

# Peptic Ulcer Disease

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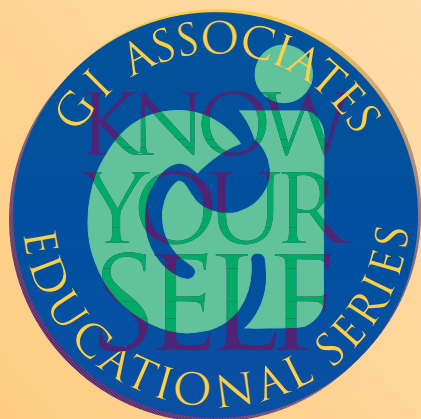
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## A discovery that brought relief to millions of ulcer patients.....

The bacterium now implicated as a cause of some ulcers was not noticed in the stomach until 1981. Before that, it was thought that bacteria couldn't survive in the stomach because of the presence of acid. Australian pathologists, Drs. Warren and Marshall found differently when they noticed bacteria while microscopically inspecting biopsies from stomach tissue. Their findings led them to theorize that the bacteria might cause stomach ulcers.

Most experts did not believe the theory, which further drove Dr. Marshall to seek proof for his idea. Because he lacked a suitable experimental animal to test the theory, he developed a plan to test the theory on himself, neither telling his wife nor the hospital ethics board. Dr. Marshall concocted a "bacteria cocktail" of his proclaimed "ulcer bugs." Despite the warnings of a laboratory worker who told him that he was crazy, he swallowed the potion.

He noted that his stomach started growling immediately after swallowing the bacteria, but for the next week he was fine. He had begun to feel discouraged yet on the eighth day, he experienced definite symptoms, awakening with a bout of nausea and vomiting. His distress continued with a two week bout of gastritis. An endoscopic examination in the third week showed an inflamed stomach lining.

In spite of the initial skepticism of colleagues, Dr. Marshall's persistence heralded a major breakthrough in the treatment of peptic ulcer disease. The results of his experiment prompted a series of research studies that have implicated *Helicobacter* as a cause of peptic ulcers.

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# Ulcers can be stubborn!

**Ulcers tend to come back. Some patients have a hard time getting rid of them for good, even with medical treatment. Ulcers are very common and your GI physician is experienced in dealing with the problem. The following suggestions will help your GI physician develop a plan specifically designed for you.**

1. Describe your symptoms thoroughly and accurately.
2. Obtain all needed diagnostic tests.
3. Stop using tobacco.
4. Restrict alcoholic and caffeine-containing beverages.
5. Take medications as prescribed for the recommended time period.
6. Do not take medication that has been prescribed for someone else.
7. Reduce unnecessary stress and try to avoid upsetting situations, when possible.
8. Have all illnesses treated promptly: ulcers tend to worsen or recur when a person is ill.
9. Get plenty of rest.
10. Do not skip meals.
11. Notify your physician immediately of severe pain or bleeding.

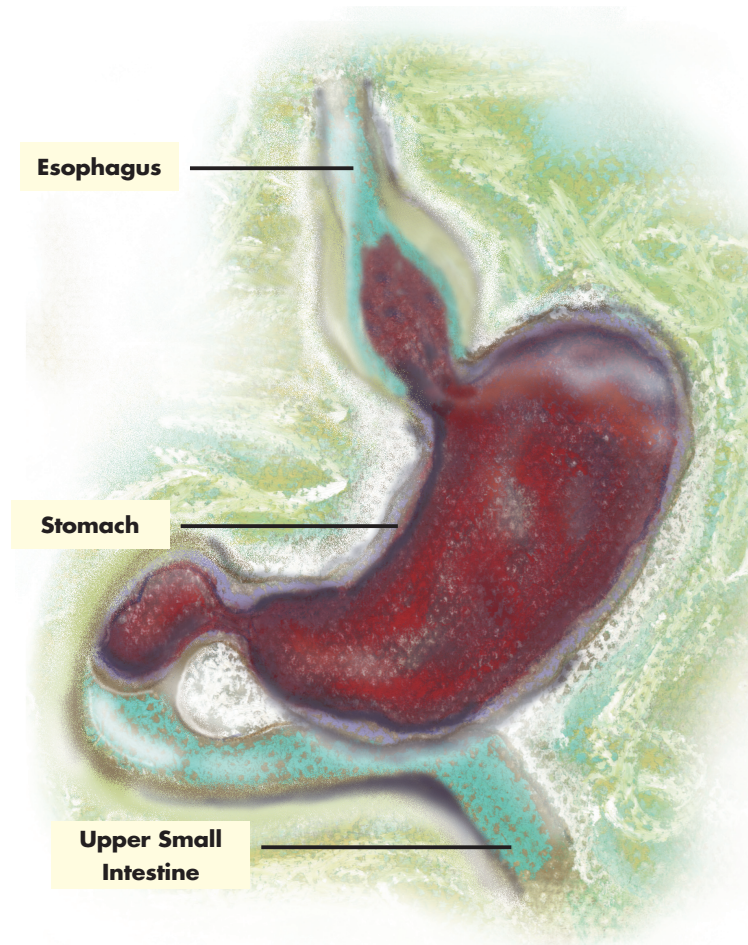
*By working together, you and your GI physician can hopefully eliminate your ulcer for good!*



# What is peptic ulcer disease?

*Peptic ulcer disease* means that an ulcer or ulcers are present within the lining of the GI tract.

An ulcer is a crater-shaped raw area, lesion or sore. A *peptic ulcer* occurs in the lining of any part of the GI tract that is exposed to gastric acid or the enzyme pepsin. Peptic ulcers usually occur in the lining of the esophagus, stomach or upper small intestine.



## How common is peptic ulcer disease?

Over a half a million new cases of peptic ulcer disease are diagnosed in the U.S. each year. About one of every ten Americans will have an ulcer at some time.

Over 46,000 operations are performed for peptic ulcer disease each year and over 7,000 persons die each year from complications associated with peptic ulcer disease.

Peptic ulcer disease does not discriminate. It is found within all population segments, affecting persons in all income levels and occupations.

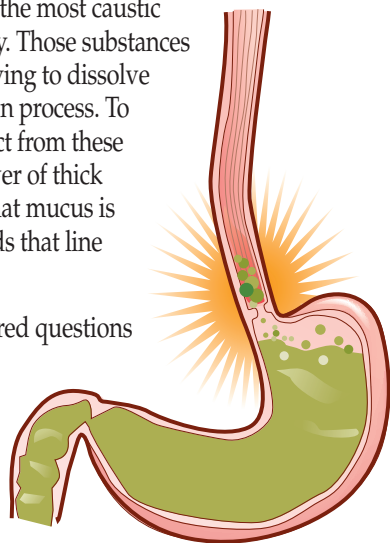
Although an ulcer may develop at any age, they tend to occur between the ages of 20 and 50, in midlife. Ulcers are more common in men than women, but that tendency is decreasing.

**Most ulcers tend to occur between the ages of 20 and 50.**

## What causes peptic ulcer disease?

Normally the stomach produces hydrochloric acid and pepsin, which are among the most caustic substances that occur naturally. Those substances are present in the GI tract, serving to dissolve food and facilitate the digestion process. To protect the lining of the GI tract from these powerful secretions, a rich cover of thick mucus is normally present. That mucus is produced by specialized glands that line the stomach.

There are still many unanswered questions about peptic ulcer disease. In spite of extensive research, much is still not known about why ulcers form and why some people seem more prone to them than others.



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even though symptoms have improved or completely disappeared, the ulcer may not be completely healed. Remember: it is important to stick with the prescribed treatment for as long as directed by your GI physician.

You can also help prevent major flare-ups of the problem by being especially aware of your symptoms and seeking treatment early, when the chances of successful treatment are the best.

## Will I have to follow a special diet?

Your diet may not have to change drastically. Major dietary changes are not necessarily part of the treatment for ulcers.

## Does a person inherit the tendency to develop peptic ulcer disease?

A person whose parents or close relatives have had ulcers is three times more likely to develop an ulcer than a person with no such family history. It is not known whether it is due to learned coping mechanisms or because of inherited genetic tendencies.

## Can medications increase the likelihood of developing an ulcer?

Certain medications may cause increased risk of an ulcer. Medications that may cause ulcer development are those that contain aspirin, those that are prescribed for arthritis, and those taken frequently or for long periods of time. Even ibuprofen can cause ulcers.



The fact that the elderly are likely to take more of these types of medications may explain why the incidence of ulcers is higher among that age group. If you must take aspirin or other NSAIDs (non-steroidal anti-inflammatory drugs), take the smallest effective dose to minimize gastrointestinal problems. It may also help to use enteric-coated aspirin, but check with your doctor before making a change, since that may not be a wise choice for all patients.

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ulcer patients are not nearly as restrictive as they were in the past. In some cases, diet may not be changed at all. Common sense is a helpful guide, also – ulcer patients certainly need to avoid foods that they know will cause problems. Avoidance of highly spiced foods, caffeine-containing beverages and alcoholic beverages is usually beneficial.

By working together, you and your GI physician can hopefully eliminate your ulcer for good!

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## Questions and answers about peptic ulcer disease

### Why should ulcer patients stop smoking?

In addition to the many other health risks associated with smoking, the habit can be especially harmful to ulcer patients. Medical research has proven that cigarette smoking causes a higher risk of ulcers. Smoking causes ulcers to heal more slowly and to recur more frequently. Smokeless tobacco should also be avoided by those who have an ulcer.

### Can alcohol use affect ulcers?

Those who have ulcers should restrict or completely avoid alcoholic beverages because ulcers heal more slowly when alcohol is used.

### Do ulcers come back, once they've healed?

Most ulcer patients have a recurrence within five years. When ulcer treatment has begun, often patients begin to feel better immediately, so many fail to follow the recommended treatment plan as long as needed. That is a mistake, because

Generally ulcers form when there is too much acid production, which causes a literal “eating away” of the tissue lining the GI tract. It is also thought that some individuals who have normal levels of gastric acid may be overly sensitive to the acid or may lack an adequate protective mucus coating.

Recent research indicates that a common bacterium, *helicobacter pylori* is present in the stomach or duodenum of most people with ulcers. Antibiotic treatment can change the course of ulcer disease in those patients who have the bacterium present. However, not all ulcer patients harbor the bacterium (their ulcers are due to other causes).

Ulcers tend to be small, usually about the size of a shirt button. They can become much larger (1 to 2 inches wide) and may become deep enough to penetrate the underlying layers of tissue.

### Is there really an ulcer-prone personality?

Ulcers are not confined to one personality type, regardless of the saying “you’ll give yourself an ulcer.” It is a common belief that hard-driving, intense individuals (so called “type A” personalities), are more prone to developing ulcers. But, some people who have those characteristics, as well as those who are exposed to long periods of stress never develop ulcers!

One should not feel guilty if peptic ulcer disease develops, because we only have a certain degree of control over disease processes.

### The role of life stress....

It is likely that stress does play a role in ulcer development, as is true with many disease processes. Psychic stress is difficult to measure, therefore, the link between ulcers and stress is still uncertain and largely unproven.



It is simply not understood at this time the extent to which stress influences ulcer development. For those who know they



have an ulcer, it is advisable to pay more attention to proper diet and rest if increased stress is unavoidable.

The ulcer patient may also find that it is helpful to take steps to reduce unnecessary tension. Often seemingly simple tactics to reduce stress can have dramatic, long-term benefits.

**Seemingly simple tactics to reduce stress can have dramatic, long-term benefits.**

In the event that extreme unrelenting stress is part of your current life situation, your GI physician might recommend consultation with a psychologist to help develop a plan to minimize stress-causing situations.

If you think that stress may hinder your chance of successful ulcer treatment, don't be afraid to ask your GI physician for advice or a referral to a qualified therapist.

treatments available for ulcers, so those number of patients that do not have *Helicobacter* can still expect successful treatment. Many people never have an ulcer recurrence after the traditional treatment if they follow medical advice, taking medication as prescribed, for the recommended length of time.

## Endoscopy:

Endoscopy may be used to treat ulcers in those severe cases where the ulcer has penetrated through the lining of the GI tract to deeper tissue. When an ulcer has developed to that extent, bleeding may occur. An endoscope can be passed into the GI tract from the mouth and can be used to stop (*coagulate*) bleeding vessels. Often this procedure can help avoid surgery.

## Surgery:

In severe cases, repair of a bleeding ulcer or actual removal of part of the stomach is required. Such drastic measures are not usually needed when treatment is begun early and the prescribed course of treatment is followed.

## Diet:

In the past, an *ulcer diet* meant a strict bland diet with lots of milk and dairy products. That type of diet was thought to help an ulcer heal.

Research has shown that some foods that at first seem to neutralize stomach acid actually stimulate production of more acid, so even though drinking milk may cause quick relief, a few hours later, the problem may grow worse than before.

Now that we know that dairy products increase stomach acid production, milk-based diets are no longer used for treatment.

Physicians still may recommend a fairly bland diet, but recommended diets for



## How are Ulcers treated?

Once an ulcer is diagnosed, treatment may consist of one or a combination of the following therapies:

### Medications:

*Antacids* are often prescribed to help neutralize stomach acid. It is important that individuals do not try to treat their ulcer (or suspected ulcer) without medical advice, because some of the over-the-counter medications may cause more gastric acid production. Also, such medications may mask the symptoms of underlying serious disease.

*Prescription drugs* may be used to either stimulate better mucus production, coat the stomach with other protective substances, neutralize acid, or actually slow down the production of acid. It is important not to take medication prescribed for someone else, because serious side effects may occur.



*Antibiotic therapy* has become a new option for medical treatment of ulcers. The exciting discovery of the role of *Helicobacter pylori* bacterium held the promise that antibiotic treatment would be a major treatment breakthrough for those who have ulcers. Early research studies indicated that antibiotics could eliminate the bacterium, thereby preventing recurrences of ulcers. Antibiotic treatment is not automatically prescribed for every ulcer patient, however, because many ulcer patients do not have the bacteria.

*Your physicians* use the latest testing methods to determine whether or not the culprit bacteria are present in ulcer patients. For those ulcer patients in which the bacteria are present, antibiotic therapy is promptly begun.

Interestingly, a substantial number of patients have ulcers that are not caused by bacteria. There are many effective traditional

## There are three major types of peptic ulcers:

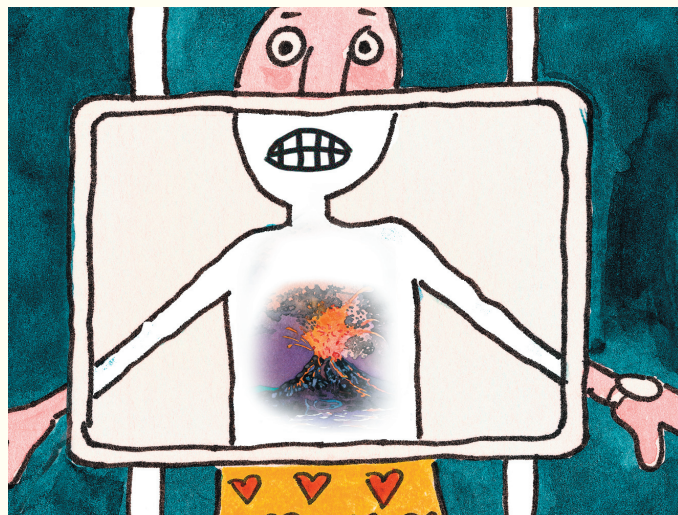
*Esophageal ulcers* occur in the esophagus, which connects the mouth to the stomach. Usually esophageal ulcers are located close to the point where the stomach meets the esophagus. About 2 percent of all ulcers fall in this category.

*Gastric ulcers* occur within the stomach and are about three to four times more common in men than in women. Gastric ulcers account for about 20 percent of all ulcers. Elderly people seem to be especially at risk of developing ulcers in this location.

*Duodenal ulcers* occur in the upper portion of the small intestine, close to where the stomach adjoins it. Duodenal ulcers are by far the most common type, accounting for about 80 percent of all peptic ulcers. They occur ten times more frequently in men than in women. When children develop ulcers, they tend to be in this location.

### Are all ulcers painful?

There is no absolute pattern of symptoms related to peptic ulcer disease. Some patients experience little or no discomfort while others have severe, disabling pain.





The amount and severity of pain associated with ulcers may vary with the type of ulcer involved. Duodenal ulcers are said to cause a gnawing pain, usually between the breastbone and the navel. Patients often say that pain is relieved by food, but that it comes back again in a short time. Frequently, the patient may be awakened from sleep by the pain.

The pain from esophageal or gastric ulcers is usually felt at a higher location in the abdomen and eating tends to bring on pain rather than relieve it.

As mentioned before, there is no set pattern of symptoms. In addition to pain, ulcer patients may experience heartburn, a sensation of fullness, indigestion, decreased appetite, and burning. Nausea, vomiting, diarrhea, or constipation may also occur.

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## Are ulcers dangerous?

About 80 to 90 percent of ulcers heal without complications with appropriate medical treatment.

Among the complications that may occur with peptic ulcer disease, the most common are *bleeding*, *perforation* and *narrowing/obstruction*.

The most common danger occurs when an ulcer is deep enough to penetrate deeper layers of tissue, exposing underlying blood vessels and causing bleeding or hemorrhage. In such cases blood may be vomited or passed in bowel movements. Blood that is vomited is usually bright red or brown, whereas blood passed in bowel movements tends to be very dark, having the appearance of coffee grounds or tar.

If an ulcer erodes tissue completely through the wall of the affected area, food particles and bacteria from the GI tract can leak into the normally sterile abdominal cavity, causing a devastating infection called *peritonitis*. Surgery is usually required to treat this complication.

*Narrowing or obstruction* of sections of the GI tract can result if swelling and inflammation of an ulcer causes a narrow area to become partially or completely closed. This complication prevents food from traveling through the GI tract and surgery may be required to correct the problem.

Any of the complications described can be life-threatening, but early diagnosis and treatment can help assure that peptic ulcer disease will not become severe.

## The cancer link

Ulcers may occasionally be cancerous, therefore, it is very important that the appropriate tests be done in a timely manner. It is also important that patients with peptic ulcer disease follow the GI physician's recommendations for cancer screening tests.

## How are ulcers diagnosed?

As with any other gastrointestinal complaint, an accurate thorough description of your symptoms can help your physician find the source of the problem. Sometimes, X-rays of the upper GI tract can help determine whether or not an ulcer is present. An *upper GI X-ray* involves drinking a substance that will make the GI tract show up clearly on X-ray film. A drawback to the procedure however, is that an upper GI X-ray can miss up to 15 percent of formed ulcers. Very small ulcers in early stages of development may be completely missed by the procedure.

Because very small ulcers may be missed by traditional X-rays, your GI physician may recommend an *endoscopic examination*, known as endoscopy. Endoscopy is a diagnostic procedure that involves the insertion of a slender lighted tube into the gastrointestinal tract via the mouth. Endoscopy enables the physician to actually see the inside lining of the upper GI tract. This close-up view not only helps the physician carefully examine the tissue, but also makes it possible to take samples of tissue without major surgery.

In addition to X-ray and endoscopy, occasionally, other tests will be used to determine the level of gastric acid present in the stomach.

