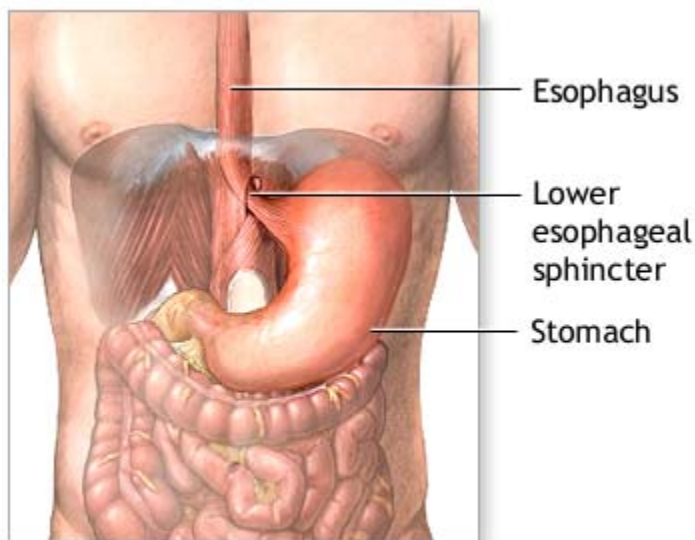


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## Gastroesophageal reflux disease



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### Definition

Gastroesophageal reflux disease (GERD) is a condition in which the stomach contents (food or liquid) leak backwards from the stomach into the esophagus (the tube from the mouth to the stomach). This action can irritate the esophagus, causing heartburn and other symptoms.

### Alternative Names

Peptic esophagitis; Reflux esophagitis; GERD; Heartburn - chronic; Dyspepsia - GERD

### Causes

When you eat, food passes from the throat to the stomach through the esophagus (also called the food pipe or swallowing tube). Once food is in the stomach, a ring of muscle fibers prevents food from moving backward into the esophagus. These muscle fibers are called the lower esophageal sphincter, or LES.

If this sphincter muscle doesn't close well, food, liquid, and stomach acid can leak back into the esophagus. This is called reflux or

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gastroesophageal reflux. This reflux may cause symptoms, or can even damage the esophagus.

The risk factors for reflux include hiatal hernia (a condition in which part of the stomach moves above the diaphragm, which is the muscle that separates the chest and abdominal cavities), pregnancy, and **scleroderma**.

Obesity, cigarettes, and possibly alcohol also increase the chance of GERD.

Heartburn and gastroesophageal reflux can be brought on or worsened by pregnancy and many different medications. Such drugs include:

- Anticholinergics (e.g., for seasickness)
- Beta-blockers for high blood pressure or heart disease
- Bronchodilators for asthma
- Calcium channel blockers for high blood pressure
- Dopamine-active drugs for **Parkinson's disease**
- Progestin for abnormal menstrual bleeding or birth control
- Sedatives for insomnia or anxiety
- Tricyclic antidepressants

If you suspect that one of your medications may be causing heartburn, talk to your doctor. Never change or stop a medication you take regularly without talking to your doctor.

## Symptoms

More common symptoms are:

- Feeling that food may be left trapped behind the breastbone
- **Heartburn** or a burning pain in the chest (under the breastbone)
  - Increased by bending, stooping, lying down, or eating
  - More likely or worse at night
  - Relieved by antacids
- Nausea after eating

Less common symptoms are:

- Cough or wheezing
- **Difficulty swallowing**
- Hiccups
- **Hoarseness** or change in voice
- Regurgitation of food
- **Sore throat**

## Exams and Tests

You may not need any tests if your symptoms are not severe.

If your symptoms are severe or they come back after you have been treated, one or more tests may help diagnose reflux or any complications:

- **Esophagogastroduodenoscopy (EGD)** is often used to identify the cause and examine the esophagus (swallowing tube) for damage. The doctor inserts a thin tube with a camera on the end through your mouth. The tube is then passed into your

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esophagus, stomach, and small intestine.

- **Barium swallow**
- Continuous **esophageal pH monitoring**
- **Esophageal manometry**

A positive stool occult blood test may diagnose bleeding from the irritation in the esophagus.

## Treatment

To prevent heartburn, avoid foods and beverages that may trigger your symptoms. For many people, these include:

- Alcohol
- Caffeine
- Carbonated beverages
- Chocolate
- Citrus fruits and juices
- Tomatoes
- Tomato sauces
- Spicy or fatty foods
- Full-fat dairy products
- Peppermint
- Spearmint

If other foods regularly give you heartburn, avoid those foods, too.

Also, try the following changes to your eating habits and lifestyle:

- Avoid bending over or exercising just after eating
- Avoid garments or belts that fit tightly around your waist
- Do not lie down with a full stomach. For example, avoid eating within 2 -3 hours of bedtime.
- Do not smoke.
- Eat smaller meals.
- Lose weight if you are overweight.
- Reduce stress.
- Sleep with your head raised about 6 inches. Do this by tilting your entire bed, or by using a wedge under your body, not just with normal pillows.

Over-the-counter antacids may be used after meals and at bedtime, although they do not last very long. Common side effects of antacids include diarrhea or constipation.

Other over-the-counter and prescription drugs can treat GERD. They work more slowly than antacids but give you longer relief. Your doctor or nurse can tell you how to take these drugs.

- Proton pump inhibitors (PPIs) are the most potent acid inhibitors: omeprazole (Prilosec), esomeprazole (Nexium), lansoprazole (Prevacid), rabeprazole (AcipHex), and pantoprazole (Protonix)
- H2 antagonists: famotidine (Pepcid), cimetidine (Tagamet), ranitidine (Zantac), and nizatidine (Axid)
- Prokinetic agents: metoclopramide (Reglan)

Anti-reflux operations (**Nissen fundoplication** and others) may be an option for patients whose symptoms do not go away with lifestyle changes and drugs. Heartburn and other symptoms should improve after surgery, but you may still need to take drugs for your heartburn. There are also new therapies for reflux that can be performed through an endoscope (a flexible tube passed through the

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mouth into the stomach).

### Outlook (Prognosis)

Most people respond to nonsurgical measures, with lifestyle changes and medications. However, many patients need to continue taking drugs to control their symptoms.

### Possible Complications

- **Barrett's esophagus** (a change in the lining of the esophagus that can increase the risk of cancer)
- Bronchospasm (irritation and spasm of the airways due to acid)
- Chronic cough or hoarseness
- Dental problems
- Esophageal **ulcer**
- Inflammation of the esophagus
- Stricture (a narrowing of the esophagus due to scarring from the inflammation)

### When to Contact a Medical Professional

Call your health care provider if symptoms worsen or do not improve with lifestyle changes or medication.

Also call for any of the following symptoms:

- Bleeding
- Choking (coughing, shortness of breath)
- Feeling filled up quickly when eating
- Frequent vomiting
- Hoarseness
- Loss of appetite
- Trouble swallowing (dysphagia) or pain with swallowing (odynophagia)
- Weight loss

### Prevention

- Heartburn prevention techniques
- Looking at the esophagus with an endoscope and obtaining a sample of esophagus tissue for examination (esophagoscopy with biopsy) may be recommended to diagnose Barrett's esophagus.
- Follow-up endoscopy to look for dysplasia or cancer is often advised.

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