

Gastroesophageal Reflux and Hiatal Hernia

Working with you as a partner in health care, your gastroenterologist at GI Associates will determine the best diagnostic and treatment measures for your unique needs.

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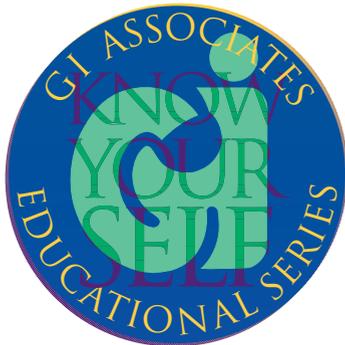
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The information contained in this brochure is intended as an educational tool, not as a substitute for medical care when needed.

Treating Symptoms

If you have symptoms from a hiatal hernia, the goal is to help you feel better. These suggestions may help:

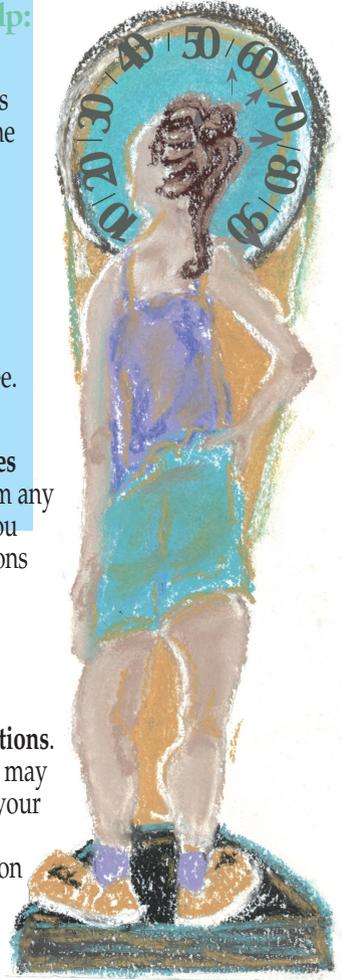
Lose excess weight. Excess weight puts pressure on the stomach and esophagus.

Avoid LES relaxers. Some things may relax the LES and cause reflux. Avoid cigarettes, alcohol, fatty foods, chocolate, and coffee.

Avoid anything that causes symptoms. Stay away from any food or drink that gives you problems. Many medications can cause symptoms. Discuss your medications with your doctor.

Try acid-reducing medications. Over-the-counter antacids may relieve heartburn. Talk to your doctor about other over-the-counter and prescription medication that can also help.

Surgery is rarely needed. Surgery is usually needed only for severe, uncontrolled symptoms. The diaphragm may be tightened. Or, the stomach may be placed back below the diaphragm.



Gastroesophageal Reflux

Gastroesophageal reflux, commonly called *reflux*, is back-up of gastric juice into the esophagus. It might be thought of as a “reverse flow” of the usual digestive process.

Patients with reflux experience feelings of burning and/or pressure in the stomach or upper abdominal area as a result of regurgitation or “burping-up” of sour stomach contents.

The uncomfortable sensation caused by reflux is often called *heartburn*, because of the burning sensation in the esophagus, and it’s location – fairly close to the heart.

What causes reflux?

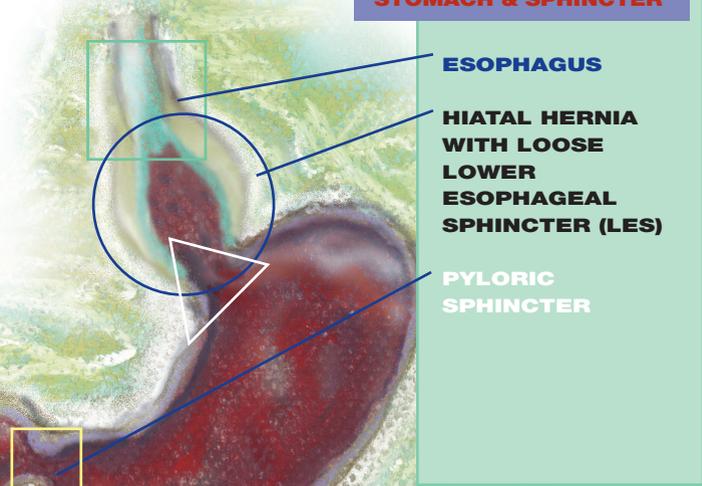
The entire gastrointestinal system functions with the help of *peristalsis*, continual muscular contractions, that help move food downward and through the various parts of the GI tract. That movement is helped by a number of muscular, valve-like structures (*sphincters*) that control the movement of digestive liquids and partially digested food. Such valves not only open to let digestive contents through, but also close to keep digestive contents from going backward.

Within the digestive tract, extremely *strong acid* (such as *hydrochloric acid*) and *digestive enzymes* (such as *bile* and *pepsin*) are necessary to break down the food we eat into a form that can be used to nourish body cells.

The muscle contractions and valve-like closures of the digestive tract provide a naturally protective action by keeping strong digestive liquids from hurting the tissues that line the GI tract. When irritating liquids do not move along as they should, damage can occur.

A valve-like structure known as the *lower esophageal sphincter* or *LES* is located toward the lower end of the esophagus (the tube through which food passes from the mouth to the stomach). The LES opens to let food into the stomach and closes to keep food and stomach acid from going back up. Another valve, located at the bottom outlet of the stomach, known as the *pyloric sphincter*,

CUT-AWAY VIEW OF STOMACH & SPHINCTER



operates in a similar manner, letting food into the small intestine and then closing to keep food and gastric juices from moving backward into the stomach.

If the LES fails to function properly, not only food, but caustic acid from the stomach may come back up into the esophagus, creating a burning sensation and irritating the lining of the esophagus. Similarly, if the pyloric sphincter at the bottom of the stomach fails to operate as it should, potent digestive juices, such as bile and pepsin, with partially digested food, may move backward, up into the stomach. It then may be regurgitated up into the esophagus, toward the throat/mouth.

Reflux is a fairly common occurrence, with many people having experienced it as a result of over-eating or other irritations of the GI tract. Others, however, may experience reflux as a frequently occurring or chronic problem. Chronic reflux can cause extreme discomfort and actual tissue damage to the esophagus, from repeated exposure to acid secretions.

Note: Some people need to completely avoid smoking, drinking and eating the foods/beverages mentioned. Others with a less severe problem may be able to just cut down somewhat. Ask your doctor, if in doubt.



Medications

Your GI doctor will prescribe antacids, prescription medications or both to help treat reflux.

Antacids

Many antacid medications are sold over-the-counter (can be obtained without a prescription) at drug stores, grocery stores and numerous other locations. These are very effective at neutralizing the acid in your stomach and relieving the heartburn and indigestion that often accompany reflux.

Liquids seem to work a bit better than tablets. The antacid should be taken consistently, at frequent intervals, to be most effective. Your GI doctor will recommend a dosage schedule. The following are examples of antacids that you may use:

- Alternagel • Amphogel • Basojel • Digel • Gaviscon • Gelusil • Maalox • Mylanta • Riopan • Roloids • Tums

Warning: Some antacids can cause loose stools when used in great quantities, while others may cause constipation.

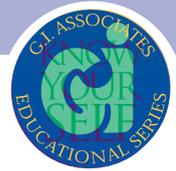
In addition, some antacids are safe for severely-restricted diets, while others are not. Each antacid has its own pros, cons, and side effects. Contact your GI doctor if you experience problems or need to discuss your choice of antacid.

Other Medications

In addition to antacids, your physician may prescribe a number of other medications to relieve your reflux problem. Be sure to take them as prescribed and report to your physician or pharmacist any difficulties or side effects.

In severe cases, where other measures have failed, as a last resort, surgery may be recommended (if the underlying cause can be surgically corrected).

What are the underlying causes of reflux?



Several factors may be responsible for the underlying causes of reflux:

Failure of the valve-like sphincters to open or close effectively may be caused by structural abnormalities such as hiatal hernia or an abnormal growth.

Hiatal hernia is the pushing up of the stomach into the chest cavity through a hole in the diaphragm. The presence of a hiatal hernia may hinder the action of the LES. Almost all persons who have hiatal hernias will experience some degree of gastroesophageal reflux, thus it is the leading cause of reflux. If the esophageal hiatus is too wide, part of the stomach may bulge above the diaphragm. This bulge is called a hernia. If the LES is not tight, stomach acid may move up into the esophagus (reflux).

Irritation: Irritation of GI tissues from any cause (such as excess acid secretion) may be an underlying cause of reflux.

Abnormalities of the GI tract: Some abnormalities of the GI tract such as strictures (narrowed passages) can cause reflux, as can abnormal growths or tumors.

Another underlying cause of reflux is poor peristalsis (the wave-like muscular contractions in the GI tract). Poor peristalsis may be due to illness, certain medications or other causes.

The symptoms of reflux

Patients with reflux experience feelings of burning and/or pressure in the stomach or upper abdominal area and also may notice *regurgitation* (or burping-up) of sour stomach contents.

Burning pain may occur between 20 and 30 minutes after eating, especially after a heavy or particularly spicy meal. Sometimes nausea and regurgitation of stomach contents into the throat and mouth will occur (without vomiting). That may often be followed by foul-smelling breath.

Pain from reflux may be aggravated by bending over or lying down. In extreme cases, reflux may interfere with swallowing. That condition is known as *dysphagia*.

Your GI physician will give you dietary guidelines that will help you lose weight.

- 6. Don't bend or stoop forward after eating**, since it may help force stomach contents upward.
- 7. Avoid tight, restrictive clothing.** Do not wear anything that fits tightly around your waist or stomach. Loose comfortable clothing will help minimize your reflux problem.
- 8. Avoid some foods.** Some foods will aggravate reflux. Try to avoid the following:

Alcohol: Stop or cut back as much as possible

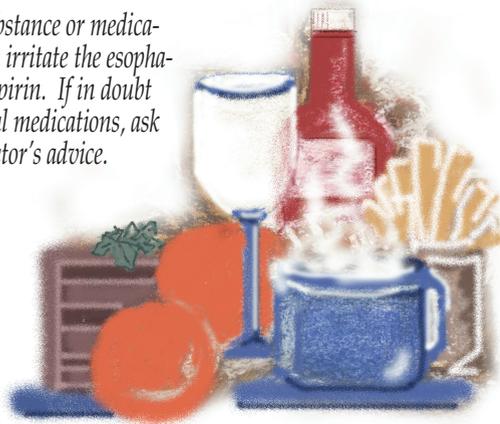
Coffee: Only in moderation (including regular as well as decaffeinated and *Sanka*)

Also avoid these:

- fatty, greasy, and fried foods
- chocolate
- citrus drinks (orange and grapefruit)
- tomato products
- spearmint or peppermint

Avoid any other food that seems to aggravate your problem.

Avoid any substance or medication that might irritate the esophagus, such as aspirin. If in doubt about any usual medications, ask for your GI doctor's advice.



**FOODS & BEVERAGES
TO AVOID**

Complications of reflux

Reflux can interfere with one's enjoyment of eating and can cause considerable frustration and anxiety among those who experience the problem. In addition to those life-style threats, more serious complications can also occur.

Esophagitis, an inflamed, irritated esophagus, may occur with reflux. It is sometimes severe enough to cause ulceration and bleeding of the esophagus. Esophagitis is an actual injury to the tissue of the esophagus resulting from repeated exposure to potent digestive secretions, such as *hydrochloric acid*, *pepsin* and *bile*.

With chronic reflux, scarring may occur in the esophagus. When this occurs, a *stricture* may form which interferes with the passage of food. The resulting problem with swallowing is referred to as *dysphagia*.

Professionals feel that there may be a link between reflux and the development of a condition known as *Barrett's esophagus* (especially among those patients who have reflux not caused by hiatal hernia). Barrett's esophagus is a condition that is often a precursor (beginning stage) of a form of esophageal cancer. Barrett's esophagus is thought to occur as a result of the chronic irritation of reflux, although much is still not known about the connection between the two problems.

To avoid both the every-day discomforts of reflux and the more serious complications, it is essential that your GI physician diagnose and treat the underlying cause of reflux.

Diagnosis

A detailed history can help your GI physician diagnose the cause of reflux. Your thorough explanation of your symptoms is an important part of that process.

Your GI physician may recommend that you have an *endoscopic examination* to determine the underlying cause of reflux.

That involves the insertion of a lighted tube into the esophagus, so your physician can actually see the inside of the esophagus, look for the cause of the problem and determine the extent of damage, if any.

Your GI physician may also order an upper GI X-ray to help discover the source of the problem.

What is the usual treatment for reflux?

Once reflux is diagnosed, an *anti-reflux program* can be started. Some patients have to maintain a strict program to relieve symptoms, while others with less severe symptoms, may not have to alter their usual routine very much.

Treatment of esophageal reflux consists of two major components, *lifestyle changes* and *medication*.

Lifestyle Changes:

- 1. Don't smoke!** If you can't stop completely, cut down. Cigarettes (and other types of tobacco products) cause increased acid secretion that can aggravate reflux and contribute to ulcer formation. In addition, it has been proven that patients who use tobacco products have a more difficult time healing from a GI problem such as esophagitis or an ulcer. Also, those patients who smoke are more likely to have such problems recur.
- 2. Avoid large meals.** Try to eat smaller, more frequent meals. Also, avoid eating fast.
- 3. Don't lie down immediately after eating.** Wait at least 3 hours after meals before going to bed.
- 4. Elevate the head of your bed.** Elevating the head of your bed four inches or more (depending on your doctor's recommendation) will help keep acid and stomach contents in your stomach instead of backing up into your esophagus. Wooden blocks or books are often used for this purpose. If that is not possible, ask your doctor for suggestions.
- 5. Avoid excess weight.** If you are overweight, try to shed pounds. Being overweight contributes to the problem.

