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H. pylori Infection

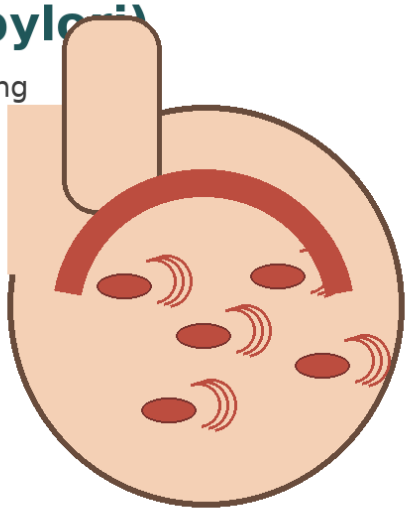
Symptoms, diagnosis, treatment and confirming eradication

Helicobacter pylori (H. pylori)

A bacterium that can live in the stomach lining

H. pylori can cause:

- inflammation of the stomach (gastritis)
- stomach or duodenal ulcers
- upper abdominal discomfort or indigestion



What is H. pylori?

Helicobacter pylori (H. pylori) is a bacterium that can infect the lining of the stomach. Many people have no symptoms. In others it causes inflammation (gastritis) and is an important cause of stomach and duodenal ulcers. Long-standing infection also increases the risk of some stomach cancers, which is one reason confirmed infection is usually treated.

What symptoms can it cause?

Upper abdominal discomfort
Pain, burning or discomfort in the upper abdomen, sometimes described as indigestion.

Nausea or bloating
Some people experience nausea, bloating, early fullness or frequent belching.

Peptic ulcer symptoms
Ulcers may cause recurrent upper abdominal pain. Symptoms can sometimes be related to meals or occur at night.

No symptoms at all
H. pylori is often found during investigation for another reason and may be present without obvious symptoms.

Seek prompt medical advice
Vomiting blood, black/tarry stools, persistent vomiting, unexplained weight loss, difficulty swallowing, anaemia, or severe/worsening abdominal pain require medical assessment.

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How is H. pylori diagnosed during an endoscopy?

During a gastroscopy (upper GI endoscopy), the doctor passes a thin flexible camera through the mouth to examine the oesophagus, stomach and first part of the small bowel. Small samples (biopsies) can be taken from the stomach lining. Taking biopsies is usually painless.

CLO test / rapid urease test

A small gastric biopsy is placed into a test medium containing urea. H. pylori produces an enzyme called urease, which breaks down urea and changes the colour of the test. A positive colour change indicates H. pylori is present.

Gastric biopsies sent to the laboratory

Biopsies can also be examined by a pathologist under the microscope (histology). This can identify H. pylori and assess inflammation or other changes in the stomach lining. In selected cases, additional laboratory testing may be used.

Medicines can affect testing

Proton pump inhibitors (PPIs), antibiotics and bismuth can suppress H. pylori and may cause a false-negative result. Your clinical team will advise whether any medicines should be stopped before testing. Do not stop prescribed medication without advice.

How is H. pylori treated?

Treatment aims to eradicate the bacterium. Regimens usually combine strong acid suppression with antibiotics. The exact choice depends on local antibiotic resistance, previous antibiotic exposure, allergies and prior treatment. It is important to take the full course exactly as prescribed.

Triple therapy - general outline

Acid suppression + 2 antibiotics

A proton pump inhibitor (PPI) is combined with two antibiotics, commonly for 14 days. A frequently used combination is a PPI + amoxicillin + clarithromycin, but clarithromycin-containing triple therapy is most appropriate when clarithromycin susceptibility is known or local resistance is low. Alternatives are required for some patients, including those with penicillin allergy.

Quadruple therapy - general outline

Four-drug treatment

A common option is bismuth quadruple therapy: a PPI + bismuth + tetracycline + metronidazole, usually for 14 days. Other non-bismuth quadruple regimens may combine a PPI with three antibiotics. Quadruple therapy may be chosen as first-line treatment in some settings or after previous treatment has failed.

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Why the exact prescription matters

H. pylori treatment is affected by antibiotic resistance. Do not substitute antibiotics or reuse leftover antibiotics. If you have a penicillin allergy, have previously taken macrolide antibiotics such as clarithromycin, or have already had H. pylori treatment, tell your doctor because this may change the recommended regimen.

Possible treatment side effects

Antibiotics can cause nausea, diarrhoea, abdominal discomfort or a metallic taste. Bismuth can darken the tongue or stools. Contact your doctor or pharmacist if side effects are severe, you develop an allergic reaction, or you are unable to complete treatment.

Confirming that treatment has worked

Successful eradication should be confirmed after treatment rather than assuming that symptom improvement means the infection has gone. The preferred non-invasive tests are:

Urea breath test

You swallow a small amount of labelled urea. If H. pylori is present, its urease enzyme breaks this down and labelled carbon dioxide can be measured in your breath.

Stool antigen test

A stool sample is tested for H. pylori antigen. This is also suitable for confirming eradication after treatment.

Timing of the eradication test

Testing is generally performed at least 4 weeks after completing antibiotics (and bismuth, if used). PPIs should usually be stopped for about 2 weeks before a urea breath test or stool antigen test because they can cause false-negative results. Follow the instructions from your doctor or testing service.

Blood antibody tests are not suitable for confirming eradication

H. pylori antibodies can remain positive long after the infection has been successfully treated, so blood serology should not be used as the test of cure.

If H. pylori is still present

If the post-treatment test remains positive, a different eradication regimen is usually required. The next treatment should take account of antibiotics already used and, where available, antibiotic susceptibility testing. Further specialist assessment may be appropriate after repeated treatment failure.

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Key points

- H. pylori may cause gastritis, indigestion and peptic ulcers, but many people have no symptoms.
- At endoscopy it can be diagnosed using a CLO/rapid urease test or by examination of gastric biopsies.
- Treatment uses a combination of acid suppression and antibiotics - commonly triple or quadruple therapy.
- Complete the full prescribed course, even if symptoms improve quickly.
- Confirm eradication afterwards with a urea breath test or stool antigen test at the correct interval.

This leaflet provides general information and does not replace individual medical advice. Antibiotic regimens vary according to resistance patterns, allergies and previous treatment; your prescriber will select the appropriate regimen.

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