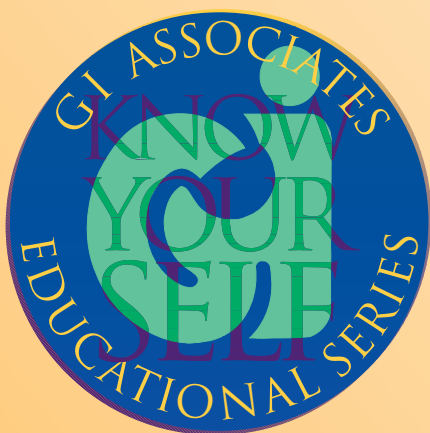


Helicobacter pylori



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Helicobacter pylori

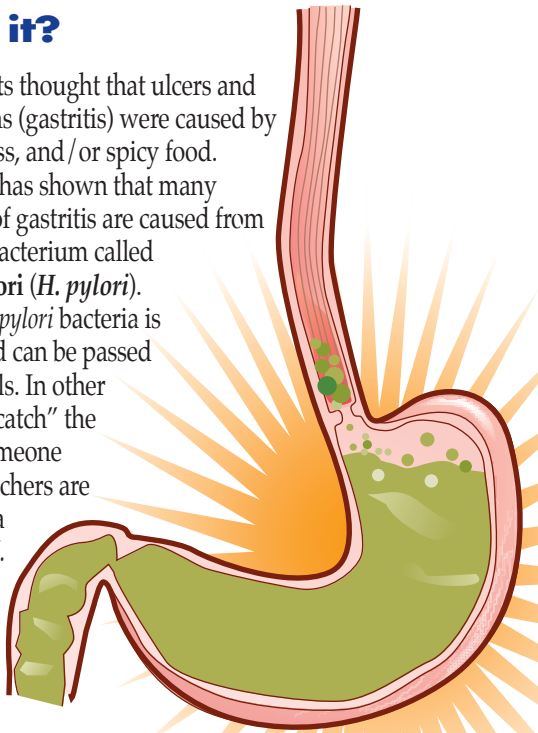
The following information will help you understand gastritis and ulcers caused by *Helicobacter pylori*. More general information about ulcers can be found in the GI Associates patient education brochure *Peptic Ulcer Disease*.

What is it?

In the past, experts thought that ulcers and stomach irritations (gastritis) were caused by acid, anxiety, stress, and/or spicy food.

Medical research has shown that many ulcers and cases of gastritis are caused from infection with a bacterium called **Helicobacter pylori** (*H. pylori*).

Infection with *H. pylori* bacteria is very common and can be passed among individuals. In other words, you can “catch” the infection from someone that has it. Researchers are now developing a vaccine against *H. pylori* that seems to have great promise for the future.



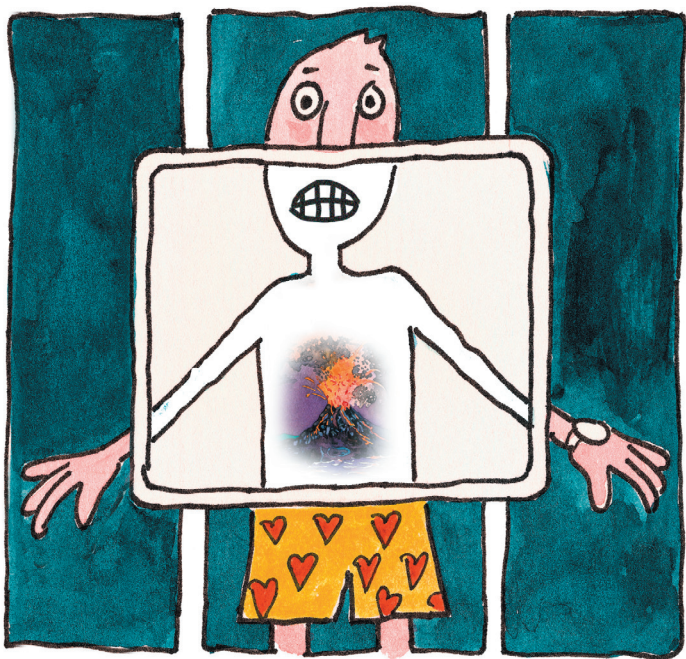
When *H. pylori* enters the body, it weakens the protective layer of tissue in the gastrointestinal system. When that

happens, the underlying tissue becomes irritated (*gastritis*). Then, normal stomach acid may further burn the irritated tissue, leading to even more irritation and possibly an ulcer in the lining of the stomach or duodenum.

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How is *H. pylori* diagnosed?

When you describe your symptoms thoroughly to your GI doctor, he or she may suspect an ulcer. Then, a number of tests may be used to diagnose the problem. **X-rays of the upper GI tract** are often used to diagnose an ulcer. 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 25 percent of formed ulcers. Very small ulcers in early stages of development may be completely missed by the procedure.



Because very small ulcers and gastritis may be missed by X-rays, an **endoscopic examination**, known as **endoscopy** or *EGD* (*esophagogastroduodenoscopy*) may be recommended. Endoscopy is a diagnostic procedure that involves the insertion of a slender lighted tube through the mouth into the gastrointestinal tract. Endoscopy helps the GI doctor actually see the inside lining of the upper GI tract. This close-up view makes it possible to carefully examine the area and take samples of tissue without major surgery. Such samples can be examined microscopically for the presence of *H. pylori*.

Blood tests can also show if you have ever had *H. pylori* in your digestive tract. They, cannot tell if the infection is active however. Breath tests may also be used to diagnose *H. pylori* infection.

Symptoms of *H. pylori* infection

If you have an ulcer caused by *H. pylori*, symptoms are like the symptoms of ulcers from other causes. Some patients experience little or no discomfort while others have severe, disabling pain.

The amount and severity of pain from an ulcer may vary with the type of ulcer involved. *Duodenal ulcers* (in the upper part of the small intestine) 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 is awakened from sleep by the pain.



The pain from a gastric ulcer (in the stomach) is usually felt at a higher location in the abdomen and eating tends to bring on pain rather than relieve it.

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There is no absolute pattern of symptoms. In addition to pain, patients may experience *heartburn*, *a sensation of fullness*, *indigestion*, *decreased appetite*, and *burning*. *Nausea*, *vomiting*, *weight loss*, *diarrhea*, or *constipation* may also occur.

Are ulcers dangerous?

About 80 to 90 percent of ulcers are small and heal with medical treatment, without major complications. Serious complications can occur and include: **bleeding**, **perforation** and **narrowing/obstruction**.

The most common danger occurs when an ulcer is deep enough to go through 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. Blood passed in bowel movements tends to be very dark, having the appearance of tar.

If an ulcer is deep enough to go 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**. This is considered a medical emergency and surgery is usually required.

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 the problem will not become severe. **For that reason, it is absolutely essential that you follow your prescribed antibiotic treatment to eliminate H. pylori.**

Treatment for H. pylori

Medical treatment is necessary if an ulcer or gastritis is caused by H. pylori infection.

Antibiotic therapy is necessary to treat the problem successfully.

Gastric ulcers are often followed up with endoscopy to ensure complete healing and to exclude the possibility of cancer.



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. Chronic *H. pylori* infections have been linked to an increased risk of gastric cancer.

You are the key!

H. pylori is a stubborn bacteria that can not be wiped out without the patient's help!

Antibiotics must be taken exactly as prescribed. Even though the medication may make you feel worse for a brief period of time, you must continue the antibiotics for successful treatment. If *H. pylori*

is not wiped out, the ulcer or gastritis will return and at some point, antibiotics will have to be repeated.



Other Treatment for *H. pylori*

Anytime an ulcer is diagnosed (whether it is caused by *H. pylori* or another cause), more than one type of treatment may be used to relieve symptoms and to avoid complications.

In addition to antibiotic treatment, **Antacids** may be 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 also be used to either protect the stomach, 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. Now that many of the prescription drugs (like *Tagamet*) are available over-the-counter, a danger is that many people *delay* going to the doctor for treatment, causing even more long term discomfort.

Working with the doctor, a treatment plan can be developed that is best suited to the patient who has an ulcer caused by *H. pylori*.

Many people *never* have another ulcer after treatment if they follow medical advice, taking medication as prescribed, for the recommended length of time.

It is important not to take medication prescribed for someone else, because serious side effects may occur.

Endoscopy may be used to treat ulcers in severe cases where the ulcer has gone through the lining of the GI tract to deeper tissue. When an ulcer is that deep, bleeding may occur. An endoscope can be passed into the GI tract from the mouth and can be used to stop bleeding. Often this procedure can help avoid surgery.

Surgery may be needed in extreme situations to repair a bleeding ulcer or to actually remove a part of the stomach. Such drastic measures are almost never needed when treatment begins early and the prescribed course of treatment is followed.

Special diets are usually not required. Usually, a patient can eat what they like, unless it is known by the patient to cause more discomfort. Your GI doctor will tell you more about diet.

Summary

Ulcers can be stubborn, and they tend to come back. Some patients have a very 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 doctor develop a plan to minimize the discomfort that may occur with ulcers.

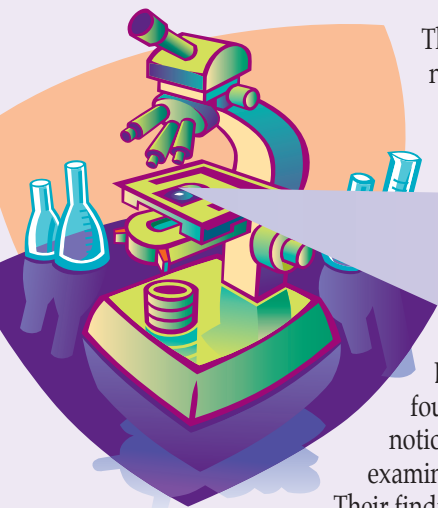
- 1. Describe your symptoms thoroughly and accurately.**
- 2. Obtain all needed diagnostic tests.**
- 3. Stop using tobacco.**
- 4. Restrict alcoholic and caffeine-containing beverages.**
- 5. Take medications exactly as prescribed for the recommended time period.**
- 6. Do not take medication that has been prescribed for someone else.**
- 7. Reduce unnecessary stress and trying 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.**

With proper treatment, most ulcers and gastric irritation caused by H. pylori heal without complications. But, if you have any of the following, please contact your physician at GI Associates.

- Sudden intense pain**
- Continued weight loss**
- Dark, tarry or bloody stools**
- Vomiting frequently or vomiting blood**
- Continued pain after completing your medication**

Infection with H. pylori need not interfere with your life in a major way when treated successfully. Working together with your doctor, you can expect the best possible treatment outcome!

The discovery that brought relief to millions of ulcer patients...



The bacterium (*H. pylori*) now known as a cause of many 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 it during microscopic examinations of stomach tissue.

Their findings led them to suspect that the bacteria might cause stomach ulcers.

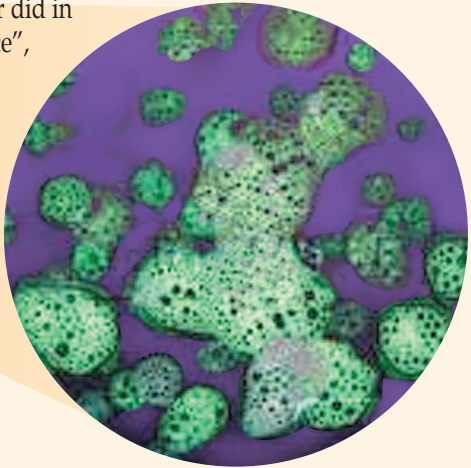
Most experts simply did not believe them, which further drove Dr. Marshall to seek proof for the idea. Because he did not have a suitable experimental animal to test the theory, he developed a plan to test the theory on himself. He did not tell the hospital ethics board or his wife (he knew they would try to stop him!). Dr. Marshall then mixed a "bacteria cocktail" of his so-called "ulcer bugs." And, he drank it, in spite of the warnings of a laboratory worker who told him that he was crazy.

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 like his experiment had failed. But, on the eighth day, he experienced definite symptoms, awakening with 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 co-workers, Dr. Marshall's persistence resulted in a major breakthrough in the treatment of peptic ulcer disease. His experiment prompted a series of research studies that have proven that *H. pylori* is a cause of many peptic ulcers.

Now, ulcers that are known to be caused by the bacterium can be successfully treated with antibiotics. A major plus of this approach is that over time, it is the least costly of other treatment strategies. Studies have shown that even when the antibiotic treatment has to be repeated to successfully eliminate the bug, it saves thousands of dollars when compared with the "older" methods of treatment.

So, what one doctor did in the name of "science", has resulted in successful ulcer treatment and a higher quality of life for many who are affected by ulcers.



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