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Helicobacter pylori infection

Helicobacter pylori (*H pylori*) is a type of bacteria that infects the stomach. It is very common, affecting about two thirds of the world's population. *H pylori* infection is the most common cause of peptic ulcers. However, the infection does not cause problems for most people.

Causes

H pylori bacteria are most likely passed directly from person to person. This tends to happen during childhood. The infection remains throughout life if not treated.

It's not clear how the bacteria are passed from one person to another. The bacteria may spread from:

- Mouth-to-mouth contact
- GI tract illness (particularly when vomiting occurs)
- Contact with stool (fecal material)
- Contaminated food and water

The bacteria may trigger ulcers in the following way:

- *H pylori* enters the mucus layer of the stomach and attaches to the stomach lining.
- *H pylori* cause the stomach to produce more stomach acid. This damages the stomach lining, leading to ulcers in some people.

Besides ulcers, *H pylori* bacteria can also cause a chronic inflammation in the stomach (gastritis) or the upper part of the small intestine (duodenitis) and duodenal ulcers.

H pylori can also sometimes lead to stomach cancer or a rare type of stomach lymphoma.

Symptoms

About 10% to 15% of people infected with *H pylori* develop peptic ulcer disease. Small ulcers may not cause any symptoms. Some ulcers can cause serious bleeding.

An aching or burning pain in your abdomen is a common symptom. The pain may be worse with an empty stomach. The pain can differ from person to person, and some people have no pain.

Other symptoms include:

- Feeling of fullness or bloating and problems drinking as much fluid as usual
- Hunger and an empty feeling in the stomach, often 1 to 3 hours after a meal
- Mild nausea that may go away with vomiting
- Loss of appetite
- Weight loss without trying
- Burping
- Bloody or dark, tarry stools or bloody vomit

Exams and Tests

Your health care provider may test you for *H pylori* if you:

- Have peptic ulcers or a history of ulcers
- Have discomfort and pain in the stomach lasting more than a month

Tell your provider about the medicines you take. Nonsteroidal anti-inflammatory drugs (NSAIDs) can also cause ulcers. If you have an ulcer or show symptoms of an *H pylori* infection, your provider may perform the following tests for *H pylori*

- Breath test -- urea breath test (Carbon Isotope-urea Breath Test, or UBT). Your provider will ask you to swallow a special substance that has urea. If *H pylori* are present, the bacteria turn the urea into carbon dioxide. This is detected and recorded in your exhaled breath after 10 minutes.
- Blood test -- measures antibodies to *H pylori* in your blood.
- Stool test -- detects the presence of *H pylori* in your stool.
- Biopsy -- tests a tissue sample taken from the stomach lining using endoscopy. The sample is checked for *H pylori* infection.

Treatment

In order for your ulcer to heal and to reduce the chance it will come back, you will be given medicines to:

- Kill the *H pylori* bacteria (if present)
- Reduce acid levels in your stomach

Take all of your medicines as you have been told. Other lifestyle changes can also help.

If you have a peptic ulcer and an *H pylori* infection, treatment is recommended. The standard treatment involves different combinations of the following medicines for 10 to 14 days:

- Antibiotics to kill *H pylori*
- Proton pump inhibitors to help lower acid levels in the stomach
- Bismuth (the main ingredient in Pepto-Bismol) may be added to help kill the bacteria

Taking all of these medicines for up to 14 days is not easy. But doing so gives you the best chance for getting rid of the *H pylori* bacteria and preventing ulcers in the future.

Outlook (Prognosis)

If you take your medicines, there is a good chance that the *H pylori* infection will be cured. You will be much less likely to get another ulcer.

Sometimes, *H pylori* can be hard to fully cure. Repeated courses of different treatments may be needed. A stomach biopsy will sometimes be done to test the germ to see which antibiotic might work best. This can help guide future treatment. In some cases, *H pylori* can't be cured with any therapy, though the symptoms may be reduced.

If cured, reinfection may occur in areas where sanitary conditions are poor.

Possible Complications

A chronic infection with *H pylori* may lead to:

- Peptic ulcer disease
- Chronic inflammation
- Gastric and upper intestine ulcers
- Stomach cancer
- Gastric mucosa-associated lymphoid tissue (MALT) lymphoma

Other complications may include:

- Severe blood loss
- Scarring from an ulcer may make it harder for the stomach to empty
- Perforation or hole of the stomach and intestines
- Iron deficiency anemia

When to Contact a Medical Professional

Severe symptoms that begin suddenly may indicate a blockage in the intestine, perforation, or hemorrhage, all of which are emergencies. Symptoms may include:

- Tarry, black, or bloody stools
- Severe vomiting, which may include blood or a substance with the appearance of coffee grounds (a sign of a serious hemorrhage) or the entire stomach contents (a sign of intestinal obstruction)
- Severe abdominal pain, with or without vomiting or evidence of blood

Anyone who has any of these symptoms should go to the emergency room right away.

Alternative Names

H pylori infection

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