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LIFE DISCOVERED. LIFE DIAGNOSED.

Do you see patients with any of these symptoms?

- Dyspepsia
- Heartburn
- Nausea
- Bloating

It may be *H. pylori*, which affects 1 in 3 people[1]

Consider the Possible Risks of *H. pylori*

It could be gastritis, GERD, or peptic ulcer disease, but it could be one of the world's most common bacterial infections: *H. pylori*.

Patients with *H. pylori* are at risk for long-term consequences such as ulcers and gastric cancer when left untreated. **Stomach cancer accounts for about 1.5% of all new cancers diagnosed in the United States each year.**[1,2]

Approximately **50%** of the world is infected[3]

The US has a **30-40%** prevalence[2]

African Americans, Hispanic, and immigrants from Asia, Eastern Europe, and Africa have higher prevalence rates **(~70%)**[3]

Helicobacter pylori (H. pylori)

H. pylori is a bacterium that is found in the lining of the stomach. *H. pylori* infections are linked to several important upper gastrointestinal (GI) conditions, including **chronic gastritis, peptic ulcer disease, and gastric cancer.**[3]

1 out of 3
people in the United States is infected with *H. pylori*

9 out of 10
ulcers are caused by *H. pylori* bacteria

Gastric Cancer
risk is **6 times higher** in *H. pylori* infected individuals

Dyspepsia

Dyspepsia is the medical term that is used to describe what many people refer to as stomach pain or abdominal pain centered in the upper abdomen. A common cause of dyspepsia is an infection with *H. pylori*. **Patients with dyspepsia and no alarm symptoms should undergo initial testing and treatment for *H. pylori*.**[6]

Dyspepsia Alarm Symptoms[6]

- Age older than 60 years with new onset dyspepsia
- Family history of upper gastrointestinal cancer
- Unintended weight loss
- Gastrointestinal bleeding
- Progressive dysphagia
- Odynophagia
- Unexplained iron-deficiency anemia
- Persistent vomiting
- Palpable mass or lymphadenopathy
- Jaundice

Proton pump inhibitors may be masking an *H. pylori* infection

Proton pump inhibitors (PPIs) are commonly used to alleviate symptoms and discomfort in patients but may mask and prolong an *H. pylori* infection. Performing an *H. pylori* test before writing a PPI prescription can help identify *H. pylori*-positive individuals, allow treatment, and prevent chronic PPI use. **Prolonged PPI (prescription and/or OTC) usage show dramatically higher incidents of kidney disease, and even kidney failure.**[6,7]

Test for *H. pylori* infection before starting PPI therapy. AGA and ACG recommend testing for *H. pylori* before prescribing a proton pump inhibitor for patients under 60, with no alarm symptoms.[3,6]

Commonly used PPIs include:

| Nexium® (esomeprazole magnesium) | Prevacid® (lansoprazole)
| Prilosec® (omeprazole) | Protonix® (pantoprazole sodium)
| AcipHex® (rabeprazole sodium) | Dexilant® (dexlansoprazole)
| Zegerid® (omeprazole/sodium bicarbonate)

Reasons to test for *H. pylori* First:

- Ongoing unexplained stomach symptoms, uninvestigated dyspepsia
- Active ulcer(s) or a history of ulcers
- Gastric cancer or a history of gastric cancer
- Confirmation a previous *H. pylori* infection has been treated successfully
- Reduce the risks associated with untreated, long-term *H. pylori* infections
- Prevent chronic use of proton pump inhibitors (PPIs)

H. pylori testing guidelines

AGA and ACG recommend a test, treat, and retest approach to confirm the eradication of *H. pylori*. Active infection tests such as 13C-urea breath tests or stool antigens are recommended rather than serology (antibody).[3,6]

Serology cannot determine active infection and is not recommended

Recommended Approach:

TEST to detect the underlying cause of the symptoms

TREAT the patient if the infection is detected with guideline-recommended therapy

RE-TEST to confirm eradication at least 4 weeks after completing treatment

Confirmatory testing is good medicine to ensure the infection has been eradicated.[6] Many patients fail to adhere to antibiotic regimens and antibiotic resistance is on the rise.

Clarithromycin resistance is **30%** in the U.S.[8]

H. pylori eradication therapy fails in **1 out of 4** patients

For more information on *H. pylori* or to download patient education resources, visit meridianbioscience.com/hpylori-resource-center

Abbreviations: | ACG: American College of Gastroenterology; AGA: American Gastroenterological Association; PPI: proton pump inhibitor |

References: 1. Fennerty, M. B. *Helicobacter pylori: why it still matters in 2005.* Cleveland Clinic Journal of Medicine, 2005; 72 (Suppl_2), S1-7. https://doi.org/10.3949/ccjm.72.suppl_2.s1. 2. American Cancer Society. *Key Statistics for Stomach Cancer.* Available at https://www.cancer.org/cancer/stomach-cancer/about/key-statistics.html Accessed June 9, 2022. 3. Chey, W. D., Leontiadis, G. I., Howden, C. W., & Moss, S. F. *ACG Clinical Guideline: Treatment of Helicobacter pylori Infection.* American Journal of Gastroenterology, 2018; 113(7), p1102. doi: 10.1038/s41395-018-0132-6 4. Centers for Disease Control. MMWR (October 1997) *Knowledge About Causes of Peptic Ulcer Disease--United States,* March-April 1997. https://www.cdc.gov/mmwr/preview/mmwrhtml/00049679.htm. Accessed June 9, 2022. 5. Helicobacter and Cancer Collaborative Group. *Gastric cancer and Helicobacter pylori: a combined analysis of 12 case control studies nested within prospective cohorts.* Gut. 2001 Sep;49(3):347-53. doi: 10.1136/gut.49.3.347. PMID: 11511555; PMCID: PMC1728434. 6. Talley, N. J. American Gastroenterological Association Medical Position Statement: *Evaluation of Dyspepsia.* Gastroenterology, 2005; 129(5):1753-1755. https://doi.org/10.1053/j.gastro.2005.09.019 7. Lazarus B, Chen Y, Wilson FP, Sang Y, Chang AR, Coresh J, Grams ME. *Proton Pump Inhibitor Use and the Risk of Chronic Kidney Disease.* JAMA Intern Med, 2016;176(2):238-246. doi:10.1001/jamainternmed.2015.7193 8. Shah S, et al. *Helicobacter pylori infection treatment in the United States: clinical consequences and costs of eradication treatment failure.* Expert Review of Gastroenterology & Hepatology, 2022; 16(4): 341-357. DOI: 10.1080/17474124.2022.2056015. 9. Urgesi R, Ciaci R, Ricconi ME. *Update on triple therapy for eradication of Helicobacter pylori: current status of the art.* Clin Exp Gastroenterol, 2012;5:151-157.

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