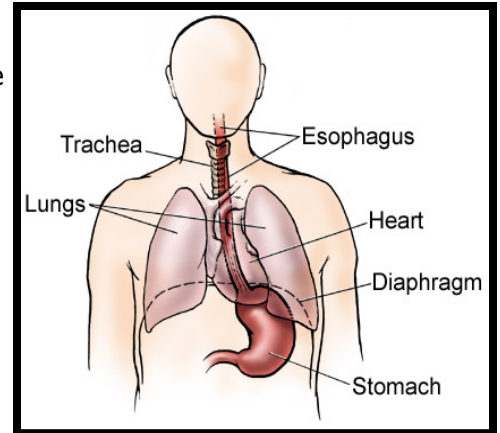


What is GERD?

Gastroesophageal reflux disease (GERD) occurs when the lower esophageal sphincter (LES) opens spontaneously, for varying periods of time, or does not close properly and stomach contents rise up into the esophagus. GERD is also called acid reflux because digestive juices rise up with the food. The esophagus is the tube that carries food from the mouth to the stomach. The LES is a ring of muscle at the bottom of the esophagus that acts like a valve between the esophagus and stomach.

When acid reflux occurs, food or fluid can be tasted in the back of the mouth. When refluxed stomach acid touches the lining of the esophagus it may cause a burning sensation in the chest or throat called heartburn or acid indigestion. Persistent reflux that occurs more than twice a week is considered GERD, and it can eventually lead to more serious health problems.



What are the symptoms of GERD?

The main symptom of GERD is frequent heartburn, also called acid indigestion—a burning-type pain in the lower part of the mid-chest, behind the breast bone, and in the mid-abdomen. Some adults have GERD without heartburn. Instead, they may experience a dry cough, asthma symptoms, or trouble swallowing.

What causes GERD?

Anatomical abnormalities such as a hiatal hernia may contribute to GERD. A hiatal hernia occurs when the upper part of the stomach and the LES move above the diaphragm, the muscle wall that separates the stomach from the chest. Normally, the diaphragm helps the LES keep acid from rising up into the esophagus. When a hiatal hernia is present, acid reflux can occur more easily. More often though, a hiatal hernia produces no symptoms.

Other factors that may contribute to GERD include

- obesity
- pregnancy
- smoking

In some people, certain foods can worsen reflux symptoms and include

- citrus fruits
- chocolate
- drinks with caffeine or alcohol
- fatty and fried foods
- garlic and onions
- mint flavorings
- spicy foods

tomato-based foods, like spaghetti sauce, salsa, chili, and pizza

In other people, they still have symptoms even if they avoid all of these foods.

Avoiding food 2 to 3 hours before bed may also help. Your health care provider may recommend raising the head of your bed with wood blocks secured under the bedposts. Just using extra pillows will not help. If these changes do not work, your health care provider may prescribe medicine for you. In rare cases, you may need



How is GERD treated?

Lifestyle Changes

- If you smoke, stop.
- Avoid foods and beverages that worsen symptoms.
- Lose weight if needed.
- Eat small, frequent meals.
- Wear loose-fitting clothes.
- Avoid lying down for 3 hours after a meal.

Raise the head of your bed 6 to 8 inches by securing wood blocks under the bedposts. Just using extra pillows will not help.

Medications for GERD

Antacids, such as Alka-Seltzer, Maalox, Mylanta, Roloids are usually the first drugs recommended to relieve heartburn and other mild GERD symptoms.. Antacids, however, can have side effects. Magnesium salt can lead to diarrhea, and aluminum salt may cause constipation..

H2 blockers, such as cimetidine (Tagamet HB), famotidine (Pepcid AC), nizatidine (Axid AR), and ranitidine (Zantac 75), decrease acid production. They are available in prescription strength and over-the-counter strength. These drugs provide short-term relief and are effective for about half of those who have GERD symptoms.

Proton pump inhibitors (PPI's) include omeprazole (Prilosec), lansoprazole (Prevacid), pantoprazole (Protonix), rabeprazole (Aciphex), and esomeprazole (Nexium), which are available by prescription. Prilosec is also available in over-the-counter strength. Proton pump inhibitors are more effective than H2 blockers and can relieve symptoms and heal the esophageal lining in almost everyone who has GERD.

Prokinetics help strengthen the LES and make the stomach empty faster. This group includes bethanecol (Urecholine) and metoclopramide (Reglan). Metoclopramide also improves muscle action in the digestive tract. Prokinetics have frequent side effects that limit their usefulness—fatigue, sleepiness, depression, anxiety, and problems with physical movement.

Because drugs work in different ways, combinations of medications may help control symptoms. People who get heartburn after eating may take both antacids and H2 blockers. The antacids work first to neutralize the acid in the stomach, and then the H2 blockers act on acid production. By the time the antacid stops working, the H2 blocker will have stopped acid production. Your health care provider is the best source of information about how to use medications for GERD.

What if GERD symptoms persist?

If your symptoms do not improve with lifestyle changes or medications, you may need additional tests.

GERD



Upper endoscopy

is more accurate than a barium swallow radiograph and may be performed in a hospital or a doctor's office. The doctor may spray your throat to numb it and then, after lightly sedating you, will slide a thin, flexible plastic tube with a light and lens on the end called an endoscope down your throat. Acting as a tiny camera, the endoscope allows the doctor to see the surface of the esophagus and search for abnormalities. If you have had moderate to severe symptoms and this procedure reveals injury to the esophagus, usually no other tests are needed to confirm GERD. The doctor also may perform a biopsy. Tiny tweezers, called forceps, are passed through the endoscope and allow the doctor to remove small pieces of tissue from your esophagus. The tissue is then viewed with a microscope to look for damage caused by acid reflux and to rule out other problems if infection or abnormal growths are not found.

pH monitoring examination

involves the doctor either inserting a small tube into the esophagus or clipping a tiny device to the device measures when and how much acid comes up into your esophagus. This test can be useful if combined with a carefully completed diary—recording when, what, and amounts the person eats—which allows the doctor to see correlations between symptoms and reflux episodes. The procedure is sometimes helpful in detecting whether respiratory symptoms, including wheezing and coughing, are triggered by reflux.

A completely accurate diagnostic test for GERD does not exist, and tests have not consistently shown that acid exposure

[Barrett's esophagus,](#)

[Barrett's Esophagus](#)

GERD



For More Information

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The National Digestive Diseases Information Clearinghouse collects resource information about digestive diseases for the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) Reference Collection. This database provides titles, abstracts, and availability information for health information and health education resources. The NIDDK Reference Collection is a service of the National Institutes of Health.

You may view the results of the automatic search on [heartburn, gastroesophageal reflux \(GER\), and gastroesophageal reflux disease \(GERD\).](#)

GERD



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The National Digestive Diseases Information Clearinghouse (NDDIC) is a service of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). The NIDDK is part of the National Institutes of Health of the U.S. Department of Health and Human Services. Established in 1980, the Clearinghouse provides information about digestive diseases to people with digestive disorders and to their families, health care professionals, and the public. The NDDIC answers inquiries, develops and distributes publications, and works closely with professional and patient organizations and Government agencies to coordinate resources about digestive diseases.

Publications produced by the Clearinghouse are carefully reviewed by both NIDDK scientists and outside experts. This publication was originally reviewed by M. Brian Fennerty, M.D., Oregon Health and Science University, and Benjamin D. Gold, M.D., Emory University School of Medicine.

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wer esophagus directly correlates with damage to the lining.