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.

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?

1. Simple Lifestyle changes:
   • Stop smoking & reduce alcohol intake
   • Reduce weight & avoid tight fitting clothing
   • Eat small regular meals avoid eating late at night
   • Spicy & 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 worst at night

2. 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

3. 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 large 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 Nissen Fundoplication: this is performed using laparoscopic (keyhole) techniques.

Laparoscopic Nissen 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, 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 usually 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.

A telescope the width of a small finger is placed into the abdomen through a small cut above 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 blow up the abdomen.

Special instruments are passed through 4 other separate 5-11 mm 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 takes it and wraps 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. 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
- 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) per 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 bolt your food. After surgery it is important to chew your food completely and to eat slowly. Some patients find that swallowed food tends to stick at the bottom of the oesophagus. This tends to settle with time. Stomach bloating may also occur intermittently: this is referred to as ‘gas bloat’ and is extremely common.

Over time the wrap can work loose - this may result in a return of your old symptoms. About 10% of patients develop some minor recurrence of reflux symptoms after 5 years.

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

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 in recovery and will 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 24 hours, this is a way of administering fluids into your vein whilst you are nil by mouth.

When 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, 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.

The small abdominal wounds will have been closed with a dissolvable suture or steri-strips (small white paper tape strips). You will 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.

The average length of stay for this operation is 2 days. Your Consultant will review you in outpatients approximately 6-8 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 4 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 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 throughout your stay, making notes of specific questions you may wish to ask the Doctors and/or Nurses before discharge.

Useful contacts for further information

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

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