



What are the risks of surgery?

Anti-reflux surgery, performed by an experienced surgeon, is very safe. The risks of serious complications are very low (less than 1 in 100), but include unrecognised damage to the oesophagus, stomach or spleen. As with any laparoscopic surgery, if the surgery cannot be completed safely laparoscopically, an open operation may be necessary. This is very uncommon and again would be less than one in 100.

In the long term most patients are very happy with the outcome of their surgery, with very good control of reflux symptoms. A small number of patients will develop recurrent reflux, requiring treatment with medications. The tightening of the lower oesophageal sphincter may also cause new symptoms in some patients. These include difficulty swallowing solid foods (especially bread or meat), bloating, inability to belch or vomit, and passing increased wind. Rarely patients will need further surgery in the long term because of recurrent reflux or swallowing difficulties.

What is the difference between a total or partial fundoplication?

Total and partial fundoplication differ around how much of the stomach is wrapped around the oesophagus, which in turn determines how much additional pressure is applied to the lower oesophageal sphincter. There is very little difference however in clinical outcomes between the two types of fundoplication.

A large number of well designed studies have been conducted comparing the long term outcomes between partial and total fundoplication. In general these studies show that total fundoplication is associated with an increased risk of difficulty swallowing early after surgery, and partial fundoplication is associated with increased acid in the oesophagus when this is measured by pH studies. Control of reflux symptoms in the short and long term, patient satisfaction, and need for further surgery are identical between partial and total fundoplication. The increased incidence of swallowing difficulties with total fundoplication also decreases over time, such that it becomes similar to that of partial fundoplication.

At Aspiring Bariatrics, Laparoscopy and Endoscopy we are happy to offer patients the choice of either partial or total fundoplication. It is important to remember that both operations offer extremely good control of GORD symptoms in the long term. If the chance of having swallowing difficulties is of major concern, we recommend you consider a partial fundoplication, but remember that even with total fundoplication these difficulties tend to decrease with time. Please discuss this further with your surgeon if you have any further questions about this, or any other aspect of laparoscopic fundoplication for gastro-oesophageal reflux disease.

Gastro-oesophageal Reflux Disease (GORD)

What is GORD?

Gastro-oesophageal Reflux Disease (also known as GORD or reflux) is a condition where acid and digestive enzymes from the stomach, reflux back in to the oesophagus causing burning and damage. GORD is a common condition, affecting approximately 20% of the population in most developed countries. GORD is considered to be a benign condition, although in a small number of sufferers it may cause severe or disabling symptoms.

What are the symptoms of GORD?

The typical symptoms caused by GORD are heartburn, which is a burning pain behind the breastbone, and reflux of food or acid in to the back of the throat. There are also less common (or atypical) symptoms which include chest pain, cough, asthma, and a hoarse voice. Not everybody with GORD experiences all of these symptoms.

What causes GORD?

GORD is a common condition, and in general is caused by a failure of the normal valve mechanism at the top of the stomach that allows downwards passage of food but prevents upwards passage of acid and digestive enzymes. The medical name for this valve is the lower oesophageal sphincter or LOS. GORD is commonly found in association with a hiatal hernia, which is where part of the stomach sits in the chest, above the diaphragm. Although hiatal hernias are also common, and not all people with hiatal hernias experience GORD.

How is GORD diagnosed?

Most people with GORD have mild and infrequent symptoms. For these people, especially if they have 'typical' symptoms, the diagnosis is usually made on the basis of symptoms alone. For those with unusual symptoms, symptoms that fail to respond to treatment, or symptoms that recur after stopping treatment, an endoscopy is recommended. Endoscopy is examination of the oesophagus, stomach and duodenum using a flexible 'endoscope'. It is performed as a day procedure, either with local anaesthetic to the throat or intravenous sedation.

Symptoms of GORD may be similar to other serious diseases and urgent endoscopy is always recommended in the following circumstances:

- **Difficulty in swallowing**
- **Regurgitation or vomiting**
- **Unexplained weight loss**
- **Blood in vomit or bowel movements**
- **Any symptoms of GORD in someone older than 50 years of age**

Sometimes an endoscopy is normal, even in the presence of severe GORD symptoms. This may occur if a patient is taking acid suppressing medication before the endoscopy, or if the reflux is predominantly digestive enzymes rather than stomach acid. In this setting further investigation with pH testing, barium swallow or oesophageal manometry may be advised. These tests use fine catheters or X-ray contrast to assess the function of the oesophagus.

How is GORD treated?

GORD is usually treated by a combination of lifestyle changes and medications. For a small number of people with severe GORD, surgery may be recommended.

Lifestyle changes

Many people are able to identify certain foods that provoke their reflux symptoms. These include spicy foods, coffee and alcohol. Avoiding these trigger foods may be all that is required to manage symptoms of mild GORD. Other helpful changes are avoiding eating shortly before going to bed, and maintaining a healthy body weight.

Medications

The most common medications used to treat symptoms of GORD are over the counter antacid medications such as Mylanta or Gaviscon. These act to neutralise the effect of stomach acid in the oesophagus, and are taken only when a person has symptoms. If people have frequent symptoms they generally need to take a medication to suppress stomach acid production. The most effective current medications to do this are drugs such as omeprazole (Losec) and pantoprazole (Protonix). These medications are most effective if taken on an empty stomach, 30 minutes before breakfast in the morning. If medications are required, these will usually be necessary on a life long basis, as symptoms will recur if the medications are stopped.

Surgery

A small number of patients with GORD eventually undergo surgery to treat this. The most common reasons that people undergo surgery are if medications are not effective in controlling their symptoms, or if they do not wish to take ongoing medications. There is also evidence that even in people with well controlled symptoms on medications, quality of life improves after surgery.

Anti-reflux surgery

Surgery to treat GORD is well established, and has been performed since the 1950's. Although initially performed as open surgery, today most of these operations are performed by laparoscopy (or keyhole) surgery. Surgery aims to restore the anatomy of the lower oesophagus and upper stomach to normal, and to increase the pressure exerted by the lower oesophageal sphincter. In all cases the stomach is returned from the chest to the abdomen and any hiatal hernia repaired. The upper stomach is then partly or totally wrapped around the lower oesophagus to increase the pressure on the LOS. This part of the operation is called the 'fundoplication' and may be a 'partial fundoplication' or 'total fundoplication' (Figure 1). A total fundoplication is also called the Nissen fundoplication, after the surgeon who first described this operation.

Laparoscopic anti-reflux surgery is performed under a general anaesthetic, and usually people only stay in hospital one night. After surgery it is necessary to have only a liquid diet for one week, and then puree diet only for two weeks after that. It is also necessary to avoid lifting objects heavier than 10kg, and avoid vomiting for at least four weeks.

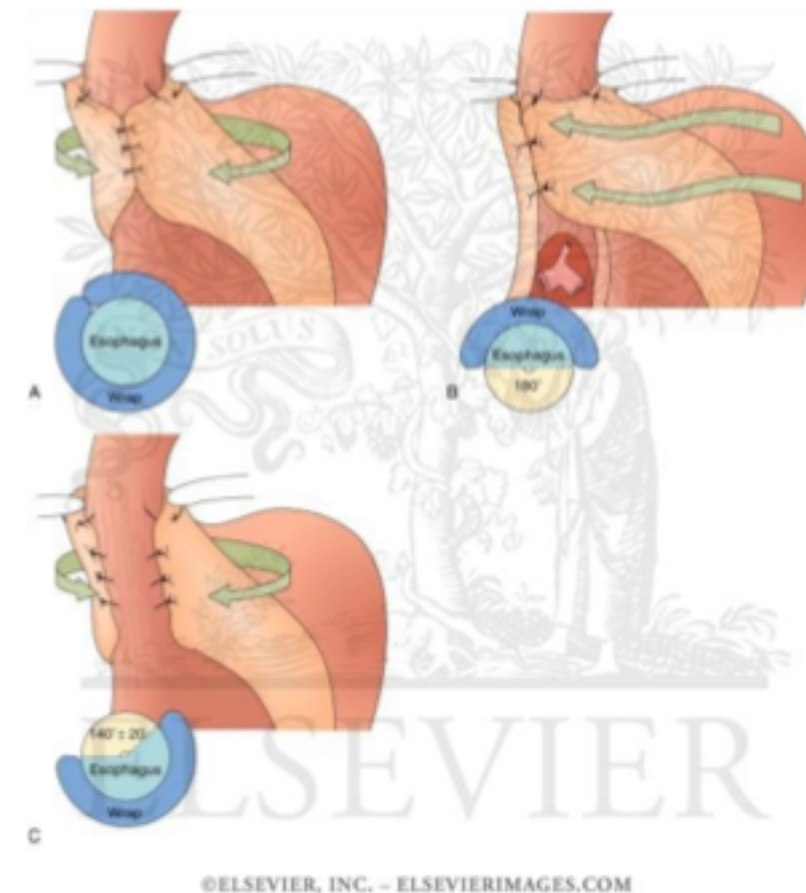


Figure 1 - Types of fundoplication