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Helicobacter Pylori

Helicobacter Pylori (H.Pylori) is a bacterium that infects the human stomach and was first recognised as a cause of symptoms in 1985. It is very common and can be found in up to 1 in 5 normal people. About 40% of persons over 40 years of age are infected with this germ compared to less than 10% of children. How it is spread is not known at this stage, but it is most likely from person to person and it can sometimes be found in several members of the same family. Once the infection is present it persists for many years, if not for life.

Most infected people have no symptoms, but H.Pylori is found in almost all patients with duodenal ulcers and in half of those with stomach (gastric) ulcers. However, it can also cause symptoms in patients who do not have an ulcer, in particular, abdominal pain related to meals, nausea, loss of appetite, belching and wind, bloating and distention after meals with a feeling that the food is not digesting, and a feeling of fullness after eating only a small amount. These symptoms can be the same as those caused by the ulcers themselves, and can be present for a few weeks, a few years or longer.

Endoscopic examinations of the stomach and duodenum can be necessary to diagnose H.Pylori infection. A small piece of tissue is taken from the stomach to test for bacterium. The test is usually positive within 2 hours but can take up to 24 hours. The endoscopic examination will also look for the presence of ulcers. Breath tests determine if you are infected by analysing a sample of your exhaled breath. This is because H.Pylori in the stomach is able to convert a naturally occurring substance called 'urea' into the gas carbon dioxide. If specially labelled urea is swallowed, labelled carbon dioxide can be detected for a short time in the breath of an infected individual. Breath tests are accurate, safe and quick to perform. They are particularly useful to check whether the infection has been successfully treated. The test 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 2 to 3 weeks). Blood tests can detect current or recent infections. However, the accuracy of these tests varies and overall they are less accurate than other methods. Bloods tests are not useful for checking whether the infection has been successfully eradicated.

Helicobacter Pylori can cause these diseases:

- 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

All people infected with H.Pylori have inflammation of the lining of the stomach. However, most infected people have no symptoms. In some people this inflammation progresses to other diseases and needs to be treated. It will disappear if the infection is successfully treated.

H.Pylori infection increases the risk of some forms of cancer of the stomach. Other factors may also increase this risk (e.g. a high salt diet or a low intake of green vegetables in certain populations). Although stomach cancer is very common in parts of the world, it is becoming an uncommon cancer in Australia as the number of people infected declines. It should be noted that only a small minority of infected people ever develop this problem.



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H.Pylori can also be the cause of different types of stomach or gastric ulcers. An ulcer is a break in the lining of the stomach or upper bowel (the duodenum). Ulcers occurring in these areas are often called peptic ulcers. H.Pylori is the cause of about 90% of ulcers in the duodenum. The common symptom is pain in the upper part of the abdomen. However, it is important to recognise that pain is often not due to ulcers as some ulcers cause no symptoms. A small proportion of ulcers cause serious complications such as bleeding or perforation (bursting).

H.Pylori is also 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. The symptoms and complications of stomach ulcers are the same as for duodenal ulcers. Modern anti-ulcer drugs heal virtually all duodenal and stomach ulcers but there is a high chance that the ulcer will come back if H.Pylori is not eradicated. 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.

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 found when they have tests (e.g. gastroscopy) to find the cause of the symptom. If no cause is found, they are described as having 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 (many do not), but only in a small number does the pain subside when the germ is treated.

In people who have, or have had, an ulcer, testing and treatment are important. This is because successful treatment will speed ulcer healing and prevent ulcers recurring. People with dyspepsia can be considered for testing also. Some of these people will have ulcers so treatment is important for them also. In some of the remainder, symptoms may improve with treatment. However, if they decide to have the infection treated, part of any benefit may be from reducing the chances of getting ulcers (or possibly stomach cancer) in the future. In each case, the decision to test and by which test should be discussed with your doctor. Testing should generally not be done unless treatment is contemplated. The side-effects and cost of treatment need to be weighed against the possible benefits.

Everyone with a duodenal ulcer should be considered for testing for H.Pylori with a view to treatment if infection is proven. This includes people with active ulcers and those who have had a duodenal ulcer in the past. If they are taking anti-ulcer drugs to prevent ulcers coming back and H.Pylori is eradicated, the anti-ulcer drug can often be stopped. There are few exceptions, such as when the doctor and patient decide that the risk of getting ulcers again may be unimportant in the context of some other severe illness. In the same way, everyone infected with H.Pylori who has had a stomach ulcer should be considered for testing and treatment. One exception may be people who develop an ulcer while taking anti-inflammatory drugs, where the benefits of treating H.Pylori infection are more controversial. In this situation, your doctor can give you individual advice.

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.



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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 to 90% of people; however this success rate is much lower if the drugs are not taken exactly as directed. Unfortunately, there is no single drug that is effective against H.Pylori. Treatment combinations include at least three drugs. The use of drug combinations reduces the risk of H.Pylori becoming resistant to treatment.

The drugs most commonly used include ulcer healing drugs (e.g. Omeprazole, Lansoprazole, Pantoprazol, Bismuth and Ranitidine-Bismuth-Citrate) and antibiotics (e.g. Amoxicillin, Clarithromycin, Metronidazole, Tinidazole and Tetracycline). Several combination packs containing all the drugs needed for a course of treatment are now available in Australia.

Taking this combination of drugs increases the risk of side-effects. Side-effects which may occur include nausea, taste disturbances, diarrhoea, skin rashes and interactions with other medications. Some people take Metronidazole or Tinidazole have an unpleasant reaction to alcohol while they are using these antibiotics. Very rarely more serious side-effects may occur such as bacterial infection of the large bowel or a sudden drop in blood pressure. It is important to tell your doctor if you have ever had any side-effects with antibiotics.

If you take the treatment exactly as directed, the chance of success is high, so it is not always necessary to check that H.Pylori has been eliminated, although many people wish to know. However, H.Pylori eradication success should be checked before stopping anti-ulcer drugs especially if you have had a serious ulcer complication or if your ulcer has often recurred. If you have to have another gastroscopy, it is very simple to look for H.Pylori using one of the tests described. 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 as H.Pylori can grow again within this time.

If treatment has not been successful, a different combination of drugs may be tried. Once you have had successful eradication of H.Pylori, the risk of being reinfected is very low (only about 0.5 to 1% per year). This is because most infection is acquired in childhood. There are no long-term complications of H.Pylori once it has been eradicated from the stomach.