



The American Gastroenterological Association's

digestive Insight

May 2003

AGA: The Indispensable Resource for Training, Education, Research and Patient Care



About The AGA

The American Gastroenterological Association (AGA) was founded in 1897 and is one of the oldest non-profit specialty medical societies in the country. The AGA membership represents every facet of gastroenterology practice, research and education. With nearly 14,000 members, the AGA is the largest gastroenterological association in the United States and among the largest medical societies of GI clinicians in the world.

To learn more about the AGA and its extensive patient information offerings, visit our Website at <http://www.gastro.org>.

FOUNDATION FOR DIGESTIVE HEALTH AND NUTRITION: AGA'S FOUNDATION

The Foundation for Digestive Health and Nutrition (FDHN) is the foundation of the American Gastroenterological Association (AGA). It is separately incorporated and governed by a distinguished board of AGA physicians and members of the lay public.

Along with the AGA, the Foundation conducts public-education initiatives related to digestive diseases and works with volunteer physicians to raise funds for research and public education in the prevention, diagnosis, treatment and cure of digestive diseases. Additionally, the Foundation produces numerous patient information materials on topics such as functional GI disorders, colorectal cancer and ulcers.



To learn more about the Foundation, please visit our Website at www.fdhn.org.

American Gastroenterological Association
4930 Del Ray Avenue
Bethesda, MD 20814
ISSN 524-7759

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Heartburn: A Minor Inconvenience or a Major Health Risk?

By Gina Rollins

Some people pop over-the-counter antacids like candy to self-medicate frequent bouts of heartburn. More effective medications and surgical procedures can provide better relief and reduce the potential for serious health problems due to long-term acid reflux.

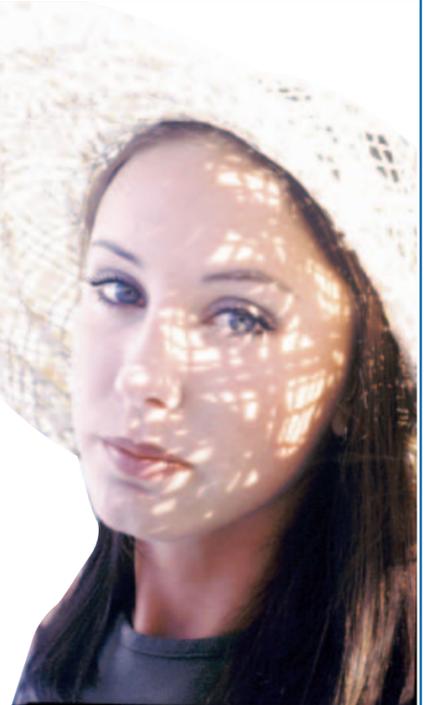
Hearthburn is one of the main symptoms of gastroesophageal reflux disease (GERD), or acid reflux disease, a condition that happens when acid from the stomach backs up (refluxes) into the esophagus (the tube that carries food from the mouth to the stomach). Normally, a muscle at the lower end of the esophagus — the lower esophageal sphincter (LES) — keeps acid in the stomach and out of the esophagus. The valve remains closed, except when food passes from the esophagus to the stomach or when gas vents from the stomach. For people afflicted with GERD, the LES relaxes far too often, allowing stomach acid to flow back into the esophagus. The burning sensation caused when the sensitive lining of the esophagus comes in contact with strong stomach acid is known as heartburn.

Not everyone experiences the same degree of discomfort with heartburn. In some, the mucous lining of the esophagus is more resistant to gastric juices, while in others saliva neutralizes gastric juices more effec-

Symptoms of GERD

- Swallowed food or fluid coming back into the mouth
- Difficulty swallowing
- Chronic hoarseness, sore throat, throat-clearing or coughing
- Chronic sinus problems
- Asthma or wheezing
- Vomiting
- Gas, belching, bloating or indigestion after meals.

tively. And sometimes the muscles of the esophagus have a better clearing action. Without these mechanisms, the esophagus's lining can become quite inflamed, creating intense heartburn.

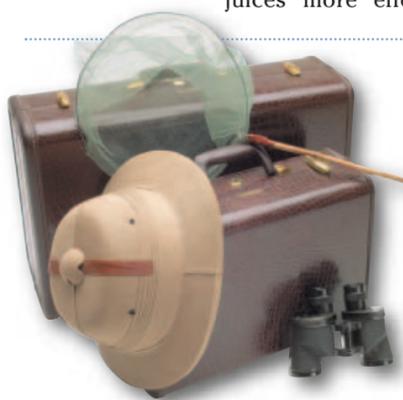


Is it a Heart Attack or Heartburn?

Heartburn can — and probably does — happen to just about everyone once in a while. It is estimated that more than 60 million American adults experience heartburn once a month. About 25 million Americans have heartburn daily. Heartburn usually occurs after meals or when lying down and can last as long as several hours. It has been described as a burning feeling in the stomach area that moves up into the chest or throat, but that's not always the case. "Every patient has his or her own perception of the symptoms," explains AGA member Reza Shaker, MD. "Some people just experience pressure, some burning, some discomfort. Others just report an unusual feeling."

Since the sensation of heartburn is not the same for every person, it can be confused with heart pain. However, more commonly, heart pain is mistaken for heartburn. Only with a full medical evaluation is it possible to know definitely whether the pain you're feeling is

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Tips for Travelers With GERD

By Kristen Counts

Summer is on its way, and many of us will soon be packing our bags, venturing out to get away from it all. Unfortunately, GERD (gastroesophageal reflux disease) insists on coming along for the ride. However, if the traveler with GERD takes along a little bit of know-how, symptoms can be controlled or prevented.

"When traveling, a number of things work against proper GERD precautions," says AGA member James Freston, MD, PhD, chair of the Foundation for Digestive Health and Nutrition.

He explains that what worsens the symptoms of GERD are those typical things that people do when vacationing, such as overeating, drinking alcoholic beverages and eating at later hours. Drinking coffee to stay awake while driving or to ward off jet lag is also common. Anyone who has GERD knows that these actions often lead to heartburn and other symptom flare-ups.

Dr. Freston encourages people to follow the same precautions whether at home or away, if at all possible, but he recognizes the tendencies of human nature.

"Let's face it. It is hard to adhere to those lifestyle measures while traveling," he says. However, he also points out that "medication can protect us from our own slothfulness.

He explains that proton pump inhibitors (PPIs) (a class of drugs that include Prevacid®, Nexium®, Protonix®, Aciphex® and Prilosec®) are very effective at preventing symptoms, even for people who are not so successful at following lifestyle precautions.

When at home, people with GERD often find some relief from symptoms by propping up the head of the bed six to eight inches. When on vacation, some try to prop themselves up with pillows, which is something that Dr. Freston strongly cautions against. He says that this causes bending at the waist, which increases abdominal pressure and exacerbates symptoms. He suggests sleeping in a chair in an upright or reclined position, if possible. ▲

GERD – Gastroesophageal reflux is the term used to describe a backflow of acid from the stomach into the swallowing tube or esophagus.

from heartburn or a heart attack, according to Dr. Shaker. "Cardiac pain is usually felt on the left, but there's no rule that it won't be felt elsewhere in the chest. Severe heartburn or acid reflux may be felt as pain usually behind the chest bone, but may radiate from the left to the right. So it's very difficult to know whether it's GERD or a heart attack, especially if the patient has other symptoms such as shortness of breath," he explains.

For this reason, chest pain "must be considered cardiac until it's determined otherwise," says Dr. Shaker.

Heartburn Triggers

Simple things like overeating and wearing tight clothes can put pressure on the stomach, forcing the LES to open. Certain foods and beverages, such as fatty or fried foods, chocolate, peppermint, alcohol, coffee and carbonated beverages, also can trigger the LES to open. Others, such as citrus juices, spicy foods and tomatoes, especially irritate the esophagus.

There may also be a hereditary link to GERD. Some families may be more prone to a weak or relaxed LES than others. Certain medications, such as blood pressure drugs and theophylline, can also cause the LES to relax, as can smoking. It's also not uncommon for pregnant women to experience heartburn.

A condition known as hiatal hernia may also play a role in heartburn. This happens when a portion of the upper stomach pushes up through an opening in the diaphragm, the muscle that separates the chest from the abdomen. Stomach acid can remain in this section and easily flush back into the esophagus.

Regardless of the cause, an occasional bout of heartburn is no reason for concern and can be remedied easily by moderating food intake or taking over-the-counter antacids or acid reducers. (See "Tips for Putting Out Heartburn," below.)

A Greater Health Risk

Chronic heartburn that occurs several times a week or even daily can cause disruption in one's life and more serious health problems. Over time, after repeated exposure to stomach acid, the esophagus can become inflamed (known as esophagitis) and may bleed or develop ulcers. The lining of the esophagus can also become thick and hardened, causing a stricture (narrowing) of the esophagus, which can make it difficult to swallow food.

Eventually, the constant irritation can lead to changes in the cells that line the esophagus, a pre-cancerous condition known as Barrett's esophagus. A small percentage of people with Barrett's esophagus go on to develop

esophageal cancer.

Unfortunately, many people with heartburn suffer in silence — sometimes for years — receiving little or no medical treatment. "Too often, people wait until the frequency and severity of their heartburn is so severe that they can't function, and their quality of life is severely impaired," explains AGA member Philip Schoenfeld, MD.

"You shouldn't wait until you experience severe symptoms to seek medical attention. If you experience heartburn two or more times a week for four weeks or more, then it's a good idea to have a check-up."

You should also seek treatment immediately if you experience:

- Sudden difficulty swallowing.
- Vomiting blood or passing black or bloody stools;
- Fatigue, fever or weight loss; or
- Vomiting undigested food.

Depending on your age and the severity and length of time that you've experienced heartburn, your doctor may need to perform some tests. One of the most common is endoscopy, during which a doctor inserts a thin tube with an attached computer chip down your esophagus to view it and your stomach. Patients diagnosed with Barrett's esophagus may need to undergo endoscopy regularly.

Another test used to diagnose the severity of heartburn and GERD is a pH-monitoring test. This test entails the placement of a thin probe in your esophagus for 24 hours. It records how much and how often acid flushes into your esophagus. Yet another test measures the pressure of esophageal muscle movements.

Most patients can be treated successfully with prescription medications such as H2-blockers or proton pump inhibitors that halt the production of stomach acid. H2-blockers work by stopping one of the signals that tells stomach cells to produce acid. Several, such as Pepcid AC®, Tagamet HB® and Zantac 75® are available over the counter. Prescription strength H2-blockers are also available.

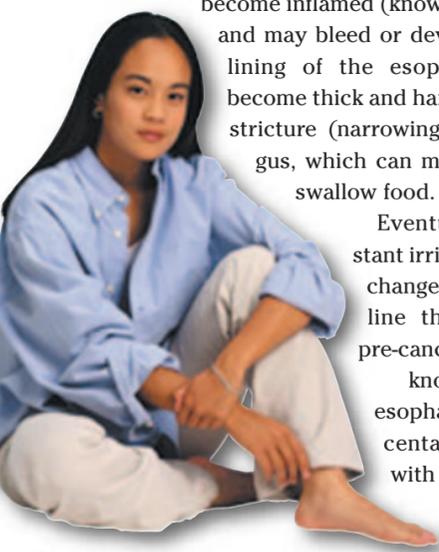
Proton pump inhibitors, which are available only by prescription, block the final pathway of acid production, therefore blocking the action of all three signals that tell the stomach to produce acid. They are more effective than the H2-blockers.

People with mild or moderate heartburn may not require prescription medications over a long time. Instead, their discomfort may lessen with life-style modifications and the occasional use of over-the-counter medications, according to AGA member Stuart Spechler. Most people with severe heartburn will see their symptoms go away as long as they take their medication as prescribed. In about 10 percent of cases, however, medication does not end the problem.

Surgery or other procedures may be necessary to bring relief. One operation that eases GERD is fundoplication, which involves wrapping part of the stomach around the lower end of the esophagus. This keeps pressure on the LES, helping it to stay closed. ▲

You should also seek treatment immediately if you experience:

- Sudden difficulty swallowing
- Vomiting blood or passing black or bloody stools
- Fatigue, fever or weight loss
- Vomiting undigested food.



Tips for Putting Out Infrequent Mild Heartburn

People with infrequent, mild heartburn can usually control their symptoms by changing their eating habits, making lifestyle modifications or taking over-the-counter medications. You will have a better chance of controlling your symptoms if you:

1. **Watch what you eat.** Certain foods create heartburn either by causing the LES to relax or by irritating the lining of the esophagus. These foods vary from person to person; what affects you may not bother someone else. However, some common offenders include fatty or fried foods, citrus fruits or juices, tomato sauces, spicy foods, chocolate, peppermint, coffee, carbonated beverages and alcohol.
2. **Lose weight.** Obesity places pressure on the stomach, causing it to push acid into the esophagus.
3. **Chew gum after you eat.** Chewing gum can cause you to produce saliva, which helps neutralize stomach acid.
4. **Don't smoke.** Smoking causes the LES to relax, so quitting may help relieve your heartburn.
5. **Don't overeat.** An over-stretched stomach can increase pressure on the LES, causing it to open and allow gastric acid to flow back up the esophagus.
6. **Don't eat late at night.** Going to bed before the acid in your stomach has decreased or the stomach has at least partially emptied can cause heartburn. It's better to eat at least two to three hours before bedtime.
7. **Raise the head of your bed.** Lying flat in bed makes it easier for gastric acid to back up into your esophagus. Raising the head of your bed six to eight inches on blocks also can help reduce the backward flow of stomach contents.
8. **Wear loose-fitting clothes.** Tight clothes and belts can put pressure on your stomach, causing it to push acid into the esophagus.
9. **Try over-the-counter remedies.** Antacids and over-the-counter acid-reducers (H2 blockers) are good remedies for the occasional bout with heartburn. Antacids neutralize acid that's already in your stomach. Acid reducers decrease the amount of stomach acid produced. If you've just finished eating and feel a bit of heartburn, then you might consider an antacid. But if you're planning to have a spicy dinner, an acid reducer taken beforehand may prevent your heartburn. If you find yourself taking such products more than a few times a week, then you should seek medical attention.

MESSAGE FROM THE PRESIDENT

Dear Reader:

This week Orlando is hosting Digestive Disease Week® (DDW), the largest meeting of gastroenterologists in the world. Nearly 14,000 physicians, scientists, journalists and industry colleagues are gathering to share the latest information on the causes, diagnosis and treatment of digestive diseases.

We would like to take this opportunity to bring you current information about two important topics: gastroesophageal reflux disease (GERD) and the risks of non-steroidal anti-inflammatory drugs (NSAIDs). These articles in this insert are taken from our consumer magazine, *Digestive Health & Nutrition*, published by our Foundation for Digestive Health & Nutrition.

We hope you will visit our Website, www.gastro.org, to learn more about us and the GI disorders our members treat.

Sincerely yours,

Martin Brotman, M.D.
President

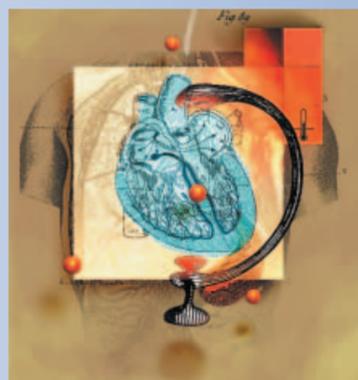
American Gastroenterological Association



Uncovering Lesser-Known Symptoms of GERD

When you hear the words gastroesophageal reflux disease or GERD, you usually think of heartburn. However, doctors now know that GERD is manifested in some previously unsuspected forms.

By Sharon J. Wood



According to AGA member H. Juergen Nord, MD, heartburn is only one symptom of GERD. Other symptoms, known as extraesophageal manifestations, occur outside of the esophagus.

Dr. Nord explains that these manifestations are basically separated into three groups. The first group is pulmonary — primarily asthma and chronic bronchitis. The second group is ear, nose and throat — consisting of cough, hoarseness, changing of the voice, the sensation of a ball sticking in the larynx and laryngitis. The third group includes the most important of all symptoms — chest pain, which can mimic heart attack.

Dr. Nord emphasizes the seriousness of chest pain: "The one thing we want to be absolutely sure about is that it's not the heart. It's critical with chest

pain that the patient have a very extensive and appropriate cardiac workup and that the cardiologist assure us that the symptoms are not related to the patient's heart."

In addition to heartburn, the most common symptoms of GERD are chronic cough, hoarseness, sore throat, frequent clearing of the throat in the morning and asthma. "Some studies suggest that up to 80 percent of adult-onset asthma that is not allergy related may be caused by acid reflux, especially if the episodes are frequent at night," says Dr. Nord.

How can such symptoms be caused by acid reflux? The problem develops at night when the person is lying down. With the body's mechanisms slowed down, acid can easily run up the esophagus and enter the extremely sensitive tissue in the

Continued on page 3: Uncovering...

Common Pain Relievers Can Cause Serious GI Problems

Aches, pains, fevers, and painful conditions such as arthritis every day lead millions of Americans to look into their medicine cabinets for relief.



Many of us – 33 million – reach for a certain type of pain reliever called a nonsteroidal anti-inflammatory drug, or NSAID. Advil®, Motrin®, Aleve®, ibuprofen, naproxen, and aspirin are all examples of NSAIDs. Tylenol®, which is an acetaminophen product, is not an NSAID.

These drugs may sometimes cause indigestion, but they can also cause serious side effects such as stomach bleeding and ulcers. Every year, approximately 103,000 Americans are hospitalized because of a bleeding stomach ulcer caused by an NSAID, and 16,500 die. Unfortunately, there are no warning signs that NSAIDs are damaging your stomach, and problems can begin within the first weeks of taking an NSAID.

Those at risk for developing an NSAID-related

stomach problem include people over the age of 60, people who have had a previous ulcer, those who take certain steroids (such as prednisone), people who take blood thinners, and people who take NSAIDs chronically and in high doses.

If you're included in any of these risk groups, talk with your doctor or pharmacist about how to reduce your risk of developing an NSAID-related stomach problem. **Call 1-888-2REDUCE for more information from the American Gastroenterological Association's REDUCE campaign (Risk Education to Decrease Ulcer Complications and their Effects from NSAIDs).**

This effort is supported by an educational grant from Pfizer, Inc. and overseen by an independent board of medical advisors: chair C. Mel Wilcox, MD, University of Alabama, Birmingham; and co chairs Byron Cryer, MD, University of Texas Southwestern, and George Triadafilopoulos, MD, Stanford University. ▲

RUMBLINGS

A Reflux-Migraine Connection



In light of two recent case reports, scientists are now considering the possibility of a connection between gastroesophageal reflux and migraines. The cases involved two patients, a 43-year-old man and a 64-year-old woman, each concurrently suffering from gastroesophageal reflux and head-aches that originated from the teeth or gums and extended into the eye. For several years, both patients had been controlling their reflux through medication, but it wasn't until their doctors doubled their daily proton-pump inhibitor (PPI) doses that a connection became evident: Upon dose increase, both patients

reported that their head-aches had subsided.

This phenomenon has lead physicians to question whether some migraine sufferers who also complain of reflux might find headache relief once their reflux has been put in check with a larger PPI dose. Though the researchers recognize the possibility that the answer might lie in previously unknown preventive effects of PPIs rather than in a direct connection between reflux and migraines, they remain confident in their theory that reflux can trigger some forms of migraine.

Cephalgia 2002;22:555-56 ▲

Continued from page 2: Uncovering...

bronchi, trachea and voice box. This tissue is much more sensitive than the lining of the intestinal tract and, therefore, more easily damaged by small amounts of acid.

It is important to note that an endoscopy performed on a patient with extraesophageal symptoms will usually come back normal, and more sophisticated testing will need to be done to prove a connection.

If you find yourself experiencing any of these symptoms, you may want to see your doctor for a complete checkup. Fortunately, medicines or surgical procedures are usually successful in the treatment of GERD, regardless of its form. ▲

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When you are in doubt about the seriousness or cause of your digestive symptoms, visiting your doctor is the best option.

