



Helicobacter pylori: What You Should Know to Protect Yourself

By Whitney Barns

You may have heard about it once or twice, maybe in the news or perhaps glanced at the words in some health magazine, but what is *Helicobacter pylori*? *H. pylori*, as it is commonly called, is a spiral-shaped bacteria that can grow in the gastrointestinal tract of people. The infection is rare in children, and only about 40% of adults are infected; most infections are “silent” and produce no symptoms. Signs and symptoms include pain in the abdomen, bloody stools, or bloody or coffee ground-like vomit and generally less pain after eating than before eating. Before 1982, when this bacterium was discovered, spicy food, acid, stress, and lifestyle were considered the major causes of ulcers. Now, tests can be done by a doctor to determine if this is the cause of any stomach pains by simply having the patient breathe into a tester. If left untreated, the bacteria can lead to digestive illnesses, including gastritis (the irritation and inflammation of the lining of the stomach), peptic ulcer disease (characterized by sores that form in the stomach or the upper part of the small intestine, called the duodenum), and even stomach cancer later in life.

Just how common is this infection, you wonder? Approximately two-thirds of the world's population is infected with *H. pylori*. In the United States, *H. pylori* is more prevalent among older adults, African Americans, Hispanics, and lower socioeconomic groups. Infected persons have a 2- to 6-fold increased risk of developing gastric cancer and mucosal-associated-lymphoid-type (MALT) lymphoma compared with their uninfected counterparts. *H. pylori* can cause malignant transformation of the B-cells of the gastrointestinal tract and cause toxic effects to the tissue by releasing a kind of free radical called Reactive Oxidative Species, causing a wide range of abnormalities within the tissue.

So you had the pain, you saw the doctor, and you have the bacteria. Now what? Don't worry, there is a cure! Therapy for *H. pylori* infection consists of 10 days to two weeks of one or two effective antibiotics, such as amoxicillin, tetracycline (not to be used for children under 12 years old), metronidazole, or clarithromycin, plus either ranitidine bismuth citrate, bismuth subsalicylate, or a proton pump inhibitor. All you have to remember is that the combination of antibiotics prescribed to you is to rid your body of this infection and the proton pump inhibitor is to decrease your painful abdominal symptoms by minimizing the gastric acid produced in your stomach.

So what happens if the infection goes unnoticed? If the *H. pylori* infection is not caught, it can cause not only peptic ulcers, but stomach cancer as well. Gastric cancer is the second most common cancer worldwide; it is most common in countries such as Colombia and China, where *H. pylori* infects over half the population in early childhood. In the United States, where *H. pylori* is less common in young people, gastric cancer rates have decreased since the 1930s. Treatments are available for this form of cancer. One study found that eradication of *H. pylori* with antibiotics



alone resulted in regression of gastric MALT lymphoma, commonly called stomach cancer, in 60 - 90 percent of cases. With more aggressive cases, chemotherapy, in combination with bacteria eradicating antibiotics, is the current treatment of choice. There are many different combinations of chemotherapy drugs and antibiotics including CHOP, CEOP, m-BACOD and COP. Although chemotherapy is the main treatment currently, surgical removal of cancerous tissue and radiation therapy may still be an option in some cases.

How the bacteria are contracted and why some people show signs of infection while others do not is still somewhat of a mystery. It is suspected that it can spread by fecal-to-oral route by humans, and cats are carriers, too. There is a high spousal correlation of positive testing for *H. pylori* as well, so care should be taken to get the simple breath test if either spouse is suspected of having the bacteria. Since the source of *H. pylori* is not yet known, recommendations for avoiding infection have not been made. In general, it is always wise for persons to wash hands thoroughly, to eat food that has been properly prepared, and to drink water from a safe, clean source.

Take home message: Don't brush off reoccurring stomach pains as stress or a reaction to spicy foods that you don't recall eating. If you have symptoms, do yourself a favor and simply get tested to rule out this easily treated bacteria and prevent the worse pain associated with peptic ulcers or stomach cancer! Remember, sanitation is the only known prevention at this time, so make sure anything going into your mouth is clean!

Whitney Barns is currently a Dietetic Intern at Patton State Hospital in Highland, CA. Her areas of interest regarding nutrition are in nutrigenomics and maternal and infant health during pregnancy. Once she has finished her internship, she plans on working to broaden her perspective of the practice and to obtain a Masters Degree.