



Become a Stomach Guardian: Keep *H. pylori* Under Control

Acute and chronic inflammation of the stomach varying in severity extending to ulcers and cancer were once considered primarily due to one or more of the following factors: diet, medications, defects of the immune system pertaining to the gastric function resulting from genetic flaws or from trauma. In 1983 researchers found that these gastric issues appeared to be related to one particularly hardy bacterium which possessed a mechanism that allowed it to thrive in the acidity of the stomach. Subsequent studies confirmed its important role in gastric inflammation, peptic ulcer disease, and even stomach cancer. Originally named *Campylobacter pyloridis* this bacterium is now known as **Helicobacter pylori**, or *H. pylori*.



One Person Infected, the Whole Family at Risk

Significantly more than half of the populations of China and Africa are infected with *H. pylori*, although the total global frequency has actually declined in the past couple of decades. *H. pylori* has been found in animals, soil, and water. Oral transmission is considered an important route, particularly in families since they not only spend so much time in close proximity, they also share bathrooms and cooking.

● **Transmission Through Saliva:** *H. pylori* are most often received by children. The leading candidate for vector in its transmission is an infected close relative. Transmission may also occur by sharing food, drinks, or utensils, and intimate behavior. One family member testing positive for *H. pylori* makes the importance of everyone getting tested paramount. Practicing good hygiene, and avoiding sharing utensils may help reduce the risk of transmission.

● **Fecal-Oral Transmission:** *H. pylori* may also spread through fecal-oral exposure, particularly in settings with inadequate sanitation resulting in contamination of hands, food or water may result in infection. Proper hand hygiene, and the ability to not recontaminate using automatic doors or fresh drying systems remains an important preventive measure.

If Stomach Acid Kills Bacteria, How Can *H. pylori* Survive?

H. pylori has a remarkable mechanism, its ability to produce an enzyme called **urease** which breaks down urea into ammonia and carbon dioxide. The alkalinity of ammonia helps neutralize the stomach acid, providing a more favorable environment for the bacterium to survive. *H. pylori* can also produce virulent factors and toxins that damage the stomach's protective barrier and trigger inflammation and immune responses.

From Silent Infection to Stomach Disease

Most people infected with *H. pylori* generally appear symptom free. However, persistent infection may lead to chronic gastric inflammation possibly leading to gastric or duodenal ulcers. Symptoms may include nausea and vomiting, bloating, indigestion, abdominal discomfort after meals, upper abdominal pain when the stomach is empty. *H. pylori* infection is associated with an increased risk of stomach cancer. The WHO classifies *H. pylori* as a Group 1 carcinogen, meaning there is sufficient evidence that it can cause cancer in humans. People with a family history of stomach cancer, other risk factors or those experiencing persistent digestive symptoms should discuss *H. pylori* testing and appropriate screening with their healthcare provider.

Once *H. pylori* Is Detected, Eradication Treatment Is Recommended

When *H. pylori* infection is confirmed, eradication therapy is generally recommended to reduce the risk of ulcers and *H. pylori*-associated gastric cancer.

Treatment typically involves a combination of antibiotics and acid-suppressing medications. A patient's medical history, previous antibiotic exposure, and local antibiotic resistance patterns, determine whether a physician prescribes a three- or four-drug regimen. During treatment, some patients may experience nausea, vomiting, dizziness, abdominal discomfort, diarrhea, reduced appetite, or changes in taste (metallic). These side effects may impact the patient's ability to stay on their medicine. Antibiotic resistance is another important factor that can reduce treatment efficacy. Following and completing the prescribed regimen and specified treatment are critical.

Patients with stomach lining inflammation or gastric cells that change to resemble intestinal cells may continue to have an increased risk of gastric cancer even after *H. pylori* eradication. Individual risk factors determine the extent and degree of regular follow-up and endoscopic monitoring.

Nutrition as an Ally: Supporting Your Stomach During *H. pylori* Treatment

Allicin from Garlic: Long recognized for its antimicrobial properties garlic owes much of its popularity and success to one of its best-known active compounds is allicin. Increasing antibiotic resistance in *Helicobacter pylori* has contributed to declining eradication rates, prompting researchers to explore alternatives and complementary approaches to antibiotic therapy. Garlic, often referred to as a "natural antibiotic," contains allicin, a broad-spectrum antimicrobial compound that has demonstrated activity against *H. pylori*. Studies suggest that high-dose allicin may enhance the effectiveness of antibiotic therapy and improve *H. pylori* eradication rates.

Probiotics: Probiotics may improve *H. pylori* eradication rates while reducing treatment-related side effects such as nausea, vomiting, diarrhea, and constipation, helping improve treatment tolerance. Certain strains, including *Lactobacillus acidophilus*, *Lactobacillus bulgaricus*, and *Bifidobacterium*, may also support the healing of gastric ulcers.

Antioxidant Nutrient: *H. pylori* infection may increase oxidative stress and weaken antioxidant defenses, contributing to gastric mucosal and DNA damage. A combination of antioxidants, including vitamins A, C, D, and E and minerals such as zinc, selenium, and copper, may help neutralize free radicals, support antioxidant defenses and immune function, and promote gastric mucosal health. These nutrients may also provide supportive benefits alongside standard *H. pylori* eradication therapy.

High-Quality Protein: Protein provides essential amino acids needed for immune function and tissue repair. Whey protein is a high-quality, well-absorbed protein source and contains bioactive components such as lactoferrin, which has demonstrated antimicrobial activity. Some research suggests that lactoferrin may provide supportive benefits when used alongside standard *H. pylori* eradication therapy. Adequate whey protein intake can help provide the amino acids needed to support nutritional status, immune function, and tissue repair.

Digestive Enzymes and Digestive Support: Enzymes derived from various vegetables, pineapple, papaya, turmeric, and ginger may support the digestion of the three macronutrients, helping ease digestive discomfort such as bloating and indigestion. Their phytochemicals may also have anti-inflammatory properties and provide supportive benefits for gastric inflammation and peptic ulcers.