Gastro-Oesophageal Reflux Disease and Fundoplication Surgery

What is gastro-oesophageal reflux disease?

This is when the stomach acid (part of your digestive juices) is allowed to move upwards (to reflux) into your oesophagus (gullet). The majority of stomach juices are acid; this acid burns the lower part of the oesophagus resulting in inflammation of the oesophageal lining (oesophagitis).

You usually experience a burning sensation (heartburn) which radiates through the chest and may radiate up into the throat and neck.

Other symptoms that may occur are acid regurgitation (where acid is felt coming up into the back of the mouth), vomiting or regurgitation, particularly on stooping and bending; choking attacks, particularly at night; chronic cough and difficulty in swallowing. It can be worse after meals, at night or after bending or on physical exercise.

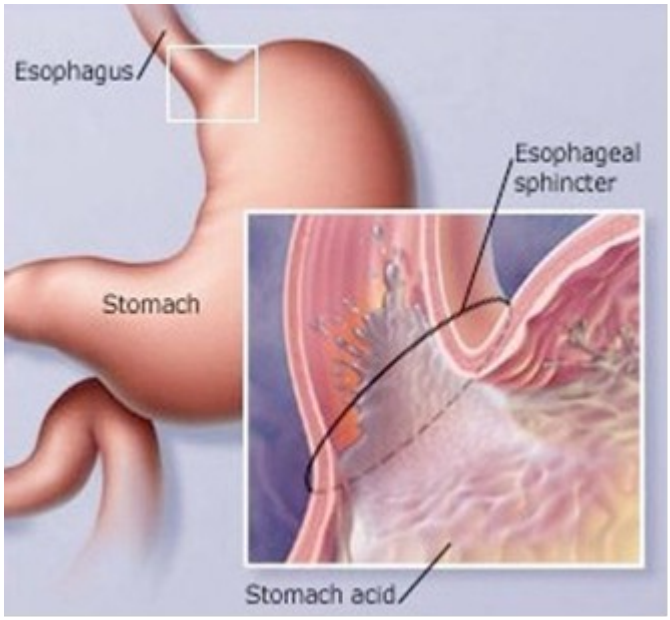
If this acid regurgitation is allowed to continue, it may cause further damage, leading to narrowing of the oesophagus (gullet) and thus leading to difficulty in swallowing.

In the long term, people with acid reflux can develop a change in the lining of the lower oesophagus called ‘Barrett’s Oesophagus’. This change is associated with an increased risk of developing cancer of the oesophagus. People with Barrett’s Oesophagus often require checks every three years using an endoscope in order to keep an eye out for early cancerous changes. Most people with acid reflux do not, however, develop Barrett’s Oesophagus.

What causes it?

Some people are born with a naturally low sphincter pressure and reflux from a very early age. There is a special muscle (sphincter) at the lower end of your oesophagus that should close tightly to prevent the passage of stomach acid into the oesophagus. Sometimes this sphincter muscle does not function well and allows a reflux of acid to occur.

Reflux can also be caused by a Hiatus Hernia; this is when part of the stomach protrudes upwards above the diaphragm (the diaphragm or breathing muscle separates the chest from the abdomen).



A Hiatus Hernia occurs at the point where the oesophagus passes through the diaphragm, which results in the sphincter muscle at the lower end of the oesophagus not contracting properly and contributing to reflux.

In adult life reflux may be precipitated by fatty and spicy food, tight clothing, smoking, alcohol and most commonly from being overweight.

In pregnancy, reflux nearly always occurs due to pressure of the baby pushing up on the stomach.

What is the treatment for Gastro-oesophageal Reflux?

Simple Lifestyle changes

- Stop smoking and reduce alcohol intake
- Reduce weight and avoid tight fitting clothing
- Eat small regular meals and avoid eating late at night
- Spicy and fatty foods should be avoided
- Place two bricks or large books under the legs of the head of your bed to give a slight angle to your bed, especially if symptoms are worse at night.

Drug therapy

- Antacids tablets or liquid, these will neutralise the acid in your stomach and in the lower end of your oesophagus

- Drugs known as 'Proton Pump' inhibitors reduce the production of stomach acid and are the mainstay of treatment of reflux

Surgery

- Surgery may be required where medical treatment fails to relieve symptoms, or, if the medication satisfactorily relieves the symptoms but as soon as it is stopped the symptoms recur.

- Under these circumstances a number of people prefer to have surgery rather than take medication for the rest of their lives; this particularly applies to the younger patient.

- An operation is performed to tighten the closing mechanism (sphincter) at the lower end of the oesophagus and thus to prevent reflux. The operation to do this is called a Fundoplication: this is performed using a laparoscopic (keyhole) technique.

Laparoscopic Fundoplication ('keyhole' surgery)

You will be asked to attend the Pre- Admission Assessment Clinic 1-6 weeks prior to surgery to ensure you are fit for surgery. This allows time for the necessary pre-operative tests, which may include blood tests, echo cardiogram (ECG) and chest x-ray. You will be admitted on the day of surgery unless there are any medical or technical reasons, which require you to be admitted the day before the operation.

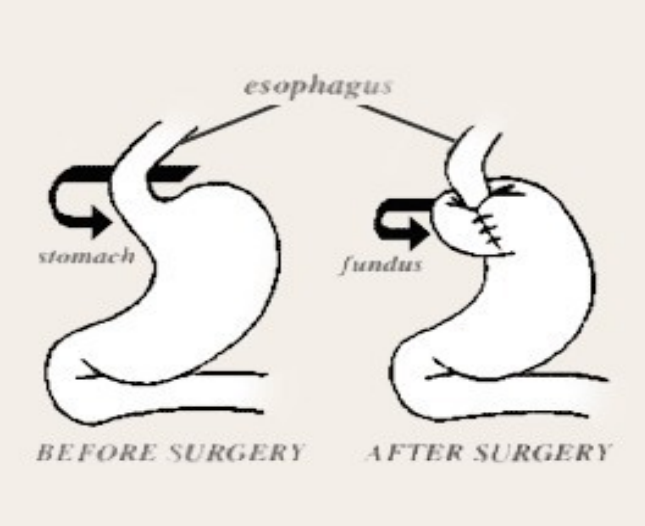
The operation is performed under a General Anaesthetic and is carried out laparoscopically (keyhole), although you will be informed at the time of consent by the surgeon of the possibility of it converting to an open (traditional) procedure if it is deemed necessary. This is uncommon but those patients who have had previous abdominal surgery have an increased risk of conversion to an open operation.

A telescope the width of a small finger is placed into the abdomen through a small cut below the navel. In order to create a space around the organs within the abdomen and provide the surgeon with a clear view it is necessary to introduce carbon dioxide (air) to inflate the abdomen.

Special instruments are passed through 4 other separate 5-11mm incisions through the abdomen: these enable the surgeon to retract and manipulate the structures within the abdomen and perform the operation.

This is all visualized on a video screen by a miniature camera inserted through one of the 'keyhole' incisions.

The hiatus hernia, if present, is firstly replaced into the abdomen. The hole in the diaphragm is tightened up with one or two stitches firstly. Following this the surgeon does the fundoplication by taking the top part of your stomach known as the fundus (hence the term fundoplication) which lies to the left of the oesophagus and wrapping it around the back of the oesophagus, bringing it around the right side of the oesophagus until it is once again the front of the oesophagus (see below).



The fundoplication procedure has the affect of creating a spiral valve in the lower end of the oesophagus: this will allow food to pass into the stomach but prevent stomach acid from flowing back up into the oesophagus.

What are the risks/complications of surgery?

- Wound infection, although this is very rare
- Chest Infection
- Bleeding
- Difficulty swallowing
- Injury to the oesophagus, stomach or very rarely the spleen

Long-term side effects are uncommon. The main side effects that do occur are increased passage of wind (flatus) via the rectum; this should be a permanent situation. One of the effects of a one-way valve between the stomach and the gullet is that air cannot be freely belched out. This means that the air passes through the intestines, leading to more air being passed from the bottom end!

Another side effect is that you will not be able to guzzle down your food or eat large amounts at a time. After surgery it is important to chew your food completely and to eat slowly. Some patients find that large unchewed items of swallowed food tends to stick at the bottom of the

oesophagus. This tends to settle with time. In the initial few weeks after surgery it can be very difficult to get solid food down. Occasionally this can require a gastroscopy (flexible camera down the mouth into the stomach) and a balloon strecthing of the wrap (fundoplication).

Stomach bloating may also occur intermittently: this is referred to as ‘gas bloat’ and is extremely common.

Over time the wrap can slowly work loose; this may result in a return of your old symptoms. About 20% of patients develop some minor recurrence of reflux symptoms after 5 years and this increases over time

These risks/complications will be explained and discussed with you when the surgeon asks you to sign the consent form for the operation.

Preparing for Surgery

Before you come in to hospital for your operation you may be asked to go on a special diet in order to shrink the liver in order to make the operation technically easier. This is common in obese and overweight patients where the liver can be large and obstruct the view of the upper stomach.

What should you expect after surgery?

After the surgeon has completed the operation you will spend some time in recovery before returning to the ward.

On returning to the ward the nurse looking after you will check you at regular intervals, monitoring your blood pressure and pulse for a period of time and assess how you are feeling after your operation.

Appropriate pain relief will be given as necessary after the operation, if at any time you are in pain please let the nurse know.

It is very important that you are not sick after this type of surgery so you will be given anti-emetics (drugs to prevent nausea); these will have been given to you initially during the operation and in recovery, they will be continue to be administered as necessary on return to the ward.

On return from theatre you may have an intravenous infusion in progress which you may have for about 12 hours, this is a way of administering fluids into your vein whilst you are nil by mouth.

When the surgeon is happy he will inform the nursing staff that you may start drinking sips of fluid gradually increasing the amount. As long as you are tolerating your fluids and the surgeon is happy with your progress you will be allowed to start eating a liquidised diet. Initially you will be offered:

- Soups (no lumps)
- Yoghurts (no lumps), jelly, ice cream and custard

- Build-Up drinks – Ensure, Enlive

You will have to continue this type of diet even after discharge. If necessary the nursing staff will arrange for the dietician to visit you before discharge to provide you with further information and advice.

After 2 weeks, introduce a very soft/sloppy diet for approximately 4-6 weeks, gradually returning to a normal diet. You may find that avoiding food/drink that make you bloated reduces your symptoms of 'gas bloat' if this is a side effect you are suffering with.

You will not need to continue your antireflux tablets (such as Omeprazole, Lansoprazole) after the operation.

The small abdominal wounds will have been closed with a dissolvable suture or steri-strips (small white paper tape strips). You may have a small dressing over these initially but they may be removed after 48 hours, after which time you may take a bath or shower. If the wounds have been sealed with skin glue, you are able to bath and shower as normal and the glue will peel off over a week or so (do not be tempted to pick it off before it is ready).

The average length of stay for this operation is 1 to 2 days. Your Consultant will review you in outpatients clinic approximately 6-8 weeks after discharge. If agreed prior to surgery, a Surgical Care Pracitioner may give you a ring at home to discuss your progress around 2 weeks after discharge.

It is advisable not to drive for about a week. Usually if you can get in and out of a bath without any discomfort and/or requiring assistance you should be all right to drive. However, please check with your Insurance Company, as policies vary with individual companies.

You may resume sexual relations as soon as this feels comfortable.

If you require a sick certificate for work please ask a member of staff before discharge.

Recovery from this operation can take up to 2 weeks, by which time you should be able to return to work, but you still need to take care when lifting, stretching and bending. If you are in a manual occupation seek further advice on this before you are discharged from hospital or from your own GP when considering a return to work.

Some swelling or bruising at the port site(s) is not unusual and there will be some discomfort and tenderness where the incisions have been made. In the period following your operation you should seek medical advice if you notice any of the following problems:

- Redness, swelling or discharge of the wound(s)
- Persistent bleeding from the wound(s)
- Nausea, vomiting or severe pain
- Severe difficulty in Swallowing
- High Temperature
- Difficulty in passing urine

Please retain this information leaflet with you through-out your stay, making notes of specific questions you may wish to ask the Doctors and/or Nurses before discharge.

Points of contact

If you have any queries following your surgery please contact the ward from which you were discharged, via the main hospital switchboard.

Further Information and Support: NHS Direct Telephone: 111

www.nhs.uk