

## HELICOBACTER PYLORI INFECTION

### Patient Information Fact Sheet

#### What is *Helicobacter pylori*?

*Helicobacter pylori* (*H. pylori* or HP) is a bacterium that is the main cause of ulcers occurring in the lining of the upper part of the small intestine (duodenal ulcers) and in the lining of the stomach (gastric ulcers). Initially, the bacterium causes inflammation (gastritis or duodenitis). Many people may be unaware of this inflammation, and only experience symptoms when an ulcer develops, perhaps years later. Not all people infected with *H. pylori* will develop an ulcer. The methods by which this bacterium is passed from one person to another are still not understood completely. However, it is thought that people infected with the bacterium are only capable of passing it to others for a short period (days or weeks). It may be passed via the fingers through contact with vomit or stools from an infected person. Therefore, good hygiene may decrease the risk of the bacterium being spread. However, it is thought that people living in the U.S. are unlikely to pass it on and do not need to take any special measures to avoid giving it to others.

#### What are the symptoms of *Helicobacter pylori* infection?

The first symptoms of infection with *H. pylori* are usually those of an ulcer. Ulcers cause pain, which can vary in intensity from mild discomfort to severe pain. The pain may be severe enough to wake you during the night. Drinking milk or taking an antacid may relieve the pain and if the pain is frequent during the day, continual snacking will alleviate the pain when it occurs.

#### What tests are used to diagnose *Helicobacter pylori* infection?

The test usually used to diagnose an ulcer is an endoscopy. This is a procedure in which a flexible fiber-optic tube, which relays images to a video camera, is passed through the mouth down into the stomach. This enables the doctor to look at your esophagus, stomach, and duodenum. This procedure also allows the doctor to perform a biopsy, which involves taking a sample of cells from the lining of the stomach or duodenum, which can then be grown in a special culture to test for the presence of *H. pylori*. If there is growth of *H. pylori*, different antibiotics can then be tested on this culture to establish which is the most effective at treating the bacterium. The most effective antibiotic can then be used to treat your ulcer. Endoscopy has largely replaced other tests to diagnose ulcers but sometimes these other tests may still be used:

**A barium x-ray**—this involves swallowing a contrast liquid that shows up on x-ray. This is less successful than an endoscopy in diagnosing ulcers.

**A urea breath test**—this involves swallowing a tasteless fluid and then giving breath



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samples into a special device. Analysis of the breath samples can confirm the presence of *H. pylori* and may indicate the extent of the infection.

**Blood tests**—these can detect antibodies to *H. pylori*. You may have a blood test prior to an endoscopy. If antibodies are not present, then you probably do not have a duodenal ulcer. If antibodies are present, this indicates that *H. pylori* is present and an endoscopy will be requested. It is unlikely that treatment will be given based on a diagnosis from a blood test alone, and an endoscopy will still be necessary.

### How is *Helicobacter pylori* treated?

Infection with *H. pylori* is usually treated with a combination of three drugs (triple therapy). A **proton pump inhibitor** such as **esomeprazole** (Nexium), **lansoprazole** (Prevacid), **omeprazole** (Prilosec), **pantoprazole** (Protonix) and **rabeprazole** (Aciphex) which suppress gastric acid, will be given together with two antibiotics. The antibiotics used include **amoxicillin** (Amoxil), **clarithromycin** (Biaxin), **metronidazole** (Flagyl), and **tetracycline**. **Bismuth subsalicylate** is sometimes used instead of a proton pump inhibitor. Occasionally if triple therapy is unsuccessful, a treatment regimen involving four drugs may be used. Evidence shows that triple therapy can eradicate *H. pylori* in around 80–85% of cases.

The main reason therapy to eradicate *H. pylori* fails is that patients do not always take their medication as prescribed. It is very important for you to take all your tablets every day as directed. Unfortunately, many people suffer side effects from therapy. The side effects may include diarrhea, nausea, a metallic taste, and sometimes a severe inflammation of the bowel. However, if you can tolerate any side effects that you experience and persist with the course of treatment, then *H. pylori* should be eradicated for good. If you stop half way through a course, your ulcer and all the problems that occur as a result of it will return. You may also be left with a drug-resistant strain of *H. pylori* that cannot easily be treated with further antibiotics. If you cannot tolerate the side effects of treatment, you should check with your doctor before stopping the course. Long-term ulcer sufferers are at risk of perforation of the lining of the stomach or duodenum, and are also at risk of bleeding from the gastrointestinal tract. There is also increasing evidence that infection with *H. pylori* is associated with cancer of the stomach. Therefore, it is important to identify and treat *H. pylori* infection.

### Further information

National Digestive Diseases Information Clearinghouse (NDDIC): <http://digestive.niddk.nih.gov/ddiseases/pubs/hpylori/index.htm>

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