



**Medical
Blueprints**

CONSTANT REFLUX CONSTANT DAMAGE REPORT #2832

BACKGROUND: Heartburn occurs in the esophagus and can cause mild to severe pain in the chest. The lining of the esophagus is more delicate than that of the stomach, so acid in the esophagus causes a burning sensation in the chest. The pain can feel sharp like a tightening sensation. Heartburn usually occurs after eating. There is a circular muscle called the lower esophageal sphincter that joins the esophagus and stomach. This muscle oversees tightening the esophagus after food passes to the stomach. If this muscle is weak or doesn't tighten properly, the acid from the stomach can move backward into the esophagus. This is known as acid reflux. GERD is the chronic form of acid reflux and is diagnosed when acid reflux occurs more than twice a week or causes inflammation in the esophagus. Long-term damage of the esophagus can lead to cancer. Pain from GERD may or may not be relieved with antacids or other over-the-counter medication.

(Source: <https://www.healthline.com/health/gerd/heartburn-vs-acid-reflux#heartburn>)

RISKS AND DIAGNOSIS: Factors that can aggravate acid reflux include smoking; eating large meals or eating late at night; eating certain foods that are fatty or fried; drinking certain beverages like alcohol or coffee; and taking certain medications like aspirin. Conditions that can increase the risk of GERD include obesity; bulging of the top of the stomach up into the diaphragm; pregnancy; connective tissue disorders like scleroderma; and a condition known as gastroparesis which causes a delay in the emptying of your stomach. A diagnosis can usually be made based on a physical examination and history of signs and symptoms. However, to confirm a diagnosis of GERD, a doctor might recommend an upper endoscopy. This is where a thin, flexible tube equipped with a light and camera is inserted down the throat to examine the inside of the esophagus and stomach. An ambulatory acid (pH) probe test is where a monitor is placed in the esophagus to identify when, and for how long, stomach acid regurgitates there. Esophageal manometry is a test that measures the rhythmic muscle contractions in the esophagus when you swallow. Finally, x-rays can be taken after you drink a chalky liquid that coats and fills the inside lining of the digestive tract. This coating allows the doctor to see a silhouette of the esophagus, stomach and upper intestine.

(Source: <https://www.mayoclinic.org/diseases-conditions/gerd/symptoms-causes/syc-20361940>)

NEW COMPOUND TARGETS BILE REFLUX: An investigational drug that binds to bile in the stomach may provide relief for patients with difficult-to-treat cases of GERD. "PPIs (proton pump inhibitors) are really good at suppressing acid reflux but don't do much to address bile reflux. This drug offers us a novel way of treating patients with refractory GERD, not just to keep going with more and more acid suppression but to intervene through bile suppression," said Michael F. Vaezi, MD, director of the Center for Swallowing and Esophageal Disorders at Vanderbilt University Medical Center. The study evaluated the safety and efficacy of three different doses of a medication called IW-3718 as an additional therapy to PPIs in patients who either failed to respond to PPI treatment or had only a partial response. Patients were randomized to receive placebo or IW-3718 twice daily (500 mg, 1000 mg, or 1500 mg) for eight weeks. The researchers observed a dose-response trend across treatment groups. "Our results are positive. They confirmed our hypothesis, that this novel way of treating patients with refractory GERD through bile sequestration would make them feel better," Vaezi said.

(Source: <https://discover.vumc.org/2020/03/gerd-drug-offers-new-approach-to-relieve-chronic-symptoms/>)

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