



## Graedon's Guide to

# King Features

# Digestive Disorders

### Foods That May Cause Gas

apples  
bagels  
beans  
bran  
broccoli  
brussels sprouts  
cabbage  
cauliflower  
dried apricots  
kale  
milk  
nuts  
onions  
pretzels  
prunes  
radishes  
raisins  
sorbitol (in sugarless candy & gum)

It's criminal what we do to our digestive tracts. We skip meals, overeat, drink cup after cup of coffee, and grab lunch on the run. Americans snack their way through the day--doughnuts at the coffee break, chips, crackers or nuts in the afternoon and ice cream in front of the television at night. After all that abuse, we expect our systems to work perfectly and not talk back. When they rebel with belching, indigestion or gas, we are surprised and dismayed.

Even healthy foods can cause problems. When we fill up on fiber, flatulence can't be far behind. For years doctors told their patients that flatulence was due to swallowed air. People were advised to avoid chewing gum, carbonated beverages and drinking fountains so that they wouldn't swallow excess air. But now flatologists (scientists who study the fine art of farting) believe that most intestinal gas is created by bacteria in the large intestine feeding

upon carbohydrates that the body could not digest. This fermentation process produces gas--much like the bubbles in beer or champagne, but less pleasant.

Everyone passes gas, on the average about 14 times a day. Total output ranges from 2 to 8 cups daily. Some poor souls far exceed the average, however. One man was encouraged by his physician to keep a "flatulographic record" (fart chart). He wrote down each time he flatulated, and soon discovered that milk was his nemesis. On a plain milk diet he had 141 flatus events a day!

There is no way to predict which foods are worst for you. Some people react to onions, while others find that bagels and pretzels are the culprits. The best way to avoid gassiness is to keep your own flatulogram. Write down the foods you eat, and keep track of the gas you pass.

## FIGHTING FLATULENCE

One way to reduce gassiness is to avoid problem foods. You may not want to give up all the foods that make you fart, though. Many of them are high in fiber, low in fat, and filled with nutrients. Oat bran, fiber cereal, beans, onions, apples, broccoli--it's hard to imagine a heart-healthy diet without such staples.

### *Beano*

Hot line for information and free samples:  
(800) 257-8650  
weekdays 8:30-5:30 EST

There are several products that may make your life easier. The newest is called **Beano**. It contains an enzyme, alpha-galactosidase, that is supposed to break down those tricky carbohydrates, leaving little for bacterial fermentation. There is also a version for pets called **CurTail**, to "prevent pet gas".

If milk makes you feel bloated and gives you gas or diarrhea, you may not be able to digest the milk sugar lactose. This problem is common and becomes more so as we get older. **Lactaid** provides lactase enzyme to break this sugar down. Like **Beano**, it should be added to the food as you eat it. There are also enzyme pills and lactose-reduced milk and dairy products.

For information and free samples call (800) 522-8243.

### *CharcoCaps*

For free samples write:  
Requa, Inc., Dept. P  
P.O. Box 4008  
Greenwich, CT 06830

Activated charcoal is a time-honored material for adsorbing noxious fumes. It is, after all, the primary component in gas masks. It even works well in the intestine. Activated charcoal pills (**Charcocaps**, **Charcoal Plus**, **Flatulex**) can reduce the quantity of gas released and the discomfort that may occur as it collects.

Do not take charcoal with other medicine or nutritional supplements. It may interfere with their absorption and reduce the effectiveness of crucial drugs such as acetaminophen (**Tylenol**), barbiturates, carbamazepine (**Tegretol**), digoxin (**Lanoxin**) and tetracycline, among others.

# Heartburn

## **Foods that May Aggravate Heartburn**

Alcohol  
Cheese  
Chocolate  
Coffee  
Cola  
Dip  
Fried foods  
Grapefruit  
Oranges  
Peppermint  
Potato chips  
Raw onions  
Spearmint  
Tea  
Tomatoes

## **Medications that Make Heartburn Worse**

aminophylline  
diazepam  
nitroglycerin  
progesterone  
Provera  
Slo-Phyllin  
Theobid  
Theo-Dur  
theophylline

Probably everyone has experienced an uncomfortable suspicion, progressing to an outright certainty, that the meal that tasted so good going down was about to cause some trouble. The chili smothered with sour cream or the Philly cheese steak slathered with onions can bite back with a vengeance.

Heartburn is one of the most common afflictions. Of course, it has nothing to do with the heart. But it's easy to understand people's confusion. The pain often occurs under the breastbone and can be so intense a person might think he's having a heart attack. Equally, some heart attacks have been initially mistaken for heartburn.

The end of the food tube, or esophagus, is separated from the stomach by a ring of muscle called the lower esophageal sphincter (LES). Normally this muscle clamps tight, keeping acid and partly digested food in the stomach where they belong. It relaxes temporarily when you swallow to let food into the stomach. For reasons that are not well understood, sometimes this muscle becomes loose, lazy or otherwise weak. When this ring of muscle relaxes or lets up the pressure, stomach acid can splash back up into the gullet. Not only does this hurt; at times it can even damage the lining of the esophagus.

To avoid heartburn, stay away from things that can weaken the sphincter. A surprising number of foods and drugs can reduce LES pressure and increase the risk of splashback. Peppermint is a problem, as is chocolate. Coffee, alcohol, fatty foods and onions are also dangerous for those who are susceptible.

Many medicines may also relax the sphincter. Asthma drugs such as aminophylline (**Somophyllin**) or theophylline (**Bronkodyl**, **Slo-Phyllin**, **Theobid**, **Theo-Dur** or **Uniphyl**, among others) tend to open the LES along with the airways. Even birth control pills or hormone replacement with progestin can make people more vulnerable to heartburn. Nicotine is also very effective at relaxing the sphincter, so heartburn sufferers might wish to quit.

Overeating or lying down for a nice nap after dinner definitely makes it harder on the digestive machinery. Bend-

ing over works against gravity and can put a strain on the LES. It's smartest to stay upright after eating, sitting or even better standing. If heartburn is particularly bothersome at night, it may help to raise the head of the bed several inches.

Some people are far more susceptible to heartburn than others. It's a common problem of pregnant women, probably for two reasons: overweight increases the likelihood of heartburn, and most women gain weight during pregnancy; and the hormone progesterone, high during pregnancy, makes the LES relax. People with a hiatal hernia, in which the lower esophagus and stomach are higher than they should be, above the diaphragm, often experience bouts of severe heartburn called GERD (gastroesophageal reflux disease).

## **TREATMENT**

Heartburn and indigestion are often treated on the assumption that if you control "excess" acid, you can alleviate the problem. To a degree that is true, but it may not be the only approach.

The best way to keep acid from splashing up into the esophagus is to increase the muscle pressure of the sphincter. Although **Reglan** (metoclopramide) has been prescribed for this, it can cause fatigue, depression, insomnia, restlessness and muscle twitching. Another option is **Propulsid** (cisapride). This prescription drug tones up the sphincter, normalizes pressure within the digestive tract, eases chronic constipation in adults and children and relieves nighttime heartburn. Side effects of **Propulsid** include stomach ache, diarrhea, constipation, headache, stuffy nose, and changes in vision. Potentially dangerous interactions with other drugs, including **Biaxin**, **Coumadin**, **Diflucan**, erythromycin, **Nizoral**, **Sporanox**, and **Tagamet**, could pose serious problems. Check for incompatibility with any other drug you take.

There are some interesting home remedies that can help. Your body's own natural fire extinguisher is saliva. Sucking on a piece of hard candy or chewing on gum helps boost saliva production, which in turn helps wash acid back down into the stomach. Another way to wash

that acid down is with a soothing cup of herbal tea. Chamomile tea is a time-honored treatment for indigestion in many different countries. Peter Rabbit's mother even dosed him with it after he made such a pig of himself in Farmer MacGregor's garden!

More standard approaches include antacids and prescription medicines that reduce acid formation. Our first choice in over-the-counter acid-neutralizing remedies is calcium carbonate. Two cost-effective formulas are **Tums Extra Strength** and **Titralac** liquid. In addition to fighting acid, they provide an essential nutrient, calcium.

Aluminum-based antacids have been the basis for most heartburn and ulcer treatment for decades. Products like **Gaviscon**, **Gelusil**, **Maalox** and **Mylanta** are quite effective, but they are also somewhat controversial because they contain aluminum hydroxide. (See discussion below.)

Several potent acid-suppressing medicines have recently become available over the counter at lower doses for heartburn. These include **Zantac 75** (ranitidine), **Tagamet HB** (cimetidine), **Pepcid AC** (famotidine) and **Axid AR** (nizatidine). Instead of neutralizing stomach acid like antacids do, they cut down on its production. They have long been prescribed to treat ulcers as well as

GERD. OTC prices are considerably cheaper than their prescription counterparts, even taking the lower doses into account.

These drugs still have side effects. (See the discussion on page 4 and 5 for details.) One danger to watch for is drug interactions. **Tagamet** may change the body's ability to eliminate certain other medications, increasing their levels and effects. Check with your physician or pharmacist if you take any other drugs.

Even alcohol in beer, wine or liquor may be affected by **Tagamet** and **Zantac**. Some studies show that these acid-suppressing drugs could raise blood alcohol levels, but there is no consensus whether this is significant.

If heartburn warrants a doctor's attention, a powerful acid suppressor such as **Prilosec** (omeprazole) or **Prevacid** (lansoprazole) may be prescribed. These proton-pump inhibitors prevent the secretion of acid into the stomach. As a result, both are very effective against ulcers or GERD. Side effects include diarrhea, rash, headache or, rarely, muscle weakness. Suppression of stomach acidity over a long period of time may lead to inadequate absorption of other drugs and nutrients, especially vitamin B<sub>12</sub>. This could cause pernicious anemia, resulting in symptoms such as burning tongue and nerve damage.

## THE ALUMINUM CONTROVERSY

Aluminum is found throughout nature. Soil and water in many places contain this mineral. Municipal water companies even add aluminum sulfate to their water supplies to help precipitate sediment, so water will be clear. Some foods also contain aluminum, particularly baking powder and goods made with it, processed cheese and certain kinds of pickles. Personal hygiene products, especially antiperspirants, use aluminum, as do buffered aspirins and many antacids.

For years, no one worried about aluminum exposure. It was assumed that little if any of the mineral would be absorbed, and that it was not likely to cause trouble if it were. But circumstantial evidence has been accumulating that aluminum may be a "neurotoxin."

Aluminum accumulates in the damaged parts of the brains of Alzheimer's patients, although no one knows whether it contributes to the disease. Many kidney dialysis patients who were exposed to aluminum, either through antacids or the water used in the dialysis process, developed dementia.

Investigators do not agree about the significance of the aluminum research. Many downplay the danger while others point to studies linking long-term aluminum exposure to a higher incidence of Alzheimer's disease.

Aluminum may ultimately be proven harmless. But in the meantime, it may be wise not to cook acidic or salty foods in aluminum pots or overdo on products containing this ingredient whenever an alternative is available.

## *Drugs that May Interact with Tagamet*

Adalat  
alcohol  
antacids  
antidepressants (tricyclic)  
caffeine  
Calan  
Cardizem  
Centrax  
Coumadin  
diabetes pills  
Dilantin  
Dyazide  
Flagyl  
Halcion  
Inderal  
Isoptin  
Librium  
Lopressor  
Maxzide  
Normodyne  
Procardia  
Propulsid  
quinidine  
theophylline  
Trandate  
Tranxene  
Valium  
Verelan  
Xanax

## *Some Drugs that Contain Aluminum*

AlternaGEL  
Aludrox  
Amphojel  
Ascriptin  
Basaljel  
buffered aspirin  
Cama Arthritis Pain Reliever  
Carafate  
Gaviscon-2  
Gelusil  
Di-Gel Liquid  
Maalox liquid  
Maalox Heartburn Relief  
Mylanta-II  
Riopan Plus  
Tempo

## Ulcers

### Some Side Effects of H<sub>2</sub> Blockers

Axid, Pepcid or Zantac or rarely cause such problems:

- headache
- drowsiness
- dizziness
- diarrhea
- constipation
- rash
- impotence

*Several years ago scientists worried that bacteria in a stomach with little acid might produce nitrosamines, potent cancer-causing chemicals. To minimize this risk some have recommended that people on acid-suppressing medicines take vitamin insurance: Vitamin C (500 mg taken four times a day) and vitamin E (about 400 units).*

Physicians used to think that ulcers resulted from nerves. A high-powered executive under constant stress was considered a prime candidate, and if an ulcer were suspected, a bland diet with plenty of milk and cream cheese was the usual prescription...along with quarts of chalky-tasting antacids.

Ulcer treatment has changed a lot since then, and doctors know more about the causes. Other medications, especially those used to treat arthritis, are a common cause of ulcers. In other cases, the culprit is a nasty little bacterium called *Helicobacter pylori*. It also appears to be associated with stomach cancer.

Doctors are still puzzled how people catch this bug and why some seem unaffected while others develop ulcers. It tends to run in families, so perhaps it spreads from one person to another. Roughly three fourths of people with stomach ulcers have *H. pylori*, as do most of those with duodenal ulcers. Conventional ulcer treatments do nothing to eradicate this bacterium, which may be one reason why ulcers recur so often.

Despite this, the most common treatments still appear to be based on the axiom "no acid, no ulcer." Gastroenterologists no longer recommend milk, since it may actually stimulate acid production more than other beverages. Spicy foods aren't prohibited since they don't appear to aggravate ulcers. Now that **Tagamet HB**, **Zantac 75**, **Pepcid AC**, and **Axid AR** are available off the shelf, doctors are less likely to rely upon these H<sub>2</sub> blockers even at prescription strength. They do reduce acid secretion and generally help ulcers heal, but more powerful medications, **Prilosec** and **Prevacid**, have largely replaced **Tagamet** and **Zantac** for the treatment of ulcers.

### PROTON PUMP INHIBITORS

**Prilosec** (omeprazole) is one of the most successful ulcer medicines on the market. Like the newer **Prevacid** (lansoprazole), **Prilosec** is a proton pump inhibitor and a very potent acid suppressors. They are prescribed for ulcers or hard-to-treat heartburn. Side effects are rare, but may include head-

## DRUG-INDUCED ULCERS

It's a sad reality that nearly all of the medicines currently used to ease joint pain and stiffness can have negative effects on the gastrointestinal (GI) tract. And we're not just talking about heartburn and indigestion. Dr. James Fries, one of the country's leading arthritis experts, states that NSAIDs (nonsteroidal anti-inflammatory drugs) account for "more than 70,000 hospitalizations and 7,000 deaths annually in the United States."<sup>1</sup>

Older people are more vulnerable to problems such as bleeding ulcers. If the medicine itself masks early warning symptoms by suppressing pain, the first sign of trouble could be massive bleeding. Such a situation can be life threatening. Early signals of a silent ulcer include weight loss, a feeling of fullness before finishing your meal, anemia and fatigue. If you experience such symptoms, seek medical care immediately.

Arthritis medicines such as **Actron**, **Advil**, **Aleve**, **Anaprox**, **Ansaid**, aspirin, **Clinoril**, **Dolobid**, **Feldene**, **Indocin**, **Lodine**, **Motrin**, **Nalfon**, **Naprosyn**, **Orudis**, **Relafen**, **Tolectin**, and **Voltaren** block the synthesis of hormone-like chemicals called prostaglandins. These compounds contribute to the inflammation and discomfort that typify arthritis. Blocking prostaglandins often relieves pain, but prostaglandins also serve a useful purpose. They protect the stomach lining from irritation. Cut back on prostaglandins to reduce pain in your joints and you risk pain or problems in your digestive tract.

What's a person to do? First, several aspirin-like compounds may be less likely to cause GI irritation. **Disalcid** (salsalate) and **Trilisate** (choline magnesium trisalicylate) are often recommended to fight inflammation. For simple pain relief, acetaminophen (**Tylenol**) works well without irritating the digestive tract.

If you must take an NSAID, your doctor might consider a prescription for **Pepcid** (famotidine). At high doses (40 mg twice a day) this acid suppressor has been shown to reduce ulcers substantially.<sup>2</sup> Another option is **Cytotec** (misoprostol). It can protect the digestive tract, but side effects of diarrhea, headache, stomachache and nausea limit its usefulness.

<sup>1</sup>Fries, James F. "NSAID Gastropathy: Epidemiology" *J. Musculoskeletal Med.* Feb. 1991

<sup>2</sup>Taha, Ali S., et al. "Famotidine for the Prevention of Gastric and Duodenal Ulcers Caused by Nonsteroidal Antiinflammatory Drugs." *N. Engl. J. Med.* 1996; 334(22):1435-1439.

ache, diarrhea, nausea, and stomach pain. Unfortunately, as with most other acid-suppressing treatments, ulcers often return once the drug is discontinued.

A controversy still lingers about the long-term safety of **Prilosec** and **Prevacid**. Animal research suggests that large doses over a long time may be associated with stomach cancer. Recent research has shown that the combination of *H. pylori* infection and **Prilosec** treatment increases the likelihood that a person will develop a condition known as "atrophic gastritis," which can be a precursor to gastric cancer.

## ANTIBIOTIC THERAPY

Now that gastroenterologists better understand the cause of so many ulcers, they are much better equipped to cure them once and for all. When *Helicobacter pylori* is eliminated from the digestive tract, relapses are far less common than with standard treatment with acid-suppressing drugs by themselves. Unfortunately, no single drug reliably kills *H. pylori*.

In one study, **Zantac** alone helped ulcers heal, but 80 percent of the patients had a recurrence within six months after stopping **Zantac**. Those who also received "triple therapy," including antibiotics, had only a 6 percent recurrence rate. Other research has yielded a cure rate between 70 and 90 percent for combination therapy. In 1994 a Consensus Conference of the National Institutes of Health recommended that all patients infected with *H. pylori* receive antibiotic therapy, and regimens have proliferated since that time.

What is triple therapy? The original treatment called for bismuth--the same ingredient found in **Pepto-Bismol** (the usual dose was 5 to 8 tablets daily). In addition, doctors added two antibiotics: metronidazole (**Flagyl**); and either tetracycline or amoxicillin. Treatment lasts two weeks and may be more effective when **Prilosec** or **Prevacid** is added to the mix.

Other regimens are also proving successful. The FDA has approved the combination of **Prilosec** and **Biaxin** (clarithromycin). Cure rates are encour-

aging, from 60 to 80 percent. Other combinations that have been proven effective are **Prevacid** with **Biaxin** and **Tritec** (ranitidine bismuth citrate) with **Biaxin**. The advantage of these double therapies is that it may be easier to keep up with taking all the pills prescribed, and that helps make the treatment more effective.

There are many treatment programs in the literature, and gastroenterologists are still experimenting to find the best one. Your physician should know the most appropriate combination, dose and duration of therapy for you.

There may be unexpected benefits to curing *H. pylori*. We have received letters from readers testifying that eliminating this germ also relieved problems with flatulence, milk intolerance and even bad breath. Dr. Barry Marshall, who discovered the connection between *H. pylori* and recurrent ulcers, has found that antibiotic treatment to eradicate the infection sometimes cures persistent bad breath once and for all.

Physicians can test for the presence of *H. pylori* to determine if treatment is appropriate.

## Can Ulcers Be Cured with Antibiotics?

Ulcer treatment is *not* a do-it-yourself project. Triple therapy requires supervision by an experienced gastroenterologist!

## Some Side Effects of Triple Therapy

### Metronidazole

- metallic taste
- dizziness
- insomnia
- confusion
- nausea/diarrhea
- loss of appetite
- interaction w/alcohol
- stomachache
- seizure (rare)
- rash/itching

### Amoxicillin

- stomach upset/diarrhea
- elevated liver enzymes
- anemia
- penicillin allergy

### Tetracycline

- stomach upset/diarrhea
- hairy tongue
- vaginal yeast infection
- loss of appetite
- anemia
- reaction to sunlight

## Constipation

### **Foods High in Fiber**

#### **All-Bran**

apples  
bananas  
bran

#### **Bran Buds**

**Bran Flakes**  
broccoli

#### **Fiber One**

lentils  
lima beans

#### **Nabisco 100% Bran**

peas  
raisins

#### **Shredded Wheat'n Bran**

Americans are obsessed with regularity and have been since the days of the old-timey medicine shows, when most of the miracle tonics contained a good dose of cathartic. The modern-day barrage of laxative commercials on television suggests that we haven't changed.

Why do people focus on the concept of regularity? There is no standard by which to judge what is normal. Some people do well with two bowel movements a week while others may visit the bathroom three times a day. Forcing your system to obey an arbitrary time schedule could lead to laxative abuse. Overreliance on laxatives is a leading cause of constipation.

The best solution has always been to get enough fiber and fluid in your diet. Insoluble fiber comes from vegetables and fruits as well as whole-grain bread or cereal. If you don't eat much fiber now, increase your intake gradually. Otherwise, you might run into

problems with gas or bellyaches.

Also make sure to get enough liquid. This helps the fiber keep moving things along through the system, and also keeps it from collecting in a clump and getting stuck.

If fiber and fluids aren't enough, you might consider a bulk-forming laxative--more fiber. Our favorite is psyllium because it is readily available (in products such as **Fiberall, Metamucil, Perdiem Plain, Serutan**, and others) and because it does double duty, helping to lower blood cholesterol levels as it relieves constipation. It is even more important to drink enough fluids if you use a bulk-forming laxative.

In an emergency, milk of magnesia works. Don't make a habit of it, though, as it could become a vicious cycle.

## Diarrhea

Diarrhea is a signal that all is not well with your digestive tract. It is Mother Nature's way of getting rid of unpleasantness. Perhaps you overdid on the chili, hot tamales and tequila. Some people find that milk or dairy products sends them running to the bathroom. Or maybe the leftovers were left a little too long. A flu bug can do you in and if you travel south, Montezuma's revenge can wreak havoc with a vacation.

Before treating diarrhea it is important to know what has caused your distress. Remember, it is merely a symptom of some underlying problem. Food poisoning may require emergency treatment with antibiotics. Drug-induced diarrhea often needs a change in medicine. But if you are suffering from garden variety diarrhea with no complications, our first choice is **Imodium A-D**.

## De-Gassing Beans

*One of our faithful readers, Parker Enwright, from Orlando, Florida, sent us a way to "eliminate gas-producing sugars before eating beans." Enclosed was a note from a food seminar in Canada. Parker insists this "really works--I have used it with complete success for about two years. (My bean soups are famous among friends as "no f--- beans!")"*

To prevent flatulence from beans, put beans in water to cover and boil three minutes. Remove from heat and let beans soak in this water, at room temperature, for at least four hours. **Pour off and discard the water.** Use fresh water to cook beans.

Discarding this water after the quick boil and soaking rids the beans of two sugars (raffinose & stachyose) that cause flatulence.

*Pulse Crop Development Board  
Saskatchewan, Canada, 1989*

If you would like to learn more about heartburn, indigestion, ulcers, flatulence, irritable bowel and other gastrointestinal problems, we recommend *Graedons' Best Medicine* (Bantam).

Look for it at your library or bookseller. To order directly, use the enclosed form, call us toll free 1-800-732-2334 weekdays, or send \$14.95 plus \$3.00 postage and handling to: Graedons' People's Pharmacy P. O. Box 52027 Durham, NC 27717-2027