

Helicobacter pylori

It is now recognised that several disorders of the upper GI tract are caused by infection with *Helicobacter pylori*. Some years ago Dr Barry Marshall, an Australian gastroenterologist, postulated that peptic ulcers and gastritis might be caused by bacteria. He was eventually proved to be correct.

What is *H pylori*?

H pylori is a bacterium that resides on the inside lining of the stomach. It has special features that allow it to survive in the highly acidic environment of the stomach. In some people it may lie dormant and cause no problem.

However, in certain circumstances it has the ability to penetrate the protective lining of the stomach, infect it and damage it by the production of special irritating chemicals. This then allows the acid in the stomach to further upset the damaged area.

What disorders does *H pylori* cause?

H pylori affects both the stomach and duodenum, the short part of the small bowel which receives food from the stomach.

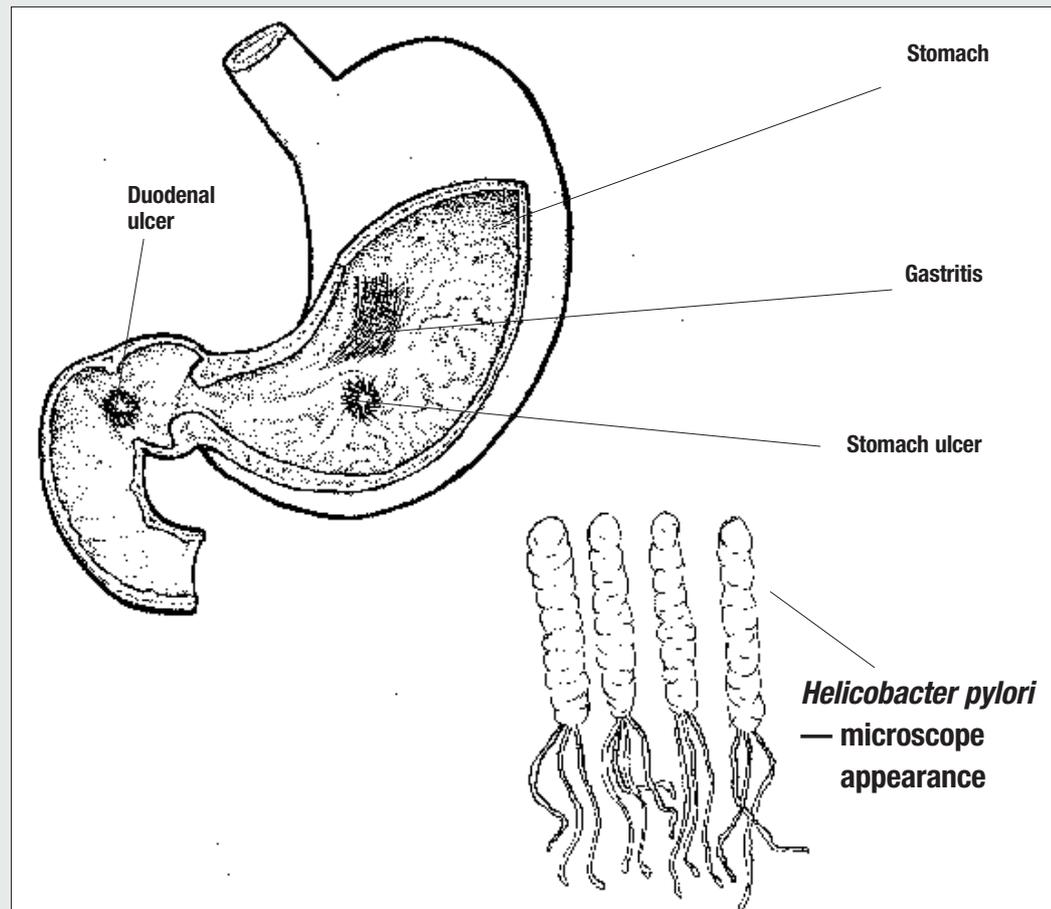
These disorders include:

- Stomach ulcers (also called gastric ulcers).
- Gastritis, which is inflammation of the stomach lining.
- Duodenal ulcers.
- Some stomach cancers.

The common factor in these conditions is inflammation of the lining of the stomach. It does not appear to cause gastro-oesophageal reflux disease, heartburn or dyspepsia in the absence of an ulcer.

How common is *H pylori* and who gets it?

The presence of *H pylori* in the stomach is common. It is estimated that about 40-50% of people older than 40 are infected with *H pylori* but many have no symptoms or problems. Older people are more likely to



develop problems as their immune system becomes less effective with age.

How is *H pylori* acquired?

It appears that it is usually acquired in childhood before the age of 10. Infection follows direct contact with other children whose attention to hygiene has probably been poor.

The transmission includes sharing food or eating utensils and kissing. There seems to be little risk of transmission between adults or from adults to children as long as good hygiene is practised.

There is no evidence that animals including household pets or infected food or water are reservoirs of infection.

How is *H pylori* infection diagnosed?

The diagnosis is made by one of several special tests that are available.

Urea breath test

In this relatively simple test a small dose of specially prepared urea is swallowed and the breath is analysed a short time later for carbon dioxide gas. The bacteria have the unique ability to make this chemical alteration.

Gastroscopy

During a gastroscopy, samples from the lining of the stomach can be collected and tested for *H pylori*. A pathologist can identify the presence of the "bug" in the biopsy specimen.

Blood test

A specific blood test can diagnose the presence or past history of infection but at this stage it is not as useful as the other tests.

How is *H pylori* treated?

Treatment is unusual and complex because a combination of drugs is needed to eradicate

the bugs which are good at hiding under the mucous lining of the stomach. At this stage there is no single drug that has been found effective.

There are several different effective drug combinations, which usually include two antibiotics (eg, tetracycline, metronidazole, amoxicillin, clarithromycin) and an ulcer-healing drug.

This modern treatment is generally effective. An eradication of *H pylori* in about 80-90% of cases can be expected. The chances of becoming reinfected after successful treatment are low.

What are the usual treatment rules?

- All the drugs should be taken as directed.
- It is necessary to take the drugs for 7-14 days.
- You should not drink alcohol during treatment.
- Side effects are common.
- Follow-up testing is essential.

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