

# Peptic (“Acid”)

Related diseases of the Stomach, Duodenum and Oesophagus.



Hydrochloric acid is produced in the stomach by cells in its wall and is responsible for the first part of food digestion. Ordinarily such a substance would be highly damaging to any tissue in the body but the stomach has adapted a number of unique mechanisms to protect itself from injury. A bacterium (*Helicobacter Pylori*) often found in the stomach, has been shown to cause direct injury to cells lining the stomach compromising this protection.

For whatever reason where this mechanism of is inadequate or acid production is too great, the result is injury to the stomach lining, seen as either gastritis or ulcer formation. If gastric acid is able to “reflux” upwards into the lower oesophagus, as in the case of Hiatus Hernia, similar damage may occur in an area less protected than the stomach. This is seen as oesophagitis, Barrett’s oesophagus or ulceration. Excess acid entering the duodenum may similarly cause ulceration and duodenitis. If inflammation and injury becomes chronic, scarring and stricturing occurs with narrowing of the lower oesophagus, stomach and duodenum which may lead to obstruction.

These conditions may be found alone or in combination. There may be significant overlap in the type of symptoms experienced as a result of each condition. Investigation in each case is usually identical.

### Symptoms

Most patients experience pain in the central and upper abdomen. It may be related to eating or experienced with hunger. Often “dyspeptic” or acid related symptoms are described such as an unpleasant taste in the mouth, burning discomfort behind the breastbone and belching.

Symptoms are often worse on lying down and at night, particularly after late meals. More serious symptoms such as weight loss, anaemia due to blood loss and difficulty swallowing or vomiting due to narrowing are much less common.

Very rarely these conditions may present to doctors with vomiting of blood and shock or severe abdominal pain due to perforation of one of the affected organs.

### Investigation

Endoscopic examination of the stomach, duodenum and oesophagus is widely available safe and very accurate at diagnosing conditions resulting from acid injury. It is also invaluable for taking biopsies (often for H.pylori) and treating a variety of conditions. In almost all cases it is the investigation of choice.

Other investigations include pH studies to measure the amount of acid that may reflux into the oesophagus and barium x-ray studies to examine the motility and emptying of both the oesophagus and stomach.

### Causes

- Unknown
- Helicobacter pylori infection
- Aspirin and other non-steroidal anti-inflammatory drugs
- Steroid drugs
- Smoking
- Obesity
- Excess alcohol consumption
- Stress
- Burns

### Treatments

This begins with where possible the removal of any factors contributing to the development of “Acid” related diseases seen above. Where present, H. Pylori infection within the stomach can be eradicated with a simple week long course of antibiotics. Proton Pump Inhibitor (PPI) drugs, like Omeprazole, Esmoprazole etc have revolutionised the treatment of these conditions in the last twenty years. In treatment dose they completely suppress acid production in the stomach and heal ulcers and inflammation. In lower dose as maintenance therapy they keep the majority of patients free of symptoms. They are safe and largely without side effects.

Endoscopic procedures to stop bleeding from the stomach, duodenum and oesophagus are widely practiced as are dilatation and stenting techniques for strictures.

Surgical procedures to suppress acid production once widely practiced are happily now mainly of historical interest thanks to PPI drugs and earlier investigation of symptoms with endoscopy. Surgical correction of Hiatus Hernia and procedures to prevent acid reflux are commonly performed throughout the western world where symptoms persist despite optimum drug therapy and lifestyle modifications.

The emergency surgical treatment of complications of these conditions is required less commonly as a result of effective early treatment but uncontrollable bleeding and perforation normally require the prompt attentions of a general surgeon.