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Gastroesophageal Reflux Disease (GERD)

GERD – A Common Problem

Gastroesophageal reflux disease (GERD) is a common problem that affects many people. One in five people say they have GERD symptoms at least once a week. GERD often is referred to as acid reflux.

As you learn about GERD and its possible treatments by reading this information, think about how you can incorporate the suggested strategies and lifestyle changes.

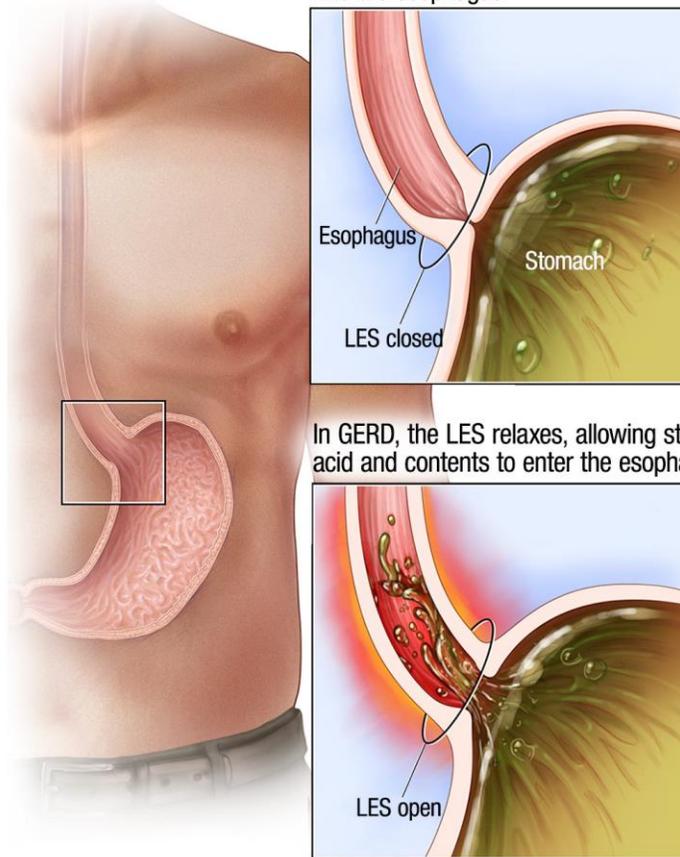
If you have any questions about this information, talk with your health care provider.

What is GERD?

During normal digestion, food or liquid travels from your mouth into your stomach through a tube called the esophagus. Acids and enzymes help digest food and liquids in your stomach.

At the lower end of the esophagus is a circular band of muscle called the lower esophageal sphincter (LES). The LES acts as a one-way valve. Food or liquid passes through it but stomach contents cannot come back up into the esophagus. See Figure 1.

The lower esophageal sphincter (LES) remains closed to keep stomach acid and contents from entering back up into the esophagus.



In GERD, the LES relaxes, allowing stomach acid and contents to enter the esophagus.

Figure 1. GERD

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If the LES muscle is weak or does not work correctly, for example it relaxes at the wrong time, the contents of the stomach can come back up into the esophagus (reflux).

The lining of the esophagus is sensitive to acid and is not protected like the lining of the stomach. This causes troublesome symptoms. For most people, the problem is not that they have too much stomach acid. Rather, the acid goes where it should not be.

When reflux happens often, typically two or more times a week, and interferes with daily life, it usually is considered gastroesophageal reflux disease (GERD).

Less common reasons for GERD are the lack of saliva or the loss of the esophageal squeeze that can delay the clearing of acid from the esophagus.

Symptoms of GERD

Heartburn and regurgitation are the two main symptoms of GERD. Heartburn is a burning feeling that may rise up behind the breast bone. It may be made worse by lying down, bending over or eating certain foods. Regurgitation is a feeling of food or fluid coming back up toward the throat. This may cause a bitter taste in the mouth.

Other less common GERD symptoms include sore throat, chronic cough, hoarseness, chest pain, or wheezing.

Hiatal hernia

Some people with a hiatal hernia also have symptoms of GERD. With a hiatal hernia, part of the stomach slides up into the chest. This keeps the diaphragm from working normally. This may be associated with a weaker LES.

When GERD symptoms are associated with a hiatal hernia, they are often controlled with medication. Only a small percentage of people who have a hiatal hernia need to have surgery.

Although hiatal hernias are common, many people who have one do not have symptoms of GERD.

Diagnosing GERD

To diagnose GERD, your health care provider asks about your symptoms. If you have typical symptoms that respond to treatment, no other tests may be needed. Testing may be needed if your symptoms are not typical or they are concerning such as unexplained weight loss or trouble swallowing.

If testing is needed to diagnose GERD, help determine how severe GERD is, or help with a treatment plan, you may have one or more of the following tests.

Upper endoscopy (EGD)

This test gives your health care team a direct view of the inside of your esophagus, stomach and upper part of the small intestine. It is used to look for any damage reflux has done to your esophagus.

During an EGD, a thin, flexible tube with a light and camera (endoscope) is put through your mouth and moved down through the esophagus, stomach and intestine. A sample of tissue may be taken during an endoscopy to test for inflammation. This is called a biopsy.

24-hour pH/impedance reflux test

This test measures acid and non-acid reflux of stomach contents that goes into the esophagus.

A thin, flexible tube with acid and non-acid sensors is put through your nose and moved down your throat into the lower esophagus. It stays there for 24 hours. The sensors measure how often and for how long stomach acid and non-acid goes up into your esophagus.

A second type of pH reflux test measures only acid reflux. For this test, upper endoscopy is used to place a wireless device against the wall of the esophagus. The probe in the esophagus measures refluxed stomach acid. After 48 hours of recording, the probe falls off and passes through the stomach and intestines.

Transnasal esophagoscopy (TNE)

This test is done to look for any damage in your esophagus.

A thin, flexible tube with a video camera is put through your nose and moved down your throat into the esophagus. The camera sends pictures to a video screen.

Complications of GERD

Ongoing reflux or reflux not treated effectively can cause the esophagus to become inflamed. Inflammation can damage the esophagus over time and lead to the following complications.

- A sore (ulcer) forms in the esophagus. The sore can bleed causing pain, difficulty swallowing, and anemia.
- The esophagus becomes narrowed from scarring into what is called a stricture. This can cause food to stick when you are trying to swallow it.
- Barrett's esophagus can happen. This condition has no symptoms. It needs to be taken seriously because sometimes it can lead to cancer.

Talk with your health care provider about your risk for these complications and what can be done to help.

Treating GERD

The first goal of treating GERD is to have no heartburn or regurgitation. It is not fine to have GERD symptoms a time or two each week. If you continue to have heartburn or regurgitation, you may need additional treatment.

The second goal is to prevent the complications listed previously.

Treatment options for GERD include:

- Lifestyle changes.
- Medications.
- Surgery.

Tell your health care provider if you still have GERD symptoms after making lifestyle changes and trying medication.

Lifestyle changes

Review the following lifestyle changes that are known to help improve GERD symptoms. Select those you want to do to improve the quality of your life.

- Eat smaller meals more often. Do not eat large meals or overeat, especially before exercising.
- Stop eating two to four hours before going to bed.
- Eat slowly and chew food well.
- Stand or sit upright for at least 30 minutes after eating.
- Raise the head of your bed 4 to 6 inches. To do this, put blocks or books under the legs at the head of your bed. See Figure 2. Or place a wedge under the mattress. Do not sleep on several pillows as this can increase pressure on your stomach and make GERD worse.

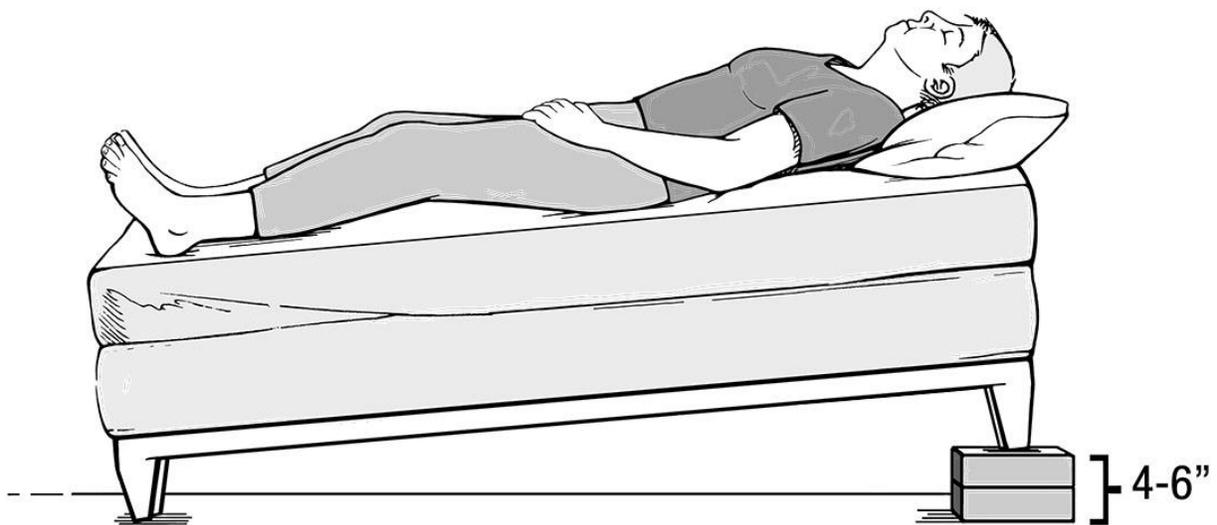


Figure 2. Raised head of the bed position

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- When you go to bed, start by lying on your left side to help make it less likely that you will have reflux.
- If you smoke, stop. Do not be around tobacco smoke.
- Lose weight if you are overweight. Excess weight around your waist causes more pressure on the stomach. Maintain a healthy weight.
- Limit how much alcohol you drink.
- Do not wear tight-fitting clothes.

- Limit or stop eating foods that bring on your GERD symptoms or make your symptoms worse. Some foods that can cause or worsen GERD symptoms are listed below. You do not need to limit or stop all of the foods listed, only those that bring on or worsen your GERD symptoms.
 - Fatty foods, including cream sauces, butter, margarine, shortening
 - Fatty meat including high-fat hamburgers, bacon, sausage and ribs
 - Chocolate, especially high-fat milk chocolate
 - Spearmint, peppermint
 - Tomatoes and tomato-based products
 - Citrus fruit and juice
 - Caffeine
 - Carbonated drinks, especially soda pop with caffeine
 - Fried foods such as French fries and onion rings
 - High-fat dairy products including whole milk
 - Peanut butter and high-fat nuts
 - Hot sauces and peppers
 - Garlic
 - Onion
 - Apples
 - Cucumbers and pickles
 - Green peppers
 - Spicy food

Medications

Your health care provider may recommend that you take medication to help relieve GERD symptoms and to prevent complications of GERD.

It is important to follow your health care provider's instructions and the directions on the medication package so that the medication works effectively.

All medications may have side effects and risks. Talk with your health care provider about the side effects and risks associated with the medications. One common side effect can be decreased calcium absorption. Talk with your health care provider about having your calcium levels checked.

There are two main types of medication for the treatment of GERD: quick relief and long-term prevention.

Sometimes over-the-counter (OTC) medication is recommended. These include:

- Antacids to neutralize stomach acid. Antacids usually work within minutes to give quick relief for symptoms. However, antacids cannot heal an inflamed esophagus damaged by stomach acid.
- Alginic acid to protect the esophagus from acid.
- Medication to lessen how much acid the stomach makes.

- Histamine 2 blockers or H-2-receptor blockers do not act as quickly as antacids but they provide longer relief.
- Proton pump inhibitors (PPI) are the most potent blockers of acid and may work for up to 24 hours. A PPI does not stop reflux but it can help relieve symptoms.

If your symptoms are not relieved within a few weeks of taking OTC medications, your health care provider may recommend prescription medication such as:

- Prescription-strength proton pump inhibitor.
- Prescription-strength H-2-receptor blocker, which may be taken for both quick relief and long-acting prevention of symptoms.

Your health care provider usually recommends that you take the lowest dose possible to control GERD symptoms. Sometimes medications to treat GERD are combined to increase effectiveness.

It may be possible to no longer need medication to relieve GERD symptoms if the lifestyle changes you make stop your GERD symptoms.

Paying for medications to treat GERD

Likely, you will need to take medication to treat GERD for a long time. Therefore, it is important to plan for how you will pay for medications.

Start by talking with your health insurance provider. Ask about the cost your insurance covers and the cost you would pay out-of-pocket for the medications your health care provider is recommending that you take. You also may need to go to several stores to check prices for over-the-counter medications.

If you have questions about medications, talk with your health care provider.

Surgery

Surgery may be recommended if GERD symptoms continue even after you make lifestyle changes and take recommended medications. Surgery also may be recommended if you cannot tolerate the medications.

Surgery may be necessary if you have:

- An esophageal sphincter that needs to be bolstered by the top part of the stomach or a metal ring.
- A large hiatal hernia.
- Inflammation of the esophagus, especially with bleeding.
- Recurrent narrowing of the esophagus.
- Barrett's esophagus, especially with progressive precancerous changes.

- Severe or ongoing lung problems such as bronchitis or pneumonia due to acid reflux.

The surgical treatment for GERD is fundoplication. This treatment gives additional support to muscle in the lower esophagus to prevent backwash of stomach acid into the esophagus. There are several approaches to this surgery including:

- Nissen fundoplication. It is done either laparoscopically (several smaller incisions), or open (one larger incision).
- Belsey Mark IV operation.
- Toupet fundoplication.

Talk about these surgical approaches with your surgeon. Together you can decide which approach is best for you. Ask for more information about fundoplication surgery, including any associated side effects, risks and complications. For example, after having surgery, your body may not be able to burp or belch or vomit.

General anesthesia is used, so you are asleep during the surgical procedure. The surgery usually takes about two to three hours.

Long-term results after surgery are very good. But some people eventually may need to take medication.

LINX™ procedure

A relatively new way to treat GERD is the LINX™ reflux management system. With this procedure, a strand of magnetic beads made of titanium is implanted around the outside of the lower esophageal sphincter. It reinforces the weak LES.

As you swallow food or liquid, the beads open to let it pass into your stomach and then the beads close. The magnetic attraction between the beads helps the LES resist opening to gastric pressures. This helps prevent stomach acid from entering your esophagus. The beads do not affect burping, belching or vomiting.

Talk about this procedure with your surgeon. Together you can decide whether it is an option for you. Ask for more information about it, including any associated side effects, risks and complications. The LINX™ procedure requires no alteration to the stomach. While its placement is less invasive than fundoplication surgery, it may not work as well as surgery for some people.

The magnetic beads do not have an effect on airport security or magnetic resonance imaging. Ask your health insurance provider if your insurance covers this procedure.

This material is for your education and information only. This content does not replace medical advice, diagnosis or treatment. New medical research may change this information. If you have questions about a medical condition, always talk with your health care provider.

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