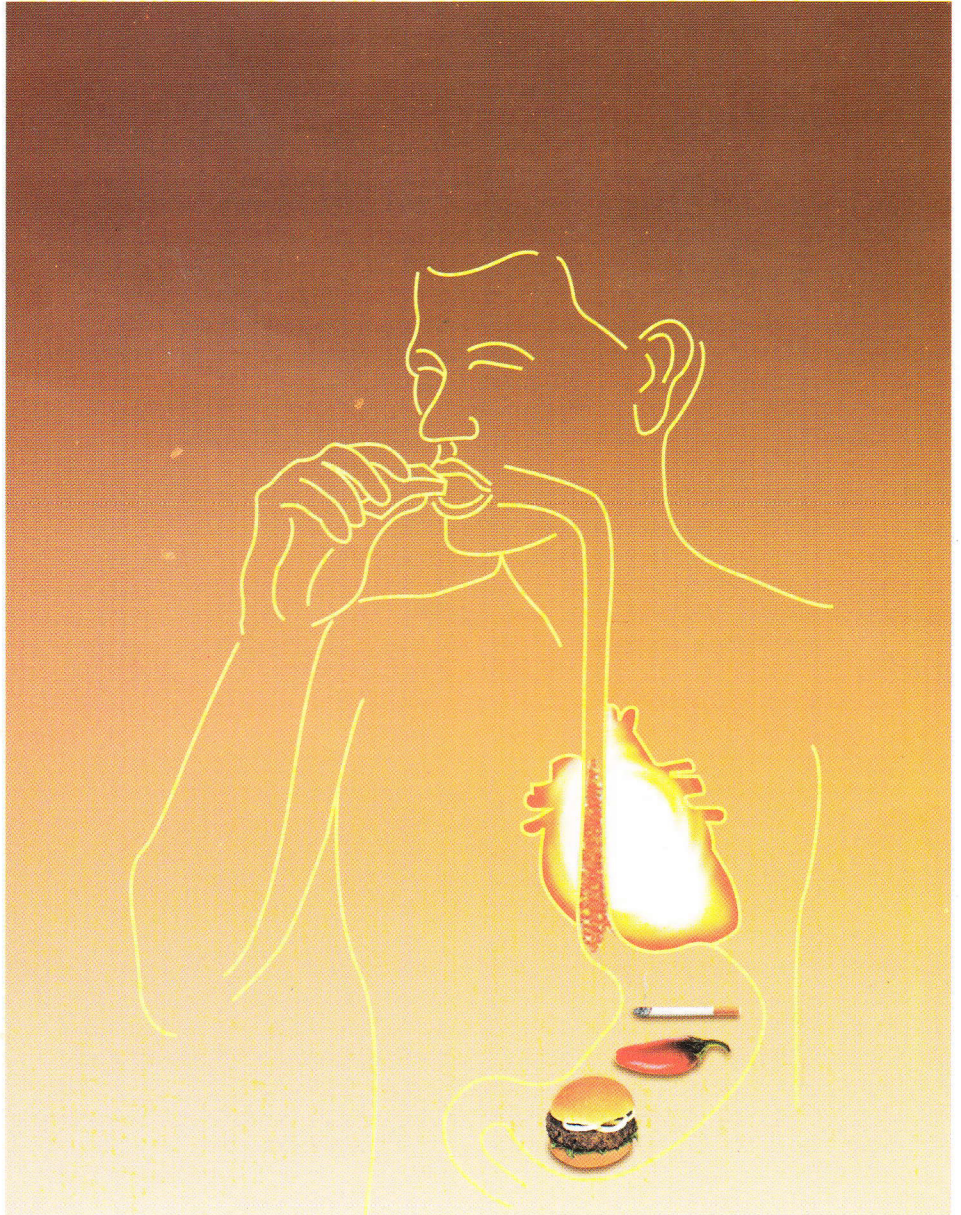


HEARTBURN AND REFLUX



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Heartburn is the burning sensation which is felt in the chest. This is the most common symptom of a condition called Gastroesophageal Reflux Disease (GERD) or acid reflux. A valve-like structure, known as the lower Esophageal sphincter, allows food to pass into the stomach. The LES muscle then closes quickly to prevent the return (reflux) of food and stomach juices back into the esophagus.

In patients with Heartburn and GERD, the LES muscle does not work properly. Gastroesophageal reflux occurs when the LES muscle either relaxes inappropriately or is weak. This allows stomach juices to back up, or reflux, into the esophagus (food-pipe). When the acid contents from the stomach regularly back up into the esophagus, a chronic condition called GERD occurs. Heartburn is sometimes called acid indigestion and usually occurs after meals especially spicy, deep fried oily meals. In addition to heartburn, symptoms of acid reflux may include persistent sore throat, hoarseness, chronic cough, asthma, heart attack-like chest pain and a feeling of a lump in the throat. These symptoms may be accompanied by a bitter or acid taste in the mouth.

There are several factors that influence the frequency and severity of acid reflux: the ability of the LES muscle to open and close properly, the type and amount of stomach juices that reflux up into the esophagus, the ability of the stomach to empty properly, the clearing action of the esophagus, the acid-neutralizing effect of saliva and other factors.

What is the Relationship Between Heartburn and Hiatus Hernia?

Hiatus hernia is a common condition that occurs when the stomach gets partially displaced in the chest cavity through a weakness in the diaphragm. A persistent hiatus hernia may produce significant heartburn. However, many people who experience heartburn do not have hiatus hernia. Likewise, many people with a hiatus hernia do not experience heartburn.

Is Heartburn Serious?

Heartburn and reflux are very common. All of us experience heartburn, it is the frequency and severity which differentiate between occasional heartburn (that may not require any treatment) to those individuals who require regular treatment. Women with pregnancy is a special group in which heartburn is very common. Usually it is not serious or life threatening.

What are the Complications of Reflux and Heartburn?

Acid reflux can sometimes result in serious complications.

1. Esophagitis, an inflammation of the food-pipe.
2. Bleeding and ulcers in the esophagus.
3. Narrowing (stricture) of esophagus which may cause difficulty in a person's ability to swallow.

Some people develop a condition known as Barrett's esophagus, a change in the cells of the tissue living at the bottom of the esophagus that can increase the chance of developing cancer. GERD can cause problems in the lungs resulting in asthma and bronchitis. GERD may result in dental caries, hoarseness of voice or it may lead to cancer of the voice box.

Diagnosis of Heartburn and GERD

Often your doctor can acid reflux based upon your symptoms alone without the need for any testing. However, tests may be required to determine its severity and complication. The various tests used to diagnose reflux are:

- **Upper GI Barium Series** — Patient drinks liquid contrast to coat the esophagus, stomach and X-rays are taken.
- **Upper GI Endoscopy** — Patient is given a sedative and a lighted, flexible tube called an endoscope is passed into the esophagus and stomach to inspect the inner lining. If necessary, a biopsy can be taken for further testing. This is the best test to show the damage to the food pipe.
- **Twenty-four-hour pH monitoring** — This is a very important test to correlate the patient's symptoms with the reflux of acid into the food pipe. It is the gold standard test to explain the patient's symptoms and help the physician to modify treatment according to the individual's need. A very thin tube is passed to the bottom of the esophagus to measure the amount of acid reflux. The tube is kept for 24 hours while the patient goes about normal activities, including eating. The episodes of acid reflux can be compared with symptoms reported by the patient.
- **Esophageal Manometry** — A specialized tube is passed into the esophagus to measure esophageal muscle function and the function of the Lower Esophageal Sphincter (LES) muscle.

Non-medical Tips to Prevent or Reduce Heartburn (Reflux)

The following are general measures the patient can take to reduce reflux:

- Avoid lying down right after eating and within two to three hours after dinner;
- Elevate the head of the bed four to six inches, not by ordinary pillow;
- Reduce weight if overweight;
- Stop smoking.

- Avoid eating large meals. Instead, eat smaller, more frequent meals.
- Avoid:
 - Chocolate and Coffee;
 - Fried and fatty foods;

- Mint products (i.e. peppermint, spearmint);
- Carbonated beverages, citrus fruits or juices;
- Tomato sauce, ketchup, mustard and vinegar;
- Aspirin and most pain medicines (other than acetaminophen).

Other Treatments

Medications:

Antacids — These widely available products can be found in liquid or tablet form. They neutralize stomach acid and can be taken as needed to relieve most heartburn symptoms quickly. However, antacids are short acting and do not prevent heartburn. They are less useful for frequent or severe heartburn.

Medications that decrease reflux from occurring — These medications are designed to tighten the esophagus/stomach barrier or improve stomach emptying to decrease reflux. These medications are sometimes useful but usually less effective than the potent acid blockers.

Medications that block acid production — These medications treat acid reflux by decreasing stomach acid output. They do not work as quickly as antacids but are far more effective because they prevent acid reflux for many hours at a time.

Surgery:

Surgery and other Procedures — Most people with heartburn can be successfully treated with lifestyle and dietary modifications and medication. A few may require surgery to tighten the LES muscle because medications are ineffective or because an alternative to medical therapy is desired. Surgery is not always permanently successful, and it can cause complications.

Recently endoscopy techniques have been developed to tighten the LES. However, the safety and effectiveness of these new alternatives compared to surgery are still under investigation.

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