

# Peptic ulcers

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## What are peptic ulcers?

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FIGHTING GUT AND LIVER DISEASE

# Peptic Ulcers explained

## What is an ulcer?

An ulcer is the term used to describe a break in the lining of any part of the body. This can occur most visibly in the skin, but many people will suffer from mouth ulcers affecting their tongue or gums.

## What are peptic ulcers?

Ulcers in the lining of the stomach are called gastric ulcers. In the lining of the duodenum, which is part of the intestine immediately below the stomach, they are called

duodenal ulcers. The term peptic ulcer includes both gastric and duodenal ulcers.

## What causes a peptic ulcer?

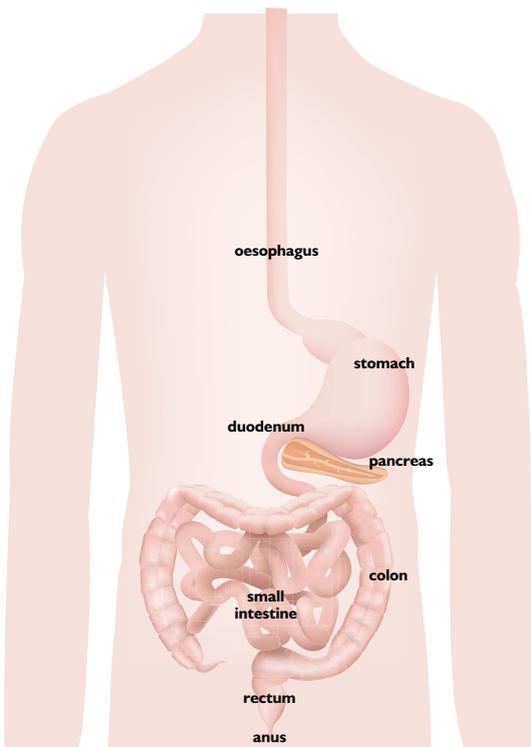
One of the important functions of the stomach is to produce acid and a chemical called pepsin, which are important in starting the digestion of food and preparing it to be absorbed (taken up) into the body. Acid and pepsin are not only strong enough to help digest food, but they are also capable of attacking the lining of the stomach and duodenum. In a healthy stomach or duodenum the lining defends itself by producing a protective layer of sticky mucous and fluid that protects the lining. An ulcer occurs when the acid and pepsin overcome these natural defences and cause a break in the lining.

The two most important factors that upset the balance between attack and defence are infection with a bacterium called *Helicobacter pylori* (also known as *H pylori*) and taking non-steroidal anti-inflammatory drugs (NSAIDs) and aspirin.

## What is *Helicobacter pylori* and how does it cause ulcers?

*Helicobacter pylori* is a bacterium, which is the main cause of peptic ulcers throughout the world. It produces ulceration by:

- Infecting and inflaming the stomach and duodenal lining which weakens their defences.



- Disturbing the mechanism which normally switches off acid and pepsin production after a meal has been digested.

### **Do all of those infected with *Helicobacter pylori* get ulcers?**

No – the great majority of people infected with *Helicobacter pylori* have no ulceration or symptoms. Why some people get ulcers and others do not is still the subject of research.

### **How are NSAIDs and aspirin involved?**

These drugs are very commonly prescribed. NSAIDs (such as Neurophen) are used for treating painful conditions whilst aspirin, particularly in low doses, is widely prescribed to protect the blood vessels of the heart and the circulation around the brain. Unfortunately, both interfere with the gastric and duodenal defences, increasing the risk of ulceration.

In most developed countries the numbers of people infected with *H pylori* have steadily decreased and in some parts of the world NSAIDs are the main cause of peptic ulcers.

### **Are there any other causes of peptic ulcers?**

- Smoking increases the chances of developing an ulcer and makes treatment less effective.
- Steroid drugs, such as prednisolone, are not thought to cause ulcers when taken

alone, but seem to increase the risk of ulceration if taken in conjunction with NSAIDs and may be associated with ulceration caused by the condition for which the steroids themselves are prescribed.

- Diet: specific foods and beverages do not cause ulcers although some may give rise to indigestion in some people and should be avoided.
- Stress was at one time blamed for peptic ulcer, but it is no longer thought to be important, apart from the stress caused by major surgical operations or trauma.
- Inheritance of an ulcer tendency may exist in some families, but is probably more often due to *H pylori* passing from one family member to another than an inherited risk.

### **How do I know if I've got an ulcer?**

Pain in the abdomen (belly) is the most frequent symptom. It is usually:

- Situated just below the breastbone
- Described as gnawing or knife-like, and sometimes is felt in the back.
- Lasts from a few minutes to a few hours at a time, often 1–2 hours after meals.
- It may wake you at night.
- Comes on in bouts lasting 2–3 weeks.
- Is partially relieved by antacids.
- Other symptoms associated with ulcers include heartburn, nausea and vomiting.

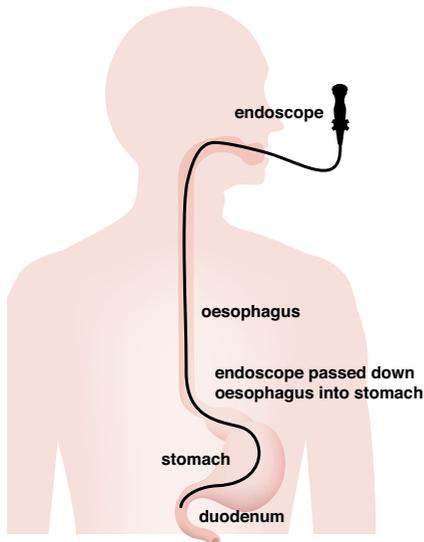
# Medical advice

Although your doctor may suspect an ulcer on the basis of what you tell them about your symptoms, the diagnosis cannot be confirmed without tests.

Many patients with an ulcer have no symptoms at all and only know about it when they develop a complication such as bleeding from the ulcer. This can result in vomiting up blood which may have a coffee-ground appearance or passing stools which are entirely black in colour.

## What tests are needed?

The most accurate way of confirming a peptic ulcer is by endoscopy. This involves passing a flexible, thin tube through the mouth, down the gullet and into the stomach and duodenum.



The views obtained are so good that an ulcer can be confirmed or excluded without the need for further tests. A sample of the lining of the stomach will also be taken for microscopic examination and to check for *H pylori* infection.

## Is there an alternative to endoscopy?

There is now good evidence that testing for *H pylori*, and treating it if the test is positive, is an effective alternative to an endoscopy because it is less trouble for patients and may reduce costs of treatment. The best way of testing for *H pylori* infection is by means of a breath test, in which you will be asked to swallow a small amount of fluid containing a trace of radioactive urea. Because *H pylori* splits urea in the stomach into water and carbon dioxide, a measurement of the amount of carbon dioxide in your breath is an indication of whether or not you have *Helicobacter pylori* infection.

Doing a blood test is a less accurate alternative to a urea breath test. Stool antigen tests, in which a small portion of a bowel motion is analysed, are also being developed as tests for *H pylori* infection.

Barium meals, which are x-ray procedures involving swallowing a white tasteless liquid which outlines the wall of the duodenum and stomach, are much less often used

nowadays, although sometimes, depending on your symptoms, a barium meal may be performed instead of an endoscopy.

### **What is the best way of treating an *H pylori* ulcer?**

If the ulcer is the result of *H pylori* infection you will be recommended to take an acid-reducing drug together with two antibiotics for seven days. Many doctors now advise this treatment not only for newly diagnosed ulcers but for patients who continue to have symptoms thought to be due to an ulcer which has been diagnosed in the past.

*CORE also publishes a leaflet on Helicobacter pylori, containing further information.*

### **What can I eat?**

You can eat normally, and do not need to follow a special diet. A healthy diet including a wide variety of foods and plenty of fruit and vegetables is good for your general health. Aim to eat five portions of fruit or vegetables each day and to drink at least two litres (8–10 cups) of fluid every day. Further information on healthy eating is available from the Food Standards Agency ([www.food.gov.uk](http://www.food.gov.uk)).

### **What if my ulcer is due to NSAID treatment?**

For NSAID ulcers the most effective treatment is to stop the NSAID and take an acid suppressing drug for 4–8 weeks.

If the NSAID cannot be stopped these drugs will still be effective, but the ulcer may take longer to heal and you will probably have to take an acid suppressing drug, probably at a lower dose, indefinitely.

### **Will I need another test to prove the ulcer has healed?**

For all gastric ulcers and for duodenal ulcers that have bled or perforated it is routine to repeat the endoscopy to confirm healing. In other patients with duodenal ulcers a further endoscopy is not necessary unless symptoms return.

### **What about checking that *H pylori* has been eliminated?**

Because eradication treatment is effective in approximately 90% of patients the odds are very much on your side. However, if symptoms persist you may need a further test, which will not necessarily be an endoscopy, but is likely to be a urea breath test, as described previously.

### **Will the ulcer come back?**

*H pylori* related ulcers very rarely recur after the bacterium has been eradicated and NSAID ulcers will not return unless the drugs are taken again.

### **Do recurrent symptoms always mean the ulcer has come back?**

No – in the great majority of patients if *H pylori* is treated and NSAIDs are avoided,

a return of indigestion is usually due to some other problem, most often reflux disease.

*Core also publishes a leaflet on Gastro-oesophageal Reflux, containing further information.*

### **Will acid reducing drugs be needed long term?**

In a few patients in whom the ulcer is not due to *Helicobacter pylori*, or when it proves impossible to eradicate *H pylori*, these drugs need to be continued on a long-term basis to prevent relapse.

### **What are the main side effects of ulcer treatment drugs?**

Acid reducing drugs have been in use for nearly 30 years and they are amongst the safest of all prescribed drugs. Some may cause diarrhoea in a few patients and the antibiotics used to treat *H pylori* can cause sickness and diarrhoea, but most people are able to complete the seven day course without problems.

### **Will an operation be needed?**

Because medical treatment is so effective surgery is not needed except in a rare emergency when ulcers bleed or perforate.

### **What can I do to help myself?**

- Try to take the tablets as directed and complete the course.
- Do not take aspirins and NSAIDs

if possible, and use paracetamol for pain relief.

- Remind doctors of your medical history if they suggest taking aspirin or NSAIDs, because safer alternatives are now available.
- Don't smoke.

### **Do peptic ulcers turn into cancer?**

No

### **What further research is needed?**

We still don't fully understand why only a small proportion of people with *H pylori* infection get ulcers, although because the level of *H pylori* infection in the population is gradually falling, this is becoming less of a problem. More research is needed into safe alternatives to aspirin and NSAIDs, and into better ways of detecting ulceration without endoscopy.



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