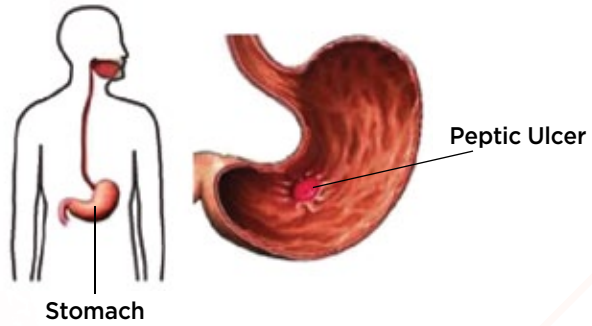
Information about

Helicobacter Pylori (H.pylori)



What is Helicobacter Pylori (*H. pylori*)?

H. pylori is a bacterium (germ) that can infect the human stomach. Its significance for human disease was first recognised in 1983. The bacterium lives in the lining of the stomach, and the chemicals it produces causes inflammation of the stomach lining. Infection appears to be life long unless treated with medications to eradicate the bacterium.

How do I catch *H. pylori*?

Researchers are not certain how *H. pylori* is transmitted. It is most likely acquired in childhood but how this occurs is unknown. A number of possibilities including sharing food or eating utensils, contact with contaminated water (such as unclean well water), and contact with the stool or vomit of an infected person have all been investigated but the answer is still not known. *H. pylori* has been found in the saliva of some infected people, which means infection could be spread through direct contact with saliva. There is no evidence that pets or farm animals are sources of infection. Infection has been shown to occur between family members (e.g. mother and child) however it is very rare to catch *H. pylori* as an adult, most people are infected during childhood.

Can *H. pylori* infection be prevented?

The overall improvement in standards of domestic hygiene last century has led to a marked decline in *H. pylori* in the Western world. As no one knows exactly how *H. pylori* spreads, prevention on an individual level is difficult. Researchers are trying to develop a vaccine to prevent, and cure, *H. pylori* infection. To help prevent infection, doctors advise people to follow good hygiene practices:

- Wash hands with soap and water after using the bathroom and before eating
- Eat food that has been washed well and cooked properly
- Drink water from a clean, safe source.

GESA Gastroenterological Society of Australia
dhf Digestive Health Foundation

An information leaflet for patients and interested members of the general public prepared by the Digestive Health Foundation

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How common is *H. pylori* infection?

It is the still the most widespread infection in the world. Actual infection rates vary from country to country. Infection is more common in developing countries. In countries with poor sanitation, 90% of the adult population can be infected.

In Australia infection is now much less common than in the past particularly in the younger members of the population. Approximately 40% of Australians over 60 years of age have *H. pylori*. *H. pylori* infection is higher in indigenous communities than in the non-Indigenous Australian population. *H. pylori* is also more common in certain ethnic populations (e.g. Middle Eastern, Asian and eastern European). There is no difference in infection rate between men and women.

What diseases does *H. pylori* cause?

H. pylori can cause:

- Inflammation of the lining of the stomach (gastritis) - frequently
- Duodenal ulcers (in the small bowel just beyond the stomach) - uncommonly
- Stomach (gastric) ulcers - uncommonly
- Some cancers of the stomach, including a rare type called lymphoma - rarely

Most people infected with *H. pylori* never develop symptoms or disease. Why the bacterium causes ulcers in some people and not in others is not known. Most likely, development of ulcers depends on characteristics of the infected person, the type or strain of *H. pylori* present, and factors medical scientists have yet to discover.

Peptic ulcers

A peptic ulcer is a hole in the gut lining of the stomach or duodenum. A peptic ulcer of the stomach is called a gastric ulcer, and in the duodenum it is called a duodenal ulcer. *H. pylori* is the most common cause of peptic ulcers worldwide.

1. Stomach ulcers

H. pylori is the cause of approximately 70% of stomach ulcers. Most of the remaining ulcers appear to be due to certain medications, particularly non-steroidal anti-inflammatory drugs (NSAIDs) taken regularly to ease arthritis, or low-dose aspirin to help prevent heart attack or stroke.

2. Duodenal ulcers

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

Modern anti-ulcer drugs heal virtually all duodenal and stomach ulcers but if *H. pylori* is not eliminated there is a very high chance that the ulcer will come back. 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 and is a safe alternative for patients with a previous ulcer.

Cancer of the stomach

While *H. pylori* infection increases the risk of some cancers of the stomach, cancer of the stomach is very rare in Australia and only a very small minority of infected people will ever develop this problem.

Non-ulcer Dyspepsia

Dyspepsia (indigestion) 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. It 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.

How is *H. pylori* diagnosed?

Accurate and simple tests for the detection of *H. pylori* infection are available:

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 medications (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* (the marker of the body's response to infection) remains in the blood for years.

3. Endoscopy

The infection may be found at the same time as a peptic ulcer, with a test called endoscopy (also known as gastroscopy). During endoscopy your doctor passes a flexible tube into your stomach which allows small samples to be taken. *H. pylori* can be detected by a number of methods – including looking at samples under a microscope, using a chemical reaction (rapid urease test) or growing it in the laboratory. Sampling that misses the *H. pylori*, or recent use of antibiotics or drugs that treat ulcers can cause false negative results.

4. Simple Poo Tests

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

Who should be tested for *H. pylori*?

1. People with a Duodenal Ulcer

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

2. People with a Stomach Ulcer

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.

3. People with Non-Ulcer Dyspepsia

Treatment may not cure the dyspepsia. However, treatment may be considered to 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 *H. pylori* be treated?

Not everyone infected with *H. pylori* should be treated. Most infected people have no symptoms and therefore do not require treatment.

Those people who do have an ulcer present or have had a past history of ulcers should have *H. pylori* eliminated. This is because successful treatment will speed ulcer healing and prevent ulcers recurring. A minority of people with ulcer-like symptoms but no ulcer (non-ulcer dyspepsia) may also improve if *H. pylori* is eradicated.

Unfortunately there is no single drug that is effective against *H. pylori.* Treatment combinations include at least three drugs (triple therapy). The use of drug combinations reduces the risk of *H. pylori* becoming resistant to treatment.

There are a number of drug combinations used at the present time to treat *H. pylori.* The most effective of these are successful in 80-90% of people. The success rate is much lower if the drugs are not taken exactly as directed.

The drug combinations most commonly used include an ulcer healing drug (e.g. Omeprazole, Lansoprazole, Pantoprazole, Bismuth or Ranitidine-Bismuth-Citrate), and two antibiotics (e.g. Amoxycillin, Clarithromycin, Metronidazole, Tinidazole or Tetracycline). Several combination packs containing all the drugs needed fora course of treatment are now available in Australia. Treatment is usually for seven days.

Side effects can occur from each of these medications, or from interactions with other medications, and may include nausea, taste disturbances, diarrhoea or skin rashes. Some people taking Metronidazole or Tinidazole have an unpleasant reaction to alcohol while they are taking these antibiotics and for this reason people are advised not to drink alcohol while taking these medications. 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). Before you start treatment it is important to tell your doctor if you have ever had any side effects to antibiotics.

An antacid may make the ulcer pain go away temporarily, but it will not kill *H. pylori.* People being treated for an *H. pylori* ulcer should check with their doctor before taking antacids. Some of the antibiotics used to kill *H. pylori* may not work as well if combined with an antacid.

Food and special diets are now known to have very little impact on the prevention or treatment of ulcers. Ulcers are not caused by stress or eating spicy food nor are ulcers healed by drinking milk. Smoking and drinking alcohol worsen ulcers and prevent healing.

How do I know if the treatment has worked?

If you take the treatment exactly as directed, the chance of successful treatment is high. It is not always necessary to check that *H. pylori* has been eliminated (although many people wish to know).

H. pylori eradication should be checked before stopping anti-ulcer drugs especially if you have had a serious ulcer complication such as bleeding or perforation (a hole in the lining of the stomach or small bowel), or if your ulcer has often recurred. If you have to have another endoscopy, it is very simple to look for *H. pylori* using one of the tests described above. It is important that these tests are performed at least four weeks after all treatment is stopped, as *H. pylori* can grow again within this time.

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

Am I likely to become infected again?

No. Once you have had successful eradication of *H. pylori*, the risk of being reinfected is very low (only about 0.5-1.0% per year). This is because most infection is acquired in childhood.

Are there benefits from being infected with *H. pylori*?

There is increasing evidence to make scientists believe there may be benefits from being infected with *H. pylori*. For this reason infection is only treated when the risks of infection outweigh the possible benefits as in the case of ulcer disease.

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

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

Further questions

If you have further questions, consult with your doctor.

Digestive Health Foundation

This information leaflet has been designed by the Digestive Health Foundation as an aid to people who have been infected with Helicobacter Pylori *(H. pylori)*, or for those who wish to know more about this topic. This is not meant to replace personal advice from your medical practitioner.

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 (GESA). GESA is the professional body representing the specialty of gastrointestinal and liver disease. Members of the Society are drawn from physicians, surgeons, scientists and other medical specialties with an interest in gastrointestinal (GI)disorders. GI disorders are the most common health related problems affecting the community.

Research and education into gastrointestinal disease are essential to contain the effects of these disorders on all Australians.

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

dhf
Digestive Health Foundation

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