

What is *Helicobacter pylori*?

Helicobacter pylori (*H. pylori*) is a bacterium (germ) that lives in the inner lining of the stomach. It produces a number of chemicals that damage the lining of the stomach. Once the infection is present, it persists for many years, if not for life.

How common is *Helicobacter pylori* infection in Australia?

About 40% of persons over 60 years of age have *Helicobacter pylori*. Most people are infected in childhood and in Australia the risk of becoming infected is now much less than in the past. There is no difference in infection rate between men and women.

H. pylori is more common in older people and in certain ethnic populations (e.g. Middle Eastern, Asian and eastern European).

How do I catch *Helicobacter pylori*?

Doctors aren't quite sure. It probably happens when people share food or eating utensils. Spread between family members (e.g. mother and child) is not uncommon. There is no evidence that pets, farm animals or infected food or water are sources of infection. It is very rare to catch *H. pylori* as an adult.

How is *Helicobacter pylori* diagnosed?

The infection may be found at the same time as a peptic ulcer, at a test call endoscopy. However, your doctor can organise other tests.

1. **Breath Tests**

A breath test shows if you are infected by analysing a sample of your breath. Breath tests are accurate, safe, simple and quick to perform. They are a particularly useful test to check whether the infection has been successfully treated. Accuracy is reduced if you have been taking certain drugs (e.g. antibiotics in the previous month and some ulcer-healing drugs in the previous one to two weeks).

2. **Blood Tests**

These can detect current or recent infection. They are not useful for



checking whether the infection has been successfully treated because the antibody to *H. pylori* remains in the blood for years.

3. **Endoscopy**

During endoscopy your doctor passes a flexible tube into your stomach. This allows small samples to be taken, to detect *H. pylori* using a number of methods including looking under the microscope, detecting it with a chemical reaction (rapid urease test) or growing it in the laboratory. These tests are very accurate, although recent use of antibiotics or drugs that treat ulcers can cause false results.

4. It is also possible to check for *H. pylori* using a sample of bowel motion. This method is used to check children.

What diseases does *Helicobacter Pylori* cause?

Most infected people have no symptoms. However, *H. pylori* can cause:

- Inflammation of the lining of the stomach (gastritis).
- Duodenal ulcers (ulcers in the first part of the small bowel).
- Stomach (gastric) ulcers.
- Some cancers of the stomach, including a rare type called lymphoma.

Peptic Ulcers

An ulcer is a break in the lining of the stomach or upper small bowel (the duodenum). Ulcers occurring in this area are often called peptic ulcers.

1. **Duodenal ulcers**

Helicobacter pylori is the cause of about 90% of ulcers in the duodenum.

2. **Stomach ulcers**

H. pylori is the cause of about 70% of stomach ulcers. Most of the remaining 30% are due to drugs taken for arthritis (non-steroidal anti-inflammatory drugs), or aspirin taken to prevent heart attacks or strokes. Some patients have both risk factors, and this increases the chance of a stomach ulcer.

Modern anti-ulcer drugs heal virtually all duodenal and stomach ulcers but there is a very high chance that the ulcer will come back if a person stops the medication if *H. pylori* is not eliminated. If *H. pylori* infection is cured, the risk of the ulcer returning is very low (unless aspirin or anti-inflammatory drugs need to be taken). Paracetamol does not cause ulcers.

Cancer of the Stomach

Cancer of the stomach is very rare in Australia, but *H. pylori* infection increases the risk. Although stomach cancer is very common in many parts of the world, it is becoming even more uncommon in Australia as the number of people infected declines. Only a very small minority of infected people ever develop this problem.

Non-ulcer dyspepsia

Dyspepsia is a word used to describe pain, discomfort or other symptoms in the upper abdomen. Most people with dyspepsia do not have an ulcer, they have "non-ulcer" dyspepsia. This is a very common problem and is thought to have many possible causes. Some of these people have *H. pylori* infection, but treatment to get rid of the *H. pylori* does not always help.

Who should be tested for *Helicobacter Pylori*?

People with Duodenal Ulcer:

Everyone with a duodenal ulcer should be tested for *Helicobacter pylori* and treated if infected. This includes people with active ulcers and those who have had a duodenal ulcer in the past.

People with Stomach Ulcers:

Everyone infected with *H. pylori* who has or has previously had a stomach ulcer should be tested and treated. This includes people who were taking aspirin and anti arthritis drugs when the ulcer developed.

People with Non-Ulcer Dyspepsia:

Treatment may not cure the dyspepsia. However, treatment may reduce the chance of getting ulcers (or possibly stomach cancer) in the future. The side-effects and cost of treatment need to be weighed against the possible benefits. For instance possible side effects might outweigh possible benefits in an elderly, fit person with no symptoms.

How should Helicobacter Pylori be treated?

There is no single treatment. A number of drug combinations are used. The most effective of these are successful in 80-90% of people. However, the success rate is much lower if the drugs are not taken exactly as directed.

Treatment combinations include at least three drugs consisting of an anti ulcer drug and two antibiotics. The use of drug combinations reduces the risk of *H. pylori* becoming resistant to treatment. However, taking three drugs increases the risk of side effects, which may include nausea, taste disturbances, diarrhoea, skin rashes and interactions with other medications or an unpleasant reaction to alcohol. Very rarely, more serious side effects may occur, such as bacterial infection of the large bowel (pseudomembranous enterocolitis) or a sudden drop in blood pressure (anaphylaxis). It is important to tell your doctor if you have ever had any side effects with antibiotics.

How do I know if the treatment has worked?

If you take the treatment exactly as directed, the chance of success is high. *Helicobacter pylori* elimination should be checked if you have had a serious ulcer complication (bleeding or perforation) or if your ulcer has often recurred. If you have to have another gastroscopy, it is very simple to look *H. pylori* using one of the tests describe above.

If you do not need another gastroscopy, your doctor may order a breath test. It is important that these tests are performed at least four weeks after all treatment is stopped, to give an accurate result. Not everyone has a follow up test.

If treatment has not been successful, a different combination of drugs may be tried.

Am I likely to become infected again?

No, the chance of becoming infected again after successful treatment is only about 0.5-1.0% per year. This is because most infection occurs in childhood.

Do my family members need to be tested if I am infected?

This is not usually recommended. Occasionally there are special circumstances and these can be discussed with your doctor.

Further questions

The information given here is current in 2005, but may change in the future. If you have further questions you should raise them with your own doctor.

Digestive Health Foundation

The Digestive Health Foundation (DHF) is an educational body committed to promoting better health for all Australians by promoting education and community health programs related to the digestive system. The DHF is the educational arm of the Gastroenterological Society of Australia.

Further information on a wide variety of gastrointestinal conditions is available on our website.

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