PEPTIC ULCER

Patient Information Fact Sheet

What is a peptic ulcer?

A peptic ulcer is a sensitive, raw patch, very much like a mouth ulcer, which forms a break in the lining of the stomach or the duodenum. Gastric ulcers occur in the stomach and duodenal ulcers occur in the duodenum, the first part of the intestine after the stomach.

How is an ulcer formed?

The stomach produces hydrochloric acid and pepsin, which together start the digestion of food. In theory, these two substances could digest the lining of the stomach or duodenum just as they do the food, but several defense mechanisms protect the lining from such attack. Ulcers occur when the acid and pepsin break the defenses and "eat" away at the lining of the stomach and duodenum. The involvement of pepsin has led to the general description of ulcers as "peptic." It is often thought that people with ulcers are making too much acid and pepsin. However, for the majority of sufferers this is not so and the amount of acid produced tends to get less with age.

A very important cause of developing an ulcer is a germ or bacterium called *Helicobacter pylori*, known as *H. pylori*. This is found in the lining of the stomach of at least half of the world's population, and it is now certain that having this germ present makes developing ulcers much more likely. Patients with duodenal ulcers almost always have this germ present and at least 80% of gastric ulcer patients also have it. Researchers are actively investigating why it is that only some people who are infected with the germ get ulcers.

Who gets an ulcer?

Ulcers are very common and men are more prone to suffer than women. About one in 10 men and one in 15 women suffer from an ulcer at some time in their lives, but in most people they heal with treatment. People who have *H. pylori* present in the lining of their stomach are far more likely to develop further ulcers and so it is important that they receive treatment to clear this infection. This can usually be done by using a combination of medications, including **antibiotics**. Ulcers are rare in children and are more likely to occur as people get older. Sometimes peptic ulcers tend to run in families.

Another important cause of ulcers is the group of drugs used in the treatment of pain, particularly arthritis and rheumatism, called the **non-steroidal anti-inflammatory drugs** (NSAIDs). **Aspirin** and **ibuprofen** are in this group of common medication.

People throughout the world suffer from ulcers, but they are most common in Europe, North America, Southern India and Bangladesh.

What are the symptoms of a peptic ulcer?

The primary symptom is severe pain in the abdomen that is:

- usually felt at the top of the stomach, centrally between the ribs and sometimes going through to the back
- often burning in quality
- often eased by eating, only to recur once the food leaves the stomach
- often worse at night (in duodenal ulcer patients and may wake them up)
- sometimes accompanied by vomiting.

What increases the risks of having an ulcer?

Sometimes there is no apparent explanation for the development of an ulcer. However, it is known that smoking, heavy alcohol intake—especially spirits—and certain medicines such as aspirin and anti-inflammatory drugs, can cause ulcers to develop or make existing ones worse. The action of aspirin and other anti-inflammatory drugs prevent the formation of protective substances and are in themselves harmful to the stomach lining. They can also cause ulcers to bleed. Patients who regularly have to take aspirin or anti-inflammatory pain killing drugs should discuss with their doctor how to minimize the effects on their stomach.

Smoking makes ulcers more likely to develop and also slows the healing process. It also makes recurrence more likely.

Stress probably does not cause ulcers, but does worsen symptoms if an ulcer is present. Stressful situations worsen their symptoms, possibly because the stomach produces more acid in response to stress.

What tests confirm the presence of an ulcer?

The usual tests used are either an endoscopy or a barium meal. These are usually done on an out-patient basis:

Endoscopy— After going without food, the patient is helped to swallow a slim flexible tube with a small camera at its tip that enables the lining of the gullet, the stomach and duodenum to be seen on a monitor. Before the procedure is carried out, the patient will receive a mild sedative and/or a numbing agent for the back of the mouth/throat. When necessary, samples for a biopsy and to test for *H. pylori* can be taken for analysis.

Barium meal— A barium meal is an x-ray that involves swallowing a tasteless, white liquid. Ulcers show up as craters or pits in the lining of the stomach and duodenum.

How is an ulcer treated?

About one-third of duodenal ulcers heal by themselves within a month. Dietary treatment used to be recommended for ulcers, but drug treatment is now so effective that the main dietary advice is simply to avoid foods that cause indigestion. These foods vary from patient to patient. A bland diet is not necessary but it is sensible to ensure regular meals. The aim of treatment is to:

- eradicate *H. pylori* infection when present. Combinations of drugs including antibiotics are used for 1 or 2 weeks to kill the bacteria.
- reduce stomach acid. The most commonly used drugs do this by inhibiting the cells that produce gastric acid. Antacids, such as **Milk of Magnesia**, act by neutralizing, for a short time, the acid after it has been produced.
- boost the body's defenses. Other drugs help the stomach lining to resist being 'eaten' away by the digestive process.

Generally ulcer drugs have few side effects. Some antacids may cause constipation, others may cause diarrhea. Antibiotic treatments are less pleasant and may cause mild stomach upset and diarrhea. They are usually only given for 1–2 weeks.

Do ulcers come back after treatment?

Most ulcers heal in 4 to 8 weeks but they are very likely to come back in the future unless the *H. pylori* infection is successfully treated. If the bacteria is killed by treatment, the chances of recurrence are small. Where this is not achieved, or the ulcer is not caused by infection, then another way of preventing ulcer recurrence is to continue to take acid-reducing tablets.

Is surgery necessary to treat ulcers?

Because we now have such effective medical treatment, surgery is rarely needed today. Occasionally, surgery may be required as an emergency if a deep ulcer causes a complication, such as bleeding or perforation of the wall of the stomach or duodenum. There are also a few people who had ulcers years ago and have persisting problems as a result of scarring. This may cause a narrowing of the centre of the stomach which can be relieved by surgery or endoscopy.

Further information

National Digestive Diseases Information Clearinghouse (NDDIC): http://digestive.niddk.nih.gov/ddiseases/pubs/hpylori/index.htm

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