

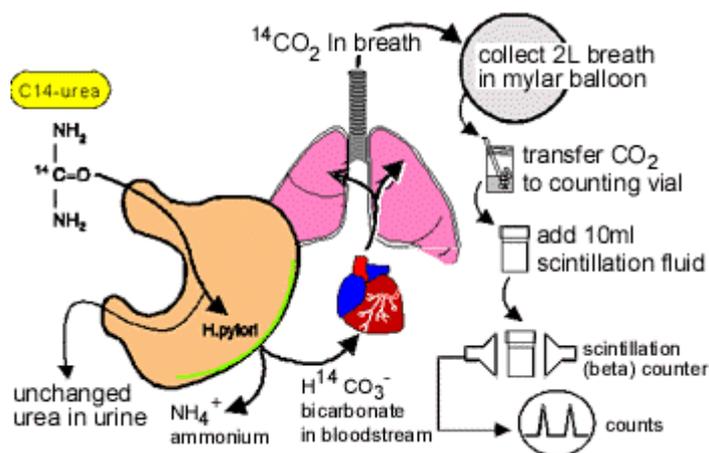
DIAGNOSIS OF *HELICOBACTER PYLORI*

It is very important that prior to any testing (except the blood test) for *H.pylori*, you have not taken any antibiotics or Pepto Bismol for one month, Losec for one week, or Pepsid, Zantac, Axid, or Tagamet for 24 hours before the tests are done.

To decide which is the best treatment for *H.pylori*, it may be necessary to do an endoscopy and take a biopsy (a small piece of tissue) from the lining of the stomach. This allows your doctor to grow your *H.pylori* in the laboratory and decide which antibiotic to use.

The Breath Test

A diagram showing how breath tests work is shown below. The figure represents a C14-urea breath test. In the C13-urea breath test the breath sample is measured in a mass spectrometer rather than a scintillation counter.



Carbon-14-urea Breath Test

In the C14-urea breath test you fast for about 6 hours (from midnight). The test is usually performed in the morning. You swallow a capsule or drink water which contains one microCurie of C14-urea. You provide the breath sample usually by blowing up a small balloon or blowing bubbles in a small bottle of collection liquid. Samples of breath are then taken between 10 and 20 minutes after the capsule is given (the exact details may vary from place to place). The C14-urea contains a tiny amount of radioactive material which passes out of your body in a day or so in the urine and breath. The amount of radioactive exposure from the test is less than you will normally receive in one day from nature. The test is quick and simple to perform, and much less expensive than endoscopy. The USA version is called the "PYtest" and is described in detail at the Tri-Med/Ballard breath-test internet site (<http://www.trimed.com>). The test costs \$50-\$100 and is also available in Australia (<http://www.trimed.com.au>).

Carbon-13-urea Breath Test

In the C13-urea breath test you fast for about 6 hours (from midnight). A baseline breath sample is collected (you blow into a bag or tube), then you eat a small, high calorie, meal ("ensure pudding" in the USA, it is somewhat like custard). Then you drink a solution of Carbon-13-urea in water. Then breath samples are taken at intervals, usually 20 40 and 60 minutes later (it varies). The samples may be mailed to a testing lab. If *H.pylori* is present in your stomach the C13-urea will be broken down and C13 will appear in your breath. Information about the test is available at the Meretek internet site (<http://www.meretek.com>) and also at this health information site (<http://www.pslgroup.com/dg/2194a.htm>). The test costs about \$100.

Blood Tests for *H.pylori*

Blood tests check your blood to see if you have antibodies which stick to *H.pylori*. If antibodies are present, it means either you have *H.pylori* or have had it in the recent past (i.e. the past 3 years usually). To have this test done your doctor can draw a blood sample and send it to a lab to have it tested. Many national labs perform this test.

Recently, several companies have been working on rapid blood tests for *H.pylori* which your doctor can do in a few minutes in his office. Saliva tests to detect antibodies in saliva have also been described.

Please Note: Antibody tests do not work well after you have been treated, since antibodies decline slowly and may remain elevated after *H.pylori* has been killed. However, antibody tests are not affected much if you have taken antibiotics, Pepto-Bismol, Prilosec, Carafate, Zantac, Tagamet, or Prilosec in the last month.

Endoscopy of the Stomach

Any gastroenterologist can do this test. A biopsy can be taken during endoscopy to check to see if you have *H.pylori*. Once a biopsy has been obtained it can be examined by Gram stain and microscopy, a rapid urease test such as the CLOtest (see www.tri-med.com/clotest.html), or Giemsa stain or silver stain for histology. Remember, you should be off all antibiotics and/or Pepto-Bismol for one month, Prilosec or Carafate for one week and H2 Blockers such as Tagamet, Zantac or Pepcid for 24 hours before this test.

In this test you do not eat or drink for up to six hours. In the endoscopy room you are given an injection of a sedative drug (similar to Valium) into a vein in the arm. A blood sample may be taken from the vein at this time. Your throat is sprayed with a local anaesthetic spray. You then swallow a narrow, flexible tube. The tube is only about the thickness of your little finger and although most patients have a little discomfort during the first five seconds of the test, once the tube has passed the back of the throat, very little discomfort occurs. Through this tube (the endoscope), the doctor examines the inside of the oesophagus (food pipe), stomach and duodenum. While in the stomach, it is usual to take up to ten small biopsy samples from the lining of the duodenum, stomach, and oesophagus. The complete endoscopy examination takes 15 minutes. After the test you may not drive a car for the remainder of the day because you may be drowsy. It is also illegal to drive after taking sedative drugs.

Helicobacter Foundation

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