

# **COMPLICAIONS OF HELICOBACTER PYLORI INFECTION**

**BY**

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## **SUMMARY**

**H. pylori, or Helicobacter pylori, is a gram-negative, micro-aerophilic bacterium that lives primarily in the digestive tract. It is associated with inflammation of the gastrointestinal tract, gastric ulcers, cancers of the stomach and other stomach problems. Helicobacter pylori symptoms include nausea, vomiting blood, and an overall loss of appetite in addition to severe abdominal pain. Direct mouth-to-mouth transmission is the most common route of transmission, but contaminated food or water can also spread the disease. Helicobacter pylori (H. Pylori) infections can lead to a variety of unpleasant side effects, including gastric ulcers, gastritis, and even stomach cancer.**

## **BRIEF HISTORY OF H. PYLORI**

Helicobacter pylori, formerly known as campylobacter pylori, is a Gram-negative microaerophilic bacterium that is commonly found in the stomach and intestine. Helicobacter pylori infection occurs when Helicobacter pylori bacteria infect the stomach and intestine. Infection with H. Pylori is also a bacterial infection that causes stomach inflammation (gastritis),

peptic ulcer disease, and certain types of stomach cancer. It was discovered in 1982 by Australian scientists Barry Marshal and Robin Warren, who discovered it in a person suffering from chronic gastritis and a gastric ulcer. This is most common during childhood.

### **H. pylori Symptoms:**

Many people who have H. pylori do not have any symptoms. People who become ill as a result of H. pylori may experience a variety of symptoms.

A stomach ulcer can cause a dull or burning pain in the upper belly area. Sometimes the pain is worse at night or when the stomach is empty. Taking an antacid may provide temporary relief. The pain, however, returns with upper belly pain, nausea, and vomiting and these are common symptoms of gastritis.

### **Among the symptoms of stomach cancer are:**

- Stomach ache or swelling
- loss of appetite
- nausea
- indigestion
- feeling full despite not eating much
- vomiting(sometimes bloody vomit).

Anyone experiencing any of these symptoms should consult their doctor. Because these symptoms can be caused by other conditions, proper medical care is required to diagnose the problem.

### **CAUSES:**

Although the exact mechanism by which H. Pylori infects someone is unknown, it can be passed from person to person through direct contact with saliva, vomit, or fecal matter, as well as through contaminated food or water.

### **RISK FACTORS:**

H. Pylori is frequently contracted as a child. Risk factors for H. Pylori infection include childhood living conditions such as:

1. **Living in a crowded environment:** Living in a crowded environment increases the risk of H. Pylori infection.
2. **Lack of a consistent supply of clean water:** Having a consistent supply of clean, running water helps to reduce the risk of H. Pylori.
3. **Living in a developing country:** People who live in developing countries, where crowded and unsanitary living conditions are more common, are more likely to contract H. Pylori.
4. **Living with someone infected with H. Pylori**

### **COMPLICATIONS WITH H. PYLORI INFECTION:**

If H. pylori is left untreated, it can lead to serious complications such as:

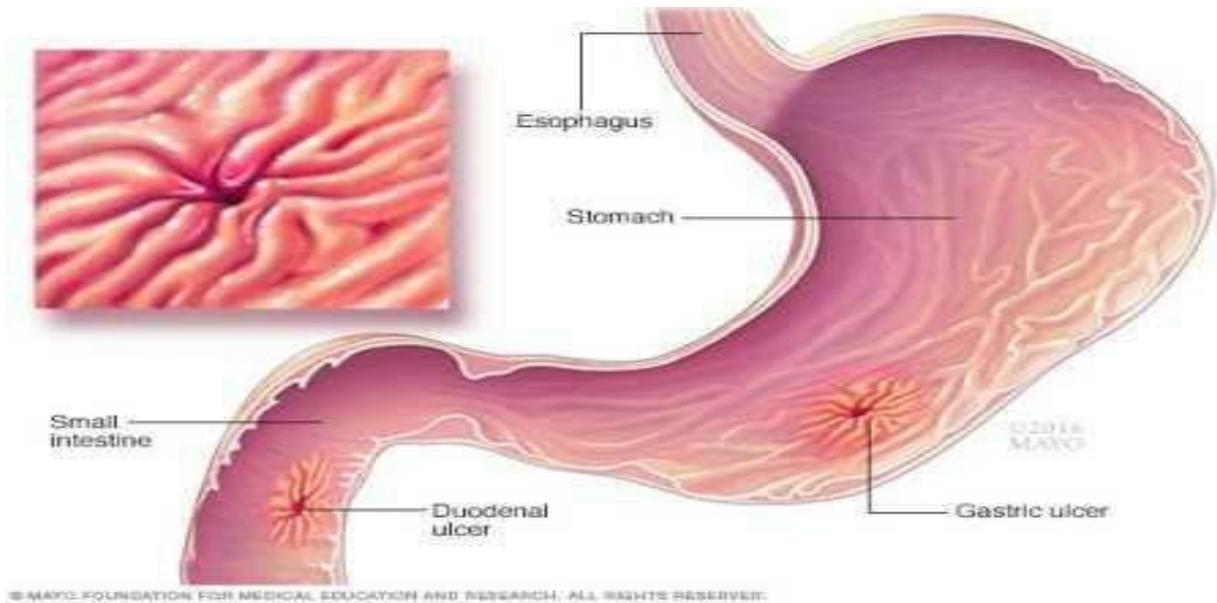
Internal bleeding that can be fatal; a hole in the stomach that can cause infection; scar tissue that can clog the stomach or intestine, preventing it from emptying food.

These complications necessitate prompt medical attention.

### **Among the possible warning signs are:**

- Severe stomach ache

- Black or tarry stool
- Stool with bright red blood
- Vomit that resembles coffee grounds
- Feeling dizzy or faint
- Feeling weak or short of breath
- Chills or fever



### THE LINK BETWEEN H. PYLORI & ULCERS

The stomach has a layer of mucus that protects it from stomach acid. *H. pylori* attacks the mucus lining of the stomach, exposing a portion of the stomach to acid. Bacteria and acid can irritate the stomach, causing ulcers, gastritis, and, in rare cases, stomach cancer.

Many people with H. pylori in their stomachs do not develop ulcers or other related problems. According to the Centers for Disease Control and Prevention, H. pylori affects two-thirds of the world's population (CDC).

In the United States, children under the age of 10 have a 5% Trusted Source prevalence of the bacteria. Hispanic and African American populations have a higher prevalence than white Americans. H. pylori infection affects approximately 60% of Hispanics and 54% of African Americans, compared to 20-29% of white Americans.

However, for unknown reasons, some people who have an H. pylori infection develop ulcers, gastritis, or stomach cancer.

Data from the developed world has shown that in the first decade since scientists discovered H. pylori, 95% of duodenal ulcers and 85% of gastric ulcers were associated with this bacterial infection.

Furthermore, people who test positive for H. pylori may have a 3-10 times higher lifetime risk of developing peptic ulcer disease (PUD) than those who do not.

H. pylori causes more than just ulcers. H. pylori has been linked to gastritis, a condition characterized by inflammation of the stomach lining.

H. pylori infection has also been linked to stomach cancer. However, according to the American Cancer Society Trusted Source, most people with H. pylori in their stomach never develop stomach cancer.

Peptic ulcers can also be caused by long-term use of certain medications, such as ibuprofen, aspirin, and naproxen. These medications are known as nonsteroidal anti-inflammatory drugs (NSAIDs).

### **H. pylori Tests:**

A blood test can be performed by a doctor to determine whether H. pylori antibodies are present in a person's blood. However, because antibodies can remain in the body after the bacteria has been removed, this may not be the best way to test for an active infection.

### **Other methods for testing for bacteria include:**

A urea breath test (UBT), in which a person swallows a urea capsule and then gives a breath sample after 10-20 minutes. This allows the doctor to determine whether the bacteria is present in the stomach.

An endoscopy can help a doctor find the infection as well as any associated ulcers or inflammation.

A stool sample can also reveal whether a person has antigens for the bacteria on their stool. This tells the doctor if the patient has an active infection.

Clinicians use a combination of tests to diagnose ulcers, gastritis, and stomach cancer:

Medical history: Previous medical problems and symptoms are discussed.

The doctor will examine and listen to the abdomen.

Special X-rays: These can show the inside of the stomach.

Endoscopy: A special instrument is used to view the inside of the stomach while the patient is sedated or put to sleep.

H. pylori contagiousness

H. pylori is contagious, though the mechanism by which it spreads is unknown. The two most likely modes of transmission for bacteria are:

- direct person-to-person transmission
- pollution of the environment

### **Causes of H. pylori Infection:**

When it comes to environmental contamination, the most likely source is contaminated food or water. It has been discovered in human saliva, so experts believe it can spread from person to person.

There is no known way to avoid H. pylori infection. However, experts recommend:

Hand washing before eating and after using the restroom.

Eating food that has been handled and prepared safely.

Drinking only clean, safe water.

H. pylori infections are more common in developing countries where people may lack access to clean, safe food and water.

### **H. pylori Treatment:**

People who have symptoms of an ulcer, gastritis, or another stomach problem may be tested for *H. pylori* or other issues. If doctors discover an ulcer, they may treat patients with a variety of medications, including some or all of the following:

antibiotics that kill *H. pylori*; medications that reduce stomach acid called proton pump inhibitors (PPIs) or histamine receptor blockers medications that coat the ulcer and help it heal.

A peptic ulcer may recur after treatment. To help avoid this, experts recommend that a person:

- Stop using NSAIDs or take a much lower dose.
- Take NSAIDs only with stomach-protecting medications.
- Avoid alcohol.
- Consider quitting smoking.

Experts also advise treating children and adolescents with *H. pylori* with 1-2 mg/kg/day of a proton pump inhibitor (PPI) and two different antibiotics: amoxicillin (50 mg/kg/day) and clarithromycin (20 mg/kg/day).

This treatment should last 14 days. If this fails, the doctor may try increasing the dosages or substituting antibiotics.

#### *H. pylori* antibiotic resistance

Most *H. pylori* infections can be successfully treated with antibiotics.

However, research indicates that some *H. pylori* infections are becoming resistant to certain antibiotics. This means that *H. pylori* can survive antibiotic treatment, and the patient may require another drug to kill the bacteria.

A 2015 study discovered that some patients in the United States had *H. pylori* infections that were resistant to two different antibiotics. A 2014 study discovered a high number of resistant *H. pylori* bacteria in Latin American countries.

Antibiotic resistance is a global issue. According to the CDC, antibiotic-resistant infections kill over 35,000 people each year.

Many people have heard of methicillin-resistant (*Staphylococcus aureus*) (MRSA). However, many other types of bacteria have developed resistance to antibiotics.

Everyone can help combat the problem of antibiotic resistance. The CDC recommends that people:

- Antibiotics should only be used as directed by a doctor.
- Colds and the flu are viruses, and antibiotics will not help.
- If antibiotics have been prescribed, complete the entire course.
- Never give antibiotics to others.
- Never use expired or stale antibiotics.

Fortunately, *H. pylori* is still treatable with a variety of antibiotics. Quick treatment will help prevent stomach damage and the potential problems of ulcers, gastritis, and stomach cancer.

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