



## Gastroesophageal reflux disease (GERD)

### Diagnosis

Your doctor might be able to diagnose GERD based on a physical examination and history of your signs and symptoms.

To confirm a diagnosis of GERD, or to check for complications, your doctor might recommend:

- **Upper endoscopy.** Your doctor inserts a thin, flexible tube equipped with a light and camera (endoscope) down your throat, to examine the inside of your esophagus and stomach. Test results can often be normal when reflux is present, but an endoscopy may detect inflammation of the esophagus (esophagitis) or other complications. An endoscopy can also be used to collect a sample of tissue (biopsy) to be tested for complications such as Barrett's esophagus.
- **Ambulatory acid (pH) probe test.** A monitor is placed in your esophagus to identify when, and for how long, stomach acid regurgitates there. The monitor connects to a small computer that you wear around your waist or with a strap over your shoulder. The monitor might be a thin, flexible tube (catheter) that's threaded through your nose into your esophagus, or a clip that's placed in your esophagus during an endoscopy and that gets passed into your stool after about two days.
- **Esophageal manometry.** This test measures the rhythmic muscle contractions in your esophagus when you swallow. Esophageal manometry also measures the coordination and force exerted by the muscles of your esophagus.
- **X-ray of your upper digestive system.** X-rays are taken after you drink a chalky liquid that coats and fills the inside lining of your digestive tract. The coating allows your doctor to see a silhouette of your esophagus, stomach and upper intestine. You may also be asked to swallow a barium pill that can help diagnose a narrowing of the esophagus that may interfere with swallowing.

### Treatment

Your doctor is likely to recommend that you first try lifestyle modifications and over-the-counter medications. If you don't experience relief within a few weeks, your doctor might recommend prescription medication or surgery.

## Over-the-counter medications

The options include:

- **Antacids that neutralize stomach acid.** Antacids, such as Mylanta, Rolaids and Tums, may provide quick relief. But antacids alone won't heal an inflamed esophagus damaged by stomach acid. Overuse of some antacids can cause side effects, such as diarrhea or sometimes kidney problems.
- **Medications to reduce acid production.** These medications — known as H-2-receptor blockers — include cimetidine (Tagamet HB), famotidine (Pepcid AC), nizatidine (Axid AR) and ranitidine (Zantac). H-2-receptor blockers don't act as quickly as antacids, but they provide longer relief and may decrease acid production from the stomach for up to 12 hours. Stronger versions are available by prescription.
- **Medications that block acid production and heal the esophagus.** These medications — known as proton pump inhibitors — are stronger acid blockers than H-2-receptor blockers and allow time for damaged esophageal tissue to heal. Over-the-counter proton pump inhibitors include lansoprazole (Prevacid 24 HR) and omeprazole (Prilosec OTC, Zegerid OTC).

## Prescription medications

Prescription-strength treatments for GERD include:

- **Prescription-strength H-2-receptor blockers.** These include prescription-strength famotidine (Pepcid), nizatidine and ranitidine (Zantac). These medications are generally well-tolerated but long-term use may be associated with a slight increase in risk of vitamin B-12 deficiency and bone fractures.
- **Prescription-strength proton pump inhibitors.** These include esomeprazole (Nexium), lansoprazole (Prevacid), omeprazole (Prilosec, Zegerid), pantoprazole (Protonix), rabeprazole (Aciphex) and dexlansoprazole (Dexilant). Although generally well-tolerated, these medications might cause diarrhea, headache, nausea and vitamin B-12 deficiency. Chronic use might increase the risk of hip fracture.
- **Medication to strengthen the lower esophageal sphincter.** Baclofen may ease GERD by decreasing the frequency of relaxations of the lower esophageal sphincter. Side effects might include fatigue or nausea.

## Surgery and other procedures

GERD can usually be controlled with medication. But if medications don't help or you wish to avoid long-term medication use, your doctor might recommend:

- **Fundoplication.** The surgeon wraps the top of your stomach around the lower esophageal sphincter, to tighten the muscle and prevent reflux. Fundoplication is usually done with a minimally invasive (laparoscopic) procedure. The wrapping of the top part of the stomach can be partial or complete.
- **LINX device.** A ring of tiny magnetic beads is wrapped around the junction of the stomach and esophagus. The magnetic attraction between the beads is strong enough to keep the junction closed to refluxing acid, but weak enough to allow food to pass through. The Linx device can be implanted using minimally invasive surgery.

## Lifestyle and home remedies

Lifestyle changes may help reduce the frequency of acid reflux. Try to:

- **Maintain a healthy weight.** Excess pounds put pressure on your abdomen, pushing up your stomach and causing acid to reflux into your esophagus.
- **Stop smoking.** Smoking decreases the lower esophageal sphincter's ability to function properly.
- **Elevate the head of your bed.** If you regularly experience heartburn while trying to sleep, place wood or cement blocks under the feet of your bed so that the head end is raised by 6 to 9 inches. If you can't elevate your bed, you can insert a wedge between your mattress and box spring to elevate your body from the waist up. Raising your head with additional pillows isn't effective.
- **Don't lie down after a meal.** Wait at least three hours after eating before lying down or going to bed.
- **Eat food slowly and chew thoroughly.** Put down your fork after every bite and pick it up again once you have chewed and swallowed that bite.
- **Avoid foods and drinks that trigger reflux.** Common triggers include fatty or fried foods, tomato sauce, alcohol, chocolate, mint, garlic, onion, and caffeine.
- **Avoid tight-fitting clothing.** Clothes that fit tightly around your waist put pressure on your abdomen and the lower esophageal sphincter.

## Alternative medicine

No alternative medicine therapies have been proved to treat GERD or reverse damage to the esophagus. Some complementary and alternative therapies may provide some relief, when combined with your doctor's care.

Talk to your doctor about what alternative GERD treatments may be safe for you. The options might include:

- **Herbal remedies.** Licorice and chamomile are sometimes used to ease GERD. Herbal remedies can have serious side effects and might interfere with medications. Ask your doctor about a safe dosage before beginning any herbal remedy.
- **Relaxation therapies.** Techniques to calm stress and anxiety may reduce signs and symptoms of GERD. Ask your doctor about relaxation techniques, such as progressive muscle relaxation or guided imagery.

## Preparing for your appointment

You may be referred to a doctor who specializes in the digestive system (gastroenterologist).

### What you can do

- **Be aware of any pre-appointment restrictions**, such as restricting your diet before your appointment.
- **Write down your symptoms**, including any that may seem unrelated to the reason why you scheduled the appointment.
- **Write down any triggers to your symptoms**, such as specific foods.
- **Make a list of all your medications**, vitamins and supplements.
- **Write down your key medical information**, including other conditions.
- **Write down key personal information**, including any recent changes or stressors in your life.
- **Write down questions to ask** your doctor.
- **Ask a relative or friend to accompany you**, to help you remember what the doctor says.

### Questions to ask your doctor

- What's the most likely cause of my symptoms?
- What tests do I need? Is there any special preparation for them?
- Is my condition likely temporary or chronic?
- What treatments are available?
- Are there any restrictions I need to follow?
- I have other health problems. How can I best manage these conditions together?

In addition to the questions that you've prepared to ask your doctor, don't hesitate to ask questions during your appointment anytime you don't understand something.

## What to expect from your doctor

Your doctor is likely to ask you a number of questions. Being ready to answer them may leave time to go over points you want to spend more time on. You may be asked:

- When did you begin experiencing symptoms? How severe are they?
- Have your symptoms been continuous or occasional?
- What, if anything, seems to improve or worsen your symptoms?
- Do your symptoms wake you up at night?
- Are your symptoms worse after meals or lying down?
- Does food or sour material ever come up in the back of your throat?
- Do you have difficulty swallowing food, or have you had to change your diet to avoid difficulty swallowing?
- Have you gained or lost weight?

By Mayo Clinic Staff

---

Any use of this site constitutes your agreement to the Terms and Conditions and Privacy Policy linked below.

[Terms and Conditions](#)

[Privacy Policy](#)

[Notice of Privacy Practices](#)

[Notice of Nondiscrimination](#)

Mayo Clinic is a not-for-profit organization and proceeds from Web advertising help support our mission. Mayo Clinic does not endorse any of the third party products and services advertised.

[Advertising and sponsorship policy](#)

[Advertising and sponsorship opportunities](#)

A single copy of these materials may be reprinted for noncommercial personal use only. "Mayo," "Mayo Clinic," "MayoClinic.org," "Mayo Clinic Healthy Living," and the triple-shield Mayo Clinic logo are trademarks of Mayo Foundation for Medical Education and Research.

---

© 1998-2018 Mayo Foundation for Medical Education and Research (MFMER). All rights reserved.

