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## Acid Reflux: Douse the Fire

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How do you envision your stomach? Is it a calm place, quietly digesting a bowl of warm chicken soup? Or a dark vat filled with powerful acids capable of attacking the toughest piece of meat and turning it into liquid? If you've ever suffered from gastroesophageal reflux, you probably realize that the second image is closer to reality.

The human stomach does have powerful acids capable of digesting any food that passes into it through the food tube, or esophagus. Once the food reaches the stomach, with its strong lining, a sphincter muscle closes tightly to keep it there. Then the stomach acids can do their tough job without interruption. Gastroesophageal reflux occurs when these stomach acids back up into the esophagus, creating an uncomfortable burning sensation, known as heartburn, and sometimes a regurgitation of a small amount of the sour-tasting liquid into the mouth.

Nearly everyone suffers from heartburn at one time or another, and about 20 percent of Americans have episodes at least once a week. Simple heartburn can usually be treated by self-help measures, but if you have been using over-the-counter remedies for two weeks or more, you should see a doctor. Longer and more frequent episodes of heartburn may indicate a more serious problem known as gastroesophageal reflux disorder (GERD). Since the lining of the esophagus is not made to withstand the assault of stomach acids, individuals with chronic heartburn eventually develop other symptoms such as a hoarse voice, sore throat, wheezing and difficulty swallowing. The most serious complication of GERD is Barrett's esophagus-severe damage to the lining of the food tube that doctors believe may be a precursor of esophageal cancer.

**Reasons for Reflux:** Reasons that stomach acids wash up into the esophagus are numerous. The stomach might be overly full or the production of stomach acid increased. A hiatal hernia, a break in the muscle wall that allows a portion of the stomach to protrude above the diaphragm-may also be involved. In many

cases, the sphincter is weak or overly relaxed. Cigarette smoking, chocolate, peppermint, fatty foods, coffee and alcoholic beverages can relax or weaken the sphincter muscle and make it more vulnerable when pressure is applied from below. This pressure might come from pregnancy, obesity, tight clothes, coughing, sneezing or sudden physical exertion.

The oldest, quickest way to douse the fire of heartburn is to take an antacid-Tums, Rolaids, Maalox, Gaviscon or Mylanta, all inexpensive and readily available without a prescription. Your great grand mother may have kept a roll of Tums in her purse. These products neutralize the acid-usually an effective remedy for occasional or mild heartburn. But long-term use of antacids can lead to side effects such as diarrhea and a change in the way the body breaks down and uses calcium.

When histamine<sub>2</sub> or H<sub>2</sub> blockers came on the scene, they offered a more effective option since they reduce the production of stomach acid. They take longer to work, however, so they are sometimes prescribed in conjunction with antacids. H<sub>2</sub> blockers include cimetidine (Tagamet HB), famotidine (Pepcid AC), Nizatidine (Axid AR) and ranitidine (Zantac 75). All are available over the counter or in stronger prescription strength formulations. When prescribed for four to six weeks, they are usually effective for mild to moderate cases of gastro esophageal reflux.

Other drugs, which might be prescribed, include prokinetic agents such as bethanechol (Urecholine) and metoclopramide (Reglan). These are designed to strengthen the sphincter and speed the process of emptying the stomach from below. Since they were introduced, proton pump inhibitors such as omeprazole (Prilosec), lansoprazole (Prevacid), pantoprazole (Protonix), rabeprazole (Aciphex) and esomeprazole (Nexium) have become a mainstay of treatment, particularly for more difficult cases. These drugs block virtually all acid secretion, and they are effective for nearly all patients.

In addition to medications, a doctor is likely to recommend lifestyle changes:

- Avoid foods that tend to relax the sphincter or increase pressure such as peppermint, chocolate, fatty dishes, coffee and alcohol.
- Stop smoking.
- If the esophagus is inflamed, avoid high-acid foods such as tomatoes, peppers and citrus fruits that can irritate the lining.
- Lose weight.

- Wear loose clothing.
- Refrain from eating at least three hours before bedtime and avoid exercise or bending over right after meals.
- Replace large meals with several smaller ones.
- Raise the head of your bed six to eight inches.

Surgery is rarely needed for GERD, and its effectiveness has been questioned. Proton pump inhibitor therapy and lifestyle changes bring relief to most patients; when they don't, doctors use a variety of tests and procedures before proceeding. An *upper GI series* involves taking special x-rays of the esophagus, the stomach and the upper part of the small intestine after the patient has swallowed a barium solution. This test can reveal ulcers or scarring that may be contributing to the problem. *Upper endoscopy* involves placing a small-lighted tube with a video camera on the end down the throat to allow the doctor to examine the lining of the esophagus and take biopsies of abnormal or questionable issue.

An *ambulatory pH test* can be used to monitor acidity levels and symptoms during a variety of activities during the day. Standard surgical treatment is a procedure known as fundoplication. A pouch of tissue from the upper part of the stomach is wrapped around the sphincter to strengthen it. For quicker recovery, this procedure can be performed with a laparoscope and a small incision. Recent non-surgical options focus on reinforcing the lower esophagus and its sphincter muscles. The Bard EndoCinch uses stitches and little pleats. The Stretta system toughens the muscle with scar tissue created by tiny cuts made with electrodes. The Enteryx implant is a liquid injected during endoscopy that solidifies into a spongy implant, reinforcing tissue in the lower esophagus. All of these procedures have been found to improve symptoms and are FDA-approved, but the long-term effects are unknown.

Eating is one of life's great pleasures. With effective treatments for heartburn and GERD now readily available, there's no reason anyone should have to suffer a fiery aftermath.

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