

J. R. DICKEY, M.D., F.A.C.S., P.A.
DAVID T. ROARK, M.D., F.A.C.S., P.A.
W. DOUGLAS APPLING, M.D., F.A.C.S., P.A.

DANIEL J. FRANKLIN, M.D., F.A.C.S., P.A.
JOHN W. CRADDOCK, JR., M.D., F.A.C.S., P.A.
RANDALL W. BRAUCHLE, M.D.

Gastroesophageal Reflux (GER)

Do you have to clear your throat or cough often? Are you hoarse? Do you have difficulty swallowing? If you have these or other throat symptoms, you may have Gastroesophageal Reflux (GER) (when stomach acid washes up and irritates your throat). Although its symptoms can be troubling, GER is not life threatening.

GER is a condition that may be defined as a back flow or a return flow of the contents of the stomach into the esophagus. Gastric juices are acid and the acid burns the lining of the esophagus. Repeated episodes of reflux may cause esophagitis or an ulcer of the hypopharynx or esophagus.

Although throat symptoms can be felt at any time, you may notice them most when you are lying down. You may have one or more of the following symptoms: frequent need to clear your throat; feeling like you're choking, chronic cough; hoarseness; trouble swallowing; sensation of having "a lump in the throat;" sour or acid taste; recurrent sore throat.

To treat uncomplicated cases of GER:

AVOID:

- 1) Orange, grapefruit and tomato juices
- 2) Fried or fatty foods, pastries, gravy and chips
- 3) Heavy seasonings, spicy foods, raw onions
- 4) Alcohol
- 5) Coffee, tea or colas
- 6) Chocolate
- 7) Peppermint and spearmint
- 8) Aspirin, ibuprofen, Naproxin – these drugs reduce the stomach's ability to protect itself from the harmful effects of acid.

CHANGE YOUR LIFE-STYLE

- 1) DO NOT SMOKE – nicotine impairs healing and causes the same symptoms as eating the foods listed above.
- 2) Lose weight – overeating and excess weight contribute to increased symptoms
- 3) Eat small, well-balanced meals
- 4) Maintain a low-fat, high-carbohydrate diet
- 5) Avoid eating just before bedtime
- 6) Elevate the head of the bed six to eight inches. A bed wedge (DEDGE) made of foam rubber may be purchased through a medical supply company, or the entire head of the bed may be elevated on blocks or bricks.

BE CERTAIN THAT YOUR DOCTOR KNOWS ABOUT ALL THE DRUGS YOU ARE TAKING – some may be contributing to your reflux symptoms.

MEDICATE – one or more of the following medications may be helpful:

- 1) Zantac (Ranitidine) – 150mg twice daily;
- 2) Reglan (Metuclopramide) – 10mg thirty minutes before the evening meal;
- 3) Prilosec (Omeprazole) – 20mg thirty minutes before the evening meal;
- 4) Prevacid (Lansoprazole) – 30mg once daily before the morning meal;
- 5) Antacids (Maalox, etc.) – as needed for relief of pain or burning.

HEARTBURN

Cooling It

"Fire in the belly" may be a desirable trait in prizefighters or politicians, but the feeling of smoldering in the chest is an entirely different matter. Heartburn is the most common manifestation of *gastroesophageal reflux*, which occurs when a poorly functioning sphincter permits caustic digestive juices to escape from the stomach into the lowest few inches of the esophagus. Hydrochloric acid and a powerful enzyme called pepsin attack the tender lining of the esophagus and produce sensations of burning and pressure originating beneath the breastbone. (The same chemical mix doesn't normally cause pain in the stomach because sturdier cells line its walls, and they are protected by a layer of mucus.)

Most people experience heartburn only after overindulgence in food or drink; an unfortunate few wage a daily battle no matter how moderately they behave at mealtime. Because not everyone responds in the same way, an amount of refluxed juice that causes intense pain in one

person may produce no symptoms at all in another. When heartburn strikes, the simplest fire-fighting methods generally involve changes in eating and activity patterns. If these do not suffice, several medications — old and new — are available to help.

Many people believe that heartburn is caused by *hiatal hernia*, a structural variation in which the top part of the stomach protrudes up through the diaphragm, the muscular wall that separates the abdominal and chest cavities. This belief has been challenged by studies showing that small hernias are extremely common. Most people who have them don't have heartburn, while many heartburn sufferers don't have hiatal hernias. It is true, however, that the worst cases of reflux are usually associated with hiatal hernias, which may permit easier escape of fluid from stomach to esophagus.

Shedding habits

Because an overly full stomach is more apt to slosh its contents back into the esophagus, avoiding large meals is one of the best ways to keep gastric juices where they belong. It is also wise to forgo eating anything close to bedtime, because reflux is much more likely when a person is horizontal. People with nocturnal heartburn often find it worthwhile to change their angle of repose by placing six-inch blocks under the bedposts at the head end. Bed blocks are much more effective than a pile of pillows for keeping stomach juice out of the esophagus.

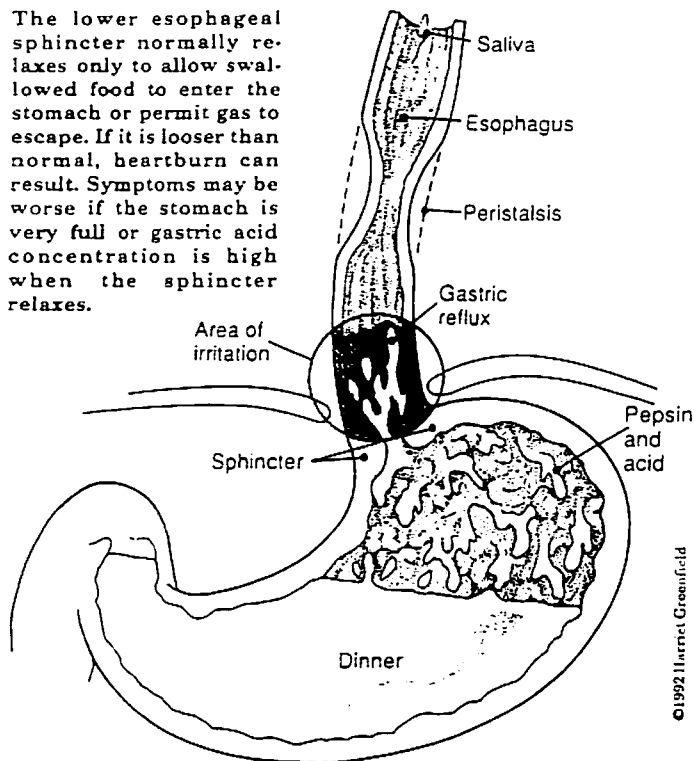
Certain foods, including tomatoes, citrus fruits, coffee, and spicy dishes such as chili, pizza, and curry, are infamous in heartburn circles. Onions, chocolate, peppermint, and high-fat foods are likely to loosen the sphincter at the top of the stomach (see box). This sphincter may also be weakened by the effects of tobacco, alcohol, and a variety of preparations including the antiasthma drug theophylline, anticholinergics such as those used to treat bowel spasm, cardiovascular medications such as calcium-channel blockers and nitrates, and tricyclic antidepressants. Aspirin and other nonsteroidal antiinflammatory drugs have also been implicated as heartburn producers.

Any increase in pressure within the abdomen will promote reflux. Bending over, or wearing a tight belt or corset, raises this pressure, as does abdominal obesity. People who have been tortured by heartburn often find that symptoms abate if they lose sufficient poundage.

At the counter

When heartburn strikes, an antacid will usually smother the flames. The most successful drug

The lower esophageal sphincter normally relaxes only to allow swallowed food to enter the stomach or permit gas to escape. If it is looser than normal, heartburn can result. Symptoms may be worse if the stomach is very full or gastric acid concentration is high when the sphincter relaxes.



Normally, esophageal peristalsis (wavelike muscular contraction) pushes refluxed gastric juice back to where it came from. The act of swallowing both initiates peristalsis and sends saliva, which helps neutralize stomach acid, to the irritated area of the esophagus. One reason why heartburn may be worse at night is that people don't swallow much while sleeping.

The Liberal Bland Diet

INDICATION: The Liberal Bland Diet may be indicated as part of the treatment for diseases of the upper gastrointestinal tract, such as a chronic ulcer disease, hiatal hernia and/or reflux esophagitis (gastroesophageal reflux - GER). It can help eliminate the symptom of heartburn caused by back flow of acids from the stomach into the esophagus.

DESCRIPTION: The Liberal Bland Diet is based on the Regular Diet and adjusted individually to omit any foods that regularly have caused discomfort. All foods should be selected according to individual tolerance to ensure proper nutrition on a routine basis. When shopping, read food labels and avoid foods made with ingredients not allowed. Recipes can be modified by substituting or eliminating certain ingredients not allowed or not well tolerated. Seasonings may be added to the family's meal after your portion has been removed.

GUIDELINES: The Liberal Bland Diet supplements the use of antacids and histamine (H₂) blockers. Three to six meals which exclude foods that may cause gastric irritation provide the framework of the diet. Know which foods you cannot tolerate. If you feel a food is causing discomfort, eat your normal diet, eliminating that food, and observe any changes in your symptoms. Eating before bedtime is contraindicated because of increased gastric acid production at night. The use of milk and milk products at bedtime to coat the stomach is discouraged as high protein foods cause acid production. Antacids and other medications used in medical management to reduce gastric acidity may also decrease the absorption of calcium, iron, and ascorbic acid. Should these medications be used for extended periods, the diet should be supplemented.

SUGGESTED MEAL PATTERN	SAMPLE MENU
<p style="text-align: center;">Breakfast Fruit or Juice Cereal Bread Margarine/Jelly Milk Beverage</p>	<p style="text-align: center;">Apple Juice Wheat Flakes Toast Margarine/Grape Jelly Milk, Low Fat Tea, no caffeine</p>
<p style="text-align: center;">Noon Meal Soup or Juice Meat/High Protein Food Bread Vegetable(s) Fruit/Dessert Milk Beverage</p>	<p style="text-align: center;">Cream of Celery Soup Sliced Chicken Sandwich with Lettuce Carrot Sticks Frozen Yogurt Milk, Low Fat Water</p>
<p style="text-align: center;">Evening Meal Meat/High Protein Food Starch Vegetables Bread/Margarine Fruit/ Dessert Milk Beverage</p>	<p style="text-align: center;">Broiled Fish Buttered Rice Green Peas Tossed Salad with French Dressing Hot Biscuit with Margarine Sliced Peaches Milk, Low Fat Tea, no caffeine</p>