because the stomach is distended, allowing liquids in the stomach to wash back into the esophagus. This happens occasionally in all individuals. Most of these episodes occur shortly after meals, are brief, and do not cause symptoms. Normally, acid reflux should occur only rarely during sleep.

Acid reflux — Acid reflux becomes gastroesophageal reflux disease (GERD) when it causes bothersome symptoms or injury to the esophagus. The amount of acid reflux required to cause GERD varies.

In general, damage to the esophagus is more likely to occur when acid refluxes frequently, the reflux is very acidic, or the esophagus is unable to clear away the acid quickly. The most common symptoms associated with acid reflux are heartburn, regurgitation, chest pain, and trouble swallowing. The treatments of GERD are designed to prevent one or all of these symptoms from occurring.

Hiatus hernia — The diaphragm is a large flat muscle at the base of the lungs that contracts and relaxes as a person breathes in and out. The esophagus passes through an opening in the diaphragm called the diaphragmatic hiatus before it joins with the stomach.

Normally, the diaphragm contracts, which improves the strength of the LES, especially during bending, coughing, or straining. If there is a weakening in the diaphragm muscle at the hiatus, the stomach may be able to partially slip through the diaphragm into the chest, forming a sliding hiatus hernia.

The presence of a hiatus hernia makes acid reflux more likely. A hiatus hernia is more common in people over age 50. Obesity and pregnancy are also contributing factors. The exact cause is unknown but may be related to the loosening of the tissues around the diaphragm that occurs with advancing age. There is no way to prevent a hiatus hernia.

ACID REFLUX SYMPTOMS

People who experience heartburn at least two to three times a week may have gastroesophageal reflux disease, or GERD. The most common symptom of GERD, heartburn, is estimated to affect 10 million adults in the United States on a daily basis. Heartburn is experienced as a burning sensation in the center of the chest, which sometimes spreads to the throat; there also may be an acid taste in the throat. Less common symptoms include:

- Stomach pain (pain in the upper abdomen)
- Non-burning chest pain
- Difficulty swallowing (called dysphagia), or food getting stuck
- Painful swallowing (called odynophagia)
- Persistent laryngitis/hoarseness
- Persistent sore throat
- Chronic cough, new onset asthma, or asthma only at night
- Regurgitation of foods/fluids; taste of acid in the throat
- Sense of a lump in the throat
- Worsening dental disease
- Recurrent lung infections (called pneumonia)
- Chronic sinusitis
- Waking up with a choking sensation

When to seek help — The following signs and symptoms may indicate a more serious problem, and should be reported to a healthcare provider immediately:

- Difficulty or pain with swallowing (feeling that food gets "stuck")
- Unexplained weight loss
- Chest pain
- Choking
- Bleeding (vomiting blood or dark-colored stools)

ACID REFLUX DIAGNOSIS

