



Helicobacter Pylori

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Simply Screening , Total Endoscopic Health & Prevention

Helicobacter Pylori (HEEL-ik-oh-back-ter PIE-lore-ee) is one of the most common human bacterial infections. It may be the cause of most stomach ulcers, stomach cancers, and Lymphoma of the stomach.

We have only known about the association of infections and ulcers, and the identity of Helicobacter pylori, since 1983. At that time, Drs. Warren and Marshall, two Australian physicians, isolated a spiral bacteria from biopsies of the stomach linings of people with ulcers and with gastritis. In 2005, they received the Nobel Prize for their work. Our understanding of this disease continues to grow.

Who gets infected with Helicobacter pylori?

Infections with Helicobacter pylori are common, affecting between 20 and 80 percent of the world population. Initial infection usually occurs in childhood. Higher rates of infection are generally found in developing countries with poor sanitation. The infection is felt to spread by impure water.

In the United States, transmission of the infection is from person-to-person, rather than due to impure water. This transmission is probably through saliva contact. We find that a large number of gastroenterologists have Helicobacter pylori infection.

What are the symptoms of Helicobacter pylori infection?

An infection with Helicobacter pylori usually causes no symptoms, unless this infection leads to an ulcer or cancer.

Symptoms of having an ulcer or cancer involving the stomach are not specific, and may include chronic indigestion, upper abdominal pain which radiates to the back and wakens one from sleep, pain worse when hungry, dark black tarry stools (called "melena"), chronic slow blood loss, and even feeling full early in a meal (called "early satiety"). If you experience these symptoms, you should be seen by a physician.

How does Helicobacter pylori affect the stomach lining?

The stomach secretes a thick barrier of mucous and bicarbonate to protect itself from the acid it contains.

The Helicobacter pylori bacteria burrows into the protective mucous lining of the stomach. There it releases an enzyme called "urease" which serves to break down the mucous lining. This allows acid to directly contact and to damage the lining of the stomach. The acid may then cause an ulcer.

Surprisingly, the Helicobacter pylori bacteria may also cause damage to the acid secreting cells in the stomach, leading to a decrease in the acidity of the gastric contents. Often after treatment for the bacteria, some people experience none hyperacidity symptoms such as reflux, rather than less.

How do we diagnose an infection with Helicobacter pylori?

If we do an upper endoscopy to look into the stomach for ulcers or cancers, we can take biopsies and either send them to the pathologist to examine for the telltale bacteria within the mucous lining of the stomach, or we may embed the biopsy in a gel which turns pink if bacteria which make urease are present (called a "clo-test").

Blood testing can be done looking for antibodies which our immune system makes against Helicobacter pylori. In some centers, a breath test can be done looking for these bacteria. This breath testing, generally not available in Hampton Roads, is especially helpful in determining if the bacteria is eliminated with treatment. A stool test may also be used.

How do we treat an infection with Helicobacter pylori?

Treatment for Helicobacter pylori is tough and requires a special amount of **diligence and effort** to complete.

Treatment is usually two antibiotics with additional one or two non-antibiotic drugs. After taking up to sixteen tablets daily for 10 to 14 days, we can achieve an 80 to 90 percent clearance of the bacteria.

However, if you do not complete all of the medications as prescribed, you may cause the specific bacteria in your stomach to become resistant to antibiotics. In West Virginia, there are widespread resistant Helicobacter pylori infections, which are almost impossible to cure.

Medications used to treat Helicobacter pylori include amoxicillin (a penicillin), tetracycline, metronidazole (Flagyl), clarithromycin (Biaxin), Pepto-Bismol, and various acid suppressing drugs. *Please tell your doctor if you are intolerant or allergic to any of the medications.*

The medications may be prescribed separately, or may come pre-packaged. The dose-pac medications (Prevpac or Helidac) may be easier to remember to take and complete. It is essential to take all the medications to avoid resistance to antibiotics.

What other problems can the medications used to treat *Helicobacter pylori* cause?

If you may be **pregnant**, please tell your physician. Your fetus should not be exposed to tetracycline or metronidazole as these medications may cause birth defects.

In addition, **metronidazole** can cause you to flush and/or become nauseated with consuming small amounts of alcohol, even the amount found in mouthwash.

Clarithromycin commonly causes nausea as well as "dysgeusia", or an odd taste in the mouth.

Bismuth compounds, such as Peto-Bismol, may cause dark stool, although not usually like the tarry, sticky stools seen with bleeding. A dark tongue may also occur.

What happens if I don't treat *Helicobacter pylori* infection?

Helicobacter pylori bacteria has been implicated in gastric cancers, with an especially high rate of gastric cancers in women who are infected. ***The World Health Organization (WHO) had designated the *Helicobacter pylori* bacteria as a Class I carcinogen.***

We find that if we treat *Helicobacter pylori* infections that we can reduce the recurrence of ulcer disease. In the past, 70% of ulcers recurred, but with treatment of this bacteria, now less than 30% recurrence is expected. Ulcers which do occur again frequently have other causes, such as arthritis medications, aspirin, or alcohol.

If you only have gastritis, or irritation of the stomach, clearance of the *Helicobacter pylori* bacteria does not usually stop symptoms of the heartburn and indigestion. However, if we detect this bacteria we should attempt to eradicate it because of its status as a carcinogen.

A special kind of lymphoma of the stomach, called MALT, is so associated with *Helicobacter pylori* that it is initially treated by treating with antibiotics for the bacterial infection, even if the bacteria is not identified in the biopsy specimens. Eradication of the bacteria may cause this particular kind of cancer to fully melt away.

What happens after I am treated for *Helicobacter pylori*?

After treatment for *Helicobacter pylori*, most people remain clear of the bacteria. It found that the re-infection rates for Americans are low, with only five percent being reinfected in nine months.

It is difficult to verify clearance of the bacteria. Options include blood testing (retesting must wait several months to allow the lab tests to slowly return to normal), breath testing (not generally available in this area) and repeat endoscopy (only appropriate to follow an ulcer until it is fully healed, as it too expensive for this use alone).

What is coming in the future treatment of *Helicobacter pylori*?

Future research of *Helicobacter pylori* may lead to a vaccine, as has been developed for many other common bacterial infections, to fully eradicate this organism in humans.

Why is my abdominal pain worse?? – I finished my antibiotics and my ulcer is healed!

Remember, after treatment for *Helicobacter pylori* some people find that their acid related symptoms in their stomach are worse. As the *Helicobacter pylori* damages the acid secreting mechanism of the stomach, people tend to make less gastric acid when infected. Clearing away the *Helicobacter pylori* causes increased secretion of acid.

Some new thoughts about *Helicobacter pylori*- a friend or foe?

Some researchers think that there may be a symbiotic relationship between man and this bacteria, with *Helicobacter* serving as an antacid to protect us from reflux and indigestion. Some believe that the decreased acid may decrease development of esophagus cancer. However, despite worsened heartburn after treatment and potential of bacteria to protect us against esophagus cancer, **it is important to try to eliminate the *Helicobacter pylori* if detected due to its WHO carcinogen status.**

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