



Peptic ulcers are open craters or sores that develop in the inner lining (mucosa) of the stomach or the duodenum (the first section of the small intestine). A coating of mucus and other chemicals normally shield the stomach and duodenum from digesting themselves. When these protective mechanisms are disrupted, powerful digestive acids can erode into the lining of these organs and cause peptic ulcers.

CAUSES

The most common cause of peptic ulcers is infection by a bacterium called *Helicobacter Pylori* (or *H. Pylori*, for short). *H. Pylori* infection breaks down the protective mucous barrier, exposing the stomach and duodenum to digestive juices. Chronic inflammation develops in the duodenum (duodenitis) or stomach (gastritis); if untreated, this can evolve into a peptic ulcer. Current medical opinion suggests that anyone with ulcer symptoms should, at some point, be checked for the presence of *H. Pylori*. The importance of this finding is that, in many cases of *H. Pylori* positive ulcers, antibiotics can actually heal the ulcer.

Other causes of peptic ulcers include Non-Steroidal Anti-inflammatory Drugs (NSAIDs) e.g. Aspirin, viral illnesses and certain rare tumors. Smoking, genetics, and alcohol consumption may be contributing factors. Psychological stress and diet (spicy foods, etc.), which were once thought to be causative, are no longer considered to be significant.

SYMPTOMS

The hallmark of peptic ulcer disease is pain in the epigastric region (a small area between the breastbone and belly-button). The pain may be described as a "hunger pain" or a continuous gnawing or burning sensation. Sometimes it is felt during sleep and may be strong enough to awaken the patient in the middle of the night. The pain can vary in intensity throughout the day or night, while pain-free periods can last for days to months or even years.

Duodenal ulcer pain usually occurs two to five hours after eating, or worsens when the stomach is empty. Gastric ulcer pain occurs soon after eating or when the stomach is full. The pain of both types of ulcer tends to be relieved by medications that neutralize stomach acid or prevent its secretion.

Other common ulcer symptoms include a bloated feeling immediately after eating, indigestion and heartburn. Ulcer symptoms are non-specific – their occurrence therefore does not necessarily indicate an ulcer. Your doctor will need to perform a thorough history, physical exam and tests before establishing (or ruling out) the diagnosis of an ulcer.

COMPLICATIONS

Gastrointestinal bleeding is one of the most serious complications of ulcers. It results when the ulcer erodes into a blood vessel in the wall of the stomach or duodenum.

The common signs of bleeding include vomiting, bright red blood or passing bloody or tarry, black stools. Pepto Bismol, often taken for relief of ulcer symptoms, may also cause black discoloration of the stools. In the case of severe bleeding, weakness, fatigue, loss of consciousness and/or shock may result.

Another serious ulcer complication is perforation. This can develop as stomach acid erodes through the intestinal wall and spills into the abdominal cavity. The first sign of perforation is sudden, intense, steady abdominal pain.

If you are experiencing this type of pain, contact your doctor immediately. Perforation is an extremely serious situation that requires immediate medical attention.

A third complication of ulcers is obstruction of the digestive tract, usually at the junction of the stomach and duodenum, as old ulcer scars accumulate and narrow the passageway through this area. As a result, food and fluid passing from the stomach to the duodenum may be restricted or blocked altogether, producing a distended stomach (from retained food and secretions), intense pain, and continued vomiting.

DIAGNOSIS

H. Pylori infection is most commonly diagnosed with a blood test; stool and "breath tests" are alternative methods. Sometimes, an "Upper Endoscopy" may be performed. This test involves passing a fiber optic tube with a camera at its tip into the stomach and duodenum. An older test called the "Upper GI" is an alternative, but it is not as good at detecting ulcers as the endoscopy. The upper GI test involves swallowing barium solution and then getting an X-ray as the barium outlines the stomach and duodenum.

TREATMENT

There are many new ulcer treatments available, depending on the type and cause, of the ulcer in question. Surgery is rarely necessary. Two of the most common causes must be identified and addressed if present, H. Pylori infection and NSAID use.

Peptic ulcers caused by H. Pylori infection are treated with several possible treatment regimens usually consisting of two antibiotics and an acid reducer for two weeks. This treatment cures the ulcer in 90% of infections, but success is highly dependent on the patient taking all the prescribed medications as directed. This treatment may be followed by an additional 2 to 6 weeks of an acid reducer.

Other recommendations may include the following:

- Stop smoking and avoid NSAIDS if possible. If continuing an NSAID is necessary, your doctor can discuss several options with you for either continuing the NSAID along with an acid reducer, or switching to alternative medications.
- Alcohol must be avoided until the ulcer has healed. Small amounts of alcohol after that are probably safe, but you should discuss this with your doctor.
- Although stress and diet have not been found to play a significant role in developing ulcers, stress management is appropriate for your general health. If certain foods upset your stomach (e.g. spicy, acidic foods), avoiding these may also decrease symptoms.
- Caffeine containing foods (coffee, tea, chocolate, and some medications) can stimulate acid secretions; therefore, worsening the ulcer pain.
- Antacids can be used during ulcer treatment, but should not be used within one hour before or two hours after taking other ulcer medication because this may alter the absorption of the medication.

SUMMING UP

Peptic ulcer is a serious medical condition, but with proper treatment it can be controlled and, in most cases, healed. Remember, even if the symptoms of your ulcer disappear, do not stop taking your medication without the consent of your physician. Also, do not become discouraged if you do not see immediate changes in your condition; it often takes time.

References

Peura, D. A., (2007) Patient information: Peptic ulcer disease.

UpToDate Web site and search for peptic ulcer disease

If you are a registered University of Illinois student and you have questions or concerns, or need to make an appointment, please call: **Dial-A-Nurse at 333-2700**

If you are concerned about any difference in your treatment plan and the information in this handout, you are advised to contact your health care provider.

Visit the McKinley Health Center Web site at: <http://www.mckinley.uiuc.edu>