



Diseases and Conditions

H. pylori infection

By Mayo Clinic Staff

H. pylori infection occurs when a type of bacteria called *Helicobacter pylori* (H. pylori) infects your stomach. This usually happens during childhood. A common cause of peptic ulcers, H. pylori infection may be present in more than half the people in the world.

Most people don't realize they have H. pylori infection, because they never get sick from it. If you develop signs and symptoms of a peptic ulcer, your doctor will probably test you for H. pylori infection, because it can be treated with antibiotics.

Most people with H. pylori infection will never have any signs or symptoms. It's not clear why this is, but some people may be born with more resistance to the harmful effects of H. pylori.

When signs or symptoms do occur with H. pylori infection, they may include:

- An ache or burning pain in your abdomen
- Abdominal pain that's worse when your stomach is empty
- Nausea
- Loss of appetite
- Frequent burping
- Bloating
- Unintentional weight loss

When to see a doctor

Make an appointment with your doctor if you notice any persistent signs and symptoms that worry you. Seek immediate medical help if you experience:

- Severe or persistent abdominal pain
- Difficulty swallowing
- Bloody or black tarry stools
- Bloody or black vomit or vomit that looks like coffee grounds

The exact way H. pylori infects someone is still unknown. H. pylori bacteria may be passed from person to person through direct contact with saliva, vomit or fecal matter. H. pylori may also be spread through contaminated food or water.

H. pylori is often contracted in childhood. Risk factors for H. pylori infection are related to living conditions in your childhood, such as:

- **Living in crowded conditions.** You have a greater risk of H. pylori infection if you live in a home with many other people.
- **Living without a reliable supply of clean water.** Having a reliable supply of clean, running water helps reduce the risk of H. pylori.
- **Living in a developing country.** People living in developing countries, where crowded and unsanitary living conditions may be more common, have a higher risk of H. pylori infection.
- **Living with someone who has an H. pylori infection.** If someone you live with has H. pylori, you're more likely to also have H. pylori.

Complications associated with H. pylori infection include:

- **Ulcers.** H. pylori can damage the protective lining of your stomach and small intestine. This can allow stomach acid to create an open sore (ulcer). About 10 percent of people with H. pylori will develop an ulcer.

- **Inflammation of the stomach lining.** H. pylori infection can irritate your stomach, causing inflammation (gastritis).
- **Stomach cancer.** H. pylori infection is a strong risk factor for certain types of stomach cancer.

See your primary care doctor if you have signs or symptoms that indicate a complication of H. pylori infection. Your doctor may test and treat you for H. pylori infection, or refer you to a specialist who treats diseases of the digestive system (gastroenterologist).

Because appointments can be brief, and because there's often a lot of ground to cover, it's a good idea to be well-prepared for your appointment. Here's some information to help you get ready for your appointment, and what to expect from your doctor.

What you can do

At the time you make the appointment, be sure to ask if there's anything you need to do in advance, such as restrict your diet. Before your appointment, you might want to write a list that answers the following questions:

- When did your symptoms begin?
- Does anything make them better or worse?
- Have your parents or siblings ever experienced similar problems?
- What medications or supplements do you take regularly?

Your time with your doctor is limited, so preparing a list of questions to ask may help you make the most of your time together. For H. pylori infection, some basic questions to ask your doctor include:

- How did H. pylori infection cause the complications I'm experiencing?
- Can H. pylori cause other complications?
- What kinds of tests do I need?
- Do these tests require any special preparation?
- What treatments are available?
- How will I know if the treatment worked?

In addition to the questions that you've prepared to ask your doctor, don't hesitate to ask additional questions that occur to you during your appointment.

What to expect from your doctor

Your doctor is likely to ask you a number of questions. Being ready to answer them may allow more time to cover other points you want to address. Your doctor may ask:

- Have your symptoms been continuous or occasional?
- How severe are your symptoms?
- Do you take any over-the-counter pain relievers such as aspirin, ibuprofen (Advil, Motrin IB, others) or naproxen sodium (Aleve)?

Tests and procedures used to determine whether you have an H. pylori infection include:

- **Blood test.** Analysis of a blood sample may reveal evidence of an active or previous H. pylori infection in your body. However, breath and stool tests are better at detecting active H. pylori infections than is a blood test.
- **Breath test.** During a breath test, you swallow a pill, liquid or pudding that contains tagged carbon molecules. If you have an H. pylori infection, carbon is released when the solution is broken down in your stomach.

Your body absorbs the carbon and expels it when you exhale. You exhale into a bag, and your doctor uses a special device to detect the carbon molecules.

Acid-suppressing drugs known as proton pump inhibitors (PPIs), bismuth subsalicylate (Pepto-Bismol) and antibiotics can interfere with the accuracy of this test. Your doctor will ask you to stop taking those medications for a week or two weeks before you have the test. This test is available for adults and children.

- **Stool test.** A laboratory test called a stool antigen test looks for foreign proteins (antigens) associated with H. pylori infection in your stool. As with the breath test, PPIs and bismuth subsalicylate can affect the results of this test, so your doctor will ask you to stop taking them for two weeks before the test.

- **Scope test.** You'll be sedated for this test, known as an endoscopy exam. During the exam, your doctor threads a long flexible tube equipped with a tiny camera (endoscope) down your throat and esophagus and into your stomach and duodenum. This instrument allows your doctor to view any irregularities in your upper digestive tract and remove tissue samples (biopsy).

These samples are analyzed for H. pylori infection. This test isn't generally recommended solely to diagnose an H. pylori infection because it's more invasive than a breath or stool test, but it may be used to diagnose H. pylori ulcers or if it's needed to rule out other digestive conditions.

H. pylori infections are usually treated with two varieties of antibiotics at once, to help prevent the bacteria from developing a resistance to one particular antibiotic. Your doctor also will prescribe an acid-suppressing drug, to help your stomach lining heal.

Drugs that can suppress acid include:

- **Proton pump inhibitors (PPIs).** These drugs stop acid from being produced in the stomach. Some examples of PPIs are omeprazole (Prilosec, others), esomeprazole (Nexium, others), lansoprazole (Prevacid, others) and pantoprazole (Protonix, others).
- **Histamine (H-2) blockers.** These medications block a substance called histamine, which triggers acid production. Examples include cimetidine (Tagamet) and ranitidine (Zantac).
- **Bismuth subsalicylate.** More commonly known as Pepto-Bismol, this drug works by coating the ulcer and protecting from stomach acid.

Your doctor may recommend that you undergo testing for H. pylori at least four weeks after your treatment. If the tests show the treatment was unsuccessful, you may undergo another round of treatment with a different combination of antibiotic medications.

In areas of the world where H. pylori infection and its complications are common, doctors sometimes test healthy people for H. pylori. Whether there is a benefit to treating H. pylori when you have no signs or symptoms of infection is controversial among doctors.

If you're concerned about H. pylori infection or think you may have a high risk of stomach cancer, talk to your doctor. Together you can decide whether you may benefit from H. pylori screening.

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