

Gastroesophageal Reflux

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What is it?

Gastroesophageal reflux (commonly known as heartburn) is a burning feeling in the lower chest, along with a sour or bitter taste of food in the throat and mouth. It usually occurs after eating a big meal, or while lying down. The feeling can last for a few minutes or as long as a couple of hours. Despite the common name "heartburn", it doesn't effect the heart.

What causes it?

When you eat, food passes from your mouth down a 10-inch tube called the *esophagus*. To enter the stomach, the food must pass through an opening between the esophagus and stomach called the *lower esophageal sphincter* (LES). This sphincter acts like a valve to keep acid out of the esophagus.

The LES to the stomach usually closes as soon as food passes through. This sphincter normally keeps the contents of the stomach sealed off from the esophagus except during swallowing, burping, or vomiting.

Occasionally, if the LES doesn't close, or increased pressure in the stomach causes the valve to open, acid in the stomach goes through the LES and up the esophagus. This is called gastroesophageal reflux. The stomach acid can irritate the esophagus. It's the cause of heartburn and the other symptoms associated with gastroesophageal reflux.

There is also a condition, called a *hiatal hernia*, in which part of the stomach is pushed up through the *diaphragm* (the muscle wall between the stomach and chest) and into the chest. Sometimes this can cause gastroesophageal reflux as well. Doctors used to think that hiatal hernia was the only cause of heartburn. But because hiatal hernia is common in people with or without heartburn, it's no longer believed to be the main source of gastroesophageal reflux.

Who gets it?

As many as 33% to 44% of adult Americans complain of heartburn at least once every month. However, up to 13% of Americans are affected by the symptoms of gastroesophageal reflux every day.

Many things can make gastroesophageal reflux worse. There are certain foods and medicines that cause the lower esophageal sphincter to relax. In

addition, increased pressure in the stomach can cause the sphincter to open at the wrong times. This allows the stomach contents to move up into the esophagus.

Things that cause the lower esophageal sphincter to malfunction

- * Cigarette smoking
- * Coffee and other caffeinated beverages
- * Alcohol
- * Whole milk
- * Citrus fruits and juices
- * Tomato-based products
- * Chocolate, mints, or peppermints
- * Fried or fatty foods
- * Onions
- * Spicy foods (pizza, chili, curry)
- * Aspirin or Ibuprofen (Advil, Motrin)
- * Certain other medicines

Things that cause increased pressure in the stomach

- * Excess weight
- * Stooping over
- * Lying down after eating
- * Tight clothing
- * Constipation
- * Pregnancy
- * Overeating

What are the symptoms?

Most people have experienced heartburn and can describe its symptoms. There is a burning sensation in the chest that sometimes moves in waves upward from the stomach to the throat. At times there can be an unpleasant sour or bitter taste in the mouth. Additional symptoms can be sore throat, chronic hoarseness and cough, or laryngitis.

How do you prevent it?

In most cases, heartburn can be reduced in frequency or stopped altogether by simple changes in diet and lifestyle, but which may need to be permanent.

Tips on Preventing Heartburn

- * Stop smoking
- * Raise the head of your bed by placing 4" to 6" blocks under the legs at the head of the bed.
- * Try to eat two to three hours before lying down.
- * If you take naps, try sleeping in a chair.
- * Lose weight if you're overweight.
- * Eat smaller meals more frequently.
- * Eat high protein, low fat meals.
- * Avoid tight clothes, such as girdles and belts.
- * Avoid foods that irritate the stomach.
- * Avoid tension and stress.
- * Limit or avoid coffee and alcohol.
- * Avoid constipation by eating high fiber foods.
- * Drink plenty of water.

Can it be treated?

If the simple lifestyle and diet changes mentioned previously are not successful in preventing gastroesophageal reflux, there are several options for treating the disease. Your doctor may want you to take prescription medicine for several weeks as a trial, or to schedule you for some tests. The simplest, least expensive therapies are usually tried first and then treatment is advanced from there.

* **Antacids** give most people fast, short term relief of heartburn. Antacids neutralize the acid that your stomach makes.

Antacids can cause diarrhea or constipation. Look for antacids that contain both magnesium hydroxide and aluminum hydroxide. (One creates constipation while the other causes diarrhea, therefore counteracting each other.) Follow directions on the package. In general, take a dose of antacid about one hour after meals or at bedtime. You should see your physician for more advanced therapy if you are taking antacids three or more times per week.

* **H2 Blockers** (Tagamet, Zantac, Pepcid, Axid) decrease the acid that your stomach makes. When there's less acid produced in the stomach, then there is less acid that can reflux back into the esophagus causing symptoms. These medications can be dosed one to two times per day. They are all now available over-the-counter in less than the usual prescription strength. They are also available as generics in prescription strength.

* **Proton pump inhibitors** (omeprazole, lansoprazole, pantoprazole) almost completely stop your stomach from making acid. They are effective in the treatment of severe or persistent gastroesophageal reflux. Potential side effects include hip fracture, C diff colon infection, vitamin B12 deficiency and pneumonia. Therefore, proton pump inhibitors are generally used at the lowest effective dose for the shortest duration needed.

* **Pro-motility agents**, which improve esophageal contractions, increase lower esophageal sphincter pressure and promote stomach emptying, also can be effective. Currently the only agent is metoclopramide (Reglan) which is available as a generic. Although these agents don't reduce the amount of acid in your stomach, they do encourage the flow of food and acid downstream into the small intestine so that there is less reflux back upstream into the esophagus.

* **Surgery** is only needed when symptoms are very bad and won't go away after medical treatment has been tried. Surgery can be done to tighten the opening to the stomach, or to correct hiatal hernia.

Are there complications?

Just about everyone has heartburn now and then. If it occurs only occasionally, it's probably not serious. However, if gastroesophageal reflux is frequent (more than 3 times a week) or goes on long enough, it can lead to *esophagitis* (an inflamed lining of the esophagus). If the esophagitis becomes severe, your esophagus might narrow (*stricture*) and cause bleeding or trouble swallowing. Frequent heartburn can also be a sign of something more serious.

Heartburn is not associated with heart attacks, but sometimes pain in the chest may be mistaken for heartburn when it's really a sign of heart disease. It's also possible for heartburn to be the first sign of a complication like a bleeding ulcer. If you have pain when swallowing, vomit blood, have dark black or bloody stools, become short of breath, dizzy or light headed, or you break out in a sweat during the pain, you should call your doctor as soon as possible.

In summary

- * Gastroesophageal reflux is commonly known as heartburn.
 - Heartburn is caused by relaxation of the lower esophageal sphincter and/or increased pressure in the stomach, forcing acid into the esophagus.
 - Gastroesophageal reflux can often be treated with changes in lifestyle and diet.
 - If heartburn occurs frequently, does not respond to the measures mentioned in this handout, or is getting worse, you should contact your doctor.