

## Stomach ulcer

A stomach or gastric ulcer is a break in the tissue lining the stomach. The term 'peptic ulcer' refers to those that occur in either the stomach or the first part of the small intestine that leads out of the stomach, called the duodenum.

It was once commonly thought that stress, smoking and diet were the principal causes of stomach ulcers. However, the *Helicobacter pylori* (*H. pylori*) bacterium is now known to be responsible for most duodenal ulcers and 60 per cent of stomach ulcers. The *H. pylori* bacterium also prompts many symptoms of dyspepsia, or indigestion.

Treatment for stomach ulcers includes the use of antibiotics to kill the infection, and acid-suppressing drugs.

### Symptoms of stomach ulcers

Some stomach ulcers don't produce any symptoms. If present, they can include:

- Abdominal pain just below the ribcage
- Indigestion
- Nausea
- Loss of appetite
- Vomiting
- Weight loss
- Bright or altered blood present in vomit or bowel motions
- Symptoms of anaemia, such as light-headedness
- Shock due to blood loss – a medical emergency.

### The stomach

The stomach is an organ of the digestive system, located in the abdomen just below the ribs and on the left. Swallowed food is squeezed down the oesophagus and pushed through a sphincter (small muscle ring) into the stomach, where it is mixed with powerful gastric juices containing enzymes and hydrochloric acid. The stomach is a muscular bag, so it can churn the food and break it down mechanically as well as chemically.

Once the food is the consistency of smooth paste, it is squeezed through a second sphincter into the first part of the small intestine (duodenum). The lining of the stomach – the mucosa or gastric epithelium – is layered with multiple folds. Ulcers occur in this lining.

### Causes of stomach ulcers

A stomach ulcer can be caused by a variety of factors, including:

- ***Helicobacter pylori*** – bacteria is thought to be responsible for around 60 per cent of stomach ulcers and at least 90 per cent of duodenal ulcers.
- **Certain medications** – which include aspirin or clopidogrel, taken regularly to help prevent heart attack or stroke, and drugs for arthritis. Anti-inflammatory medications (NSAIDs) are thought to cause around two fifths of stomach ulcers.
- **Cancer** – stomach cancer can present as an ulcer, particularly in older people.

### *Helicobacter pylori*

The *Helicobacter pylori* bacterium (*H. pylori*) is the main cause of peptic ulcers. The discovery of this micro-organism in 1983 revolutionised many aspects of gastroenterology, including the treatment of stomach ulcers.

It is thought that about one in three people over the age of 40 years is infected with this strain of bacteria in Australia. The germs live in the lining of the stomach and the chemicals they produce cause irritation and inflammation. *H. pylori* directly causes one third of stomach ulcers and is a contributing factor in around three fifths of cases. Other disorders caused by this infection include inflammation of the stomach (gastritis) and dyspepsia (indigestion).

Researchers believe the germ could also play a contributing role in the development of stomach cancers. The infection is more common among poor or institutionalised people. The mode of transmission is so far unknown, but is thought to include sharing food or utensils, coming into contact with infected vomit, and sharing of water (such as well water) in undeveloped populations.

## Ulcer bleeding

This is a serious complication of ulcer disease and is particularly deadly in the elderly or those with multiple medical problems. Bleeding from stomach ulcers is more common in people treated with blood thinning agents, such as warfarin, aspirin or clopidogrel (Plavix) and those people should also consider using regular anti-ulcer medication to prevent this complication.

## Perforated ulcer

A severe, untreated ulcer can sometimes burn through the wall of the stomach, allowing digestive juices and food to leak into the abdominal cavity. This medical emergency is known as a perforated ulcer. Treatment generally requires immediate surgery.

## Diagnosis of a stomach ulcer

Diagnosing a stomach ulcer is done using a range of methods, including:

- **Endoscopy** – a thin flexible tube is threaded down the oesophagus into the stomach under light anaesthesia. The endoscope is fitted with a small camera so the physician can see if there is an ulcer.
- **Barium meal** – a chalky liquid is drunk and an x-ray is performed, showing the stomach lining. These tests are less common nowadays, but may be useful where endoscopy is unavailable.
- **Biopsy** – a small tissue sample is taken during an endoscopy and tested in a laboratory. This biopsy should always be done if a gastric ulcer is found.
- **C14 breath test** – to check for the presence of *H. pylori*. The bacteria convert urea into carbon dioxide. The test involves swallowing an amount of radioactive carbon (C14) and testing the air exhaled from the lungs. A non-radioactive test can be used for children and pregnant women.

## Treatment for a stomach ulcer

Special diets are now known to have very little impact on the prevention or treatment of stomach ulcers. Treatment options can include:

- **Medications** – including antibiotics, to destroy the *H. pylori* colony, and drugs to help speed the healing process. Different drugs need to be used in combination; some of the side effects can include diarrhoea and rashes. Resistance to some of these antibiotics is becoming more common.
- **Subsequent breath tests** – used to make sure the *H. pylori* infection has been treated successfully.
- **Changes to existing medications** – the doses of arthritis medications, aspirin or other anti-inflammatory drugs can be altered slightly to reduce their contributing effects on the stomach ulcer.
- **Reducing acid** – tablets are available to reduce the acid content in the gastric juices.
- **Lifestyle modifications** – this would include quitting cigarettes, since smoking reduces the natural defences in the stomach and impairs the healing process.

## Where to get help

- Your doctor
- NURSE-ON-CALL Tel. 1300 60 60 24 – for expert health information and advice (24 hours, 7 days)
- Gastroenterologist

## Things to remember

- A stomach or gastric ulcer is a break in the tissue lining of the stomach.
- Most stomach ulcers are caused by infection with the *Helicobacter pylori* bacterium or anti-inflammatory medication, not stress or poor diet as once thought.
- Treatment options include antibiotics and acid-suppressing medications.

**This page has been produced in consultation with, and approved by:**

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