The Harbour Hospital

Patient take home information

Laparascopic Fundoplication

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What is acid reflux?
Acid reflux is a condition where acid from your gut travels up in to your oesophagus (gullet). It is normal for a small amount of acid to travel into your oesophagus. If this happens too often it can cause symptoms of a burning sensation in your chest (heartburn) or acid at the back of your mouth. The acid can cause the lining of your oesophagus to become inflamed (oesophagitus) or scarred.
Your surgeon has recommended an operation to prevent the acid from travelling into your oesophagus.

How does acid reflux happen?
At the join between your stomach and the oesophagus there is a weak valve that prevents acid from travelling up into the oesophagus. Sometimes this valve does not work effectively, causing acid reflux (see figure 1)

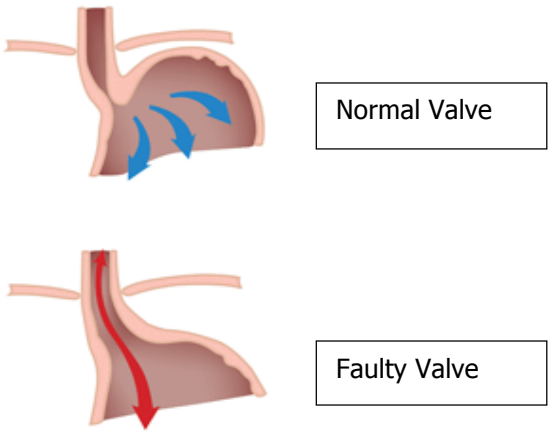

Figure 1

Your oesophagus normally passes through a hole in your diaphragm. Acid reflux is commonly associated with a hiatus hernia, where the top of your stomach passes through the hole in your diaphragm. (see figure 2)

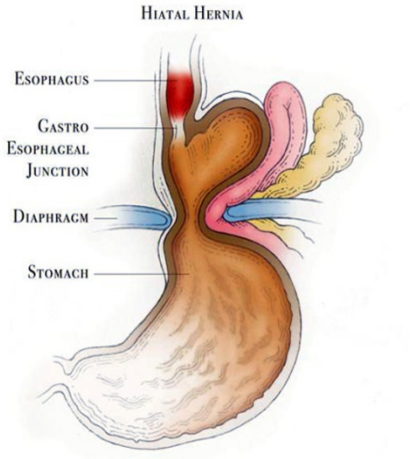

Figure 2

Are there any alternatives to surgery?
Medication that lowers the acid content in your stomach is effective in controlling your symptoms and healing inflammation in your oesophagus. Medication called 'Proton Pump inhibitors' is currently the most effective and is the main treatment for acid reflux. Surgery is recommended only if symptoms continue while you are taking the medication, or if you feel that you would prefer to have an operation rather than take medication for the rest of your life.

What will happen if I decide not to have the operation?
Surgery is not essential and you can continue on the medication to control your symptoms. It is important to follow the diet advice that your doctor gives you. You should eat smaller meals and avoid chocolate, caffeine and alcohol. Try to eat at regular times and not in the two hours before you go to sleep.

What does the operation involve?
The operation is performed under general anaesthetic and usually takes one to two hours. You may also have injections of local anaesthetic to help with the pain after the operation. You may be given antibiotics during the operation to reduce the risk of infection. Your surgeon will use laparoscopic (keyhole) surgery as this is associated with less pain, less scarring and a faster return to normal activities. Your surgeon will make a small cut on or near your belly button so that they can insert an instrument into you abdominal cavity and inflate it with gas (carbon dioxide). They will make several small cuts on your abdomen so that they can insert tubes (ports) into your abdomen. Your surgeon will insert surgical instruments through the ports along with a telescope so that they can see inside your abdomen and perform the operation (see figure 3)

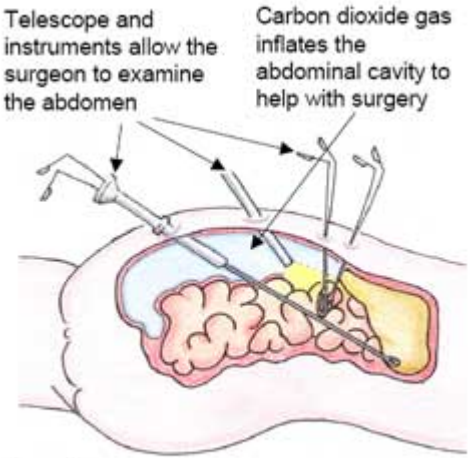

Figure 3 – the technique for laparoscopic surgery

Your surgeon will hold your liver out of the way and free up the upper stomach and lower oesophagus, along with the muscular part of your diaphragm. They will stitch you diaphragm to reduce the size of the hole your oesophagus passes through. Your surgeon will wrap and stitch the top part of your stomach around your lower oesophagus, to produce a valve effect (see figure 4).

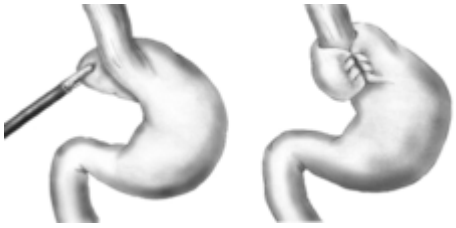

Figure 4 – The stomach stitched around the oesophagus to prevent acid travelling up into the oesophagus

What should I do about my medication?
Let your doctor know about all the medication that you take and follow their advice. This includes all blood-thinning medication as well as herbal and complimentary remedies, dietary supplements and medication that you can buy over the counter.

What can I do to make the operation a success?
If you smoke then stopping smoking several weeks or more before the operation may reduce your risk of developing complications and will improve your long-term health. Try to maintain a healthy weight. You have a higher risk of developing complications if you are overweight. Regular exercise should help you prepare you for the operation, help you recover and improve your long-term health. Before you start exercising, ask you GP for advice. You can reduce the risk of infection in a surgical wound by not shaving or waxing the area that the cut is likely to be in the week before the operation, have a bath or shower on the day off or the day before your operation and by keeping warm around the time of the operation. Please let the nursing team know if you are feeling cold.

What complications can happen?
The healthcare team will try to make to operation as safe as possible but complications can happen. Some of these can be serious and even cause death (risk:1 in 500). When you are recovering you need to be aware of the symptoms that may show you have a serious complication. You should ask your doctor if there is anything that you don't understand. Any numbers that relate to risk are from studies of people who have had this operation. Your doctor may be able to tell you if the risk of a complication is higher or lower for you.

1. Complication of anaesthesia
Your anaesthetist will be able to discuss with you the possible complications of having an anaesthetic.

2. General complications of any operation
- Pain. The healthcare team will give you medication to control the pain and it is important that you take it as you are told to so you can move about and cough freely. After keyhole surgery, it is common to have some pain in your shoulders because a small amount of carbon dioxide gas may be left under your diaphragm. Your body will naturally absorb the gas over the next 24 hours, which will ease the symptoms.
- Bleeding during or after the operation. You may need a blood transfusion or another operation.
- Unsightly scarring of your skin.
- Developing a hernia in the scar, if you have open surgery, caused by the deep muscle layers failing to heal. This appears as a bulge or rupture called an incisional hernia. If this causes problems you may need a further operation.

- Infection in the wound. It is usually safe to shower after 2 days but you should check with healthcare team. Let the team know if you get a high temperature, notice pus in your wound, or if your wound becomes red, sore or painful. An infection usually settles with antibiotics but you may need another operation.
- Blot clot in your leg (deep-vein thrombosis DVT) this can cause pain, swelling or redness in your leg, or the veins near the surface of your leg to appear larger than normal. The healthcare team will assess your risk. They will encourage you to get out of bed soon after the operation and may give you injections, medication, or special stockings to wear. Let the healthcare team know straightaway if you think you may have a DVT.
- Blood clot in your lung (pulmonary embolus) if a blood clot moves through your bloodstream to your lungs. If you become short of breath, feel pain in your chest or upper back, or if your cough up blood, let the healthcare team know straight away. If you are at home, call an ambulance or go immediately to you nearest Emergency department.

Specific complications of this operation

Keyhole surgery complications

- Developing a hernia near one of the cuts used to insert the ports (risk 1:100). Your surgeon will try and reduce this risk by using small ports (less than a centimetre in diameter) where possible or, if they need to use larger ports, using deeper stitching to close the cuts.
- Damage to structure such as you bowel, bladder or blood vessels when inserting instruments into your abdomen (risk: less than 3 in 1,000). The risk is higher if you have had previous surgery to your abdomen. If an injury does happen you may need open surgery. About 1 in 3 of these injuries is not obvious until after the operation.
- Surgical emphysema (crackling sensation in in your skin caused by trapped carbon dioxide gas), which settles quickly and is not serious)

Fundoplication complications

- Pneumothorax, where air escapes into the space around your lung. Rarely the air will need to be let out by inserting a tube in your chest (chest drain).
- Making a hole in your oesophagus or stomach which needs repairing (risk: 1 in 100)
- Tear of the stiches used for the wrap, if you wretch or vomit in the first few weeks. This may cause the wrap to become loose. Sometimes a tear can make a hole in your stomach that will need to be repaired by surgery straight away.
- Damage to your liver when holding it out of the way (risk:5 in 100) If that damage is serious, you may need another operation.
- Damage to your spleen (risk: 1 in 50). Rarely your spleen may need to be removed.
- Difficulty swallowing for a few months because the site where your stomach is wrapped around your oesophagus is inflamed. This is common and you should be able to swallow most foods normally by three months.

Long term problems

- Continued difficulty swallowing where you cannot swallow most foods normally (risk: 5 in 100). If you find that food such as bread and meat get stuck avoid them.
- Incomplete control of reflux, if the wrap is not tight enough or comes loose (risk: less than 5 in 100). This may settle with medication.
- Weight loss during the first two months. It is normal to feel fuller than usual and you may only be able to eat small meals. Sit upright when you eat and take a drink with your meal to help the food go down. Eat more often than before to try and keep your weight up. If you do lose weight you will usually put it back on. If you have any concerns about your diet, ask the dietician.
- Abdominal discomfort (risk: 2 to 5 in 10). You will probably not be able to burp as usual which can cause gas to build up in your abdomen. You may pass more wind than usual.
- Diarrhoea (risk: less than 3 in 100). If loose or more frequent stools are a troublesome, your doctor may give you some medication to slow down your bowel.

If any of these problems are severe and continue for over three months, you may need another operation (risk: less than 5 in 100). If you have these symptoms for over three months, let your surgeon know.

How soon will I recover?

In hospital

After the operation you will be transferred to the recovery area and then the ward. You will be given anti-sickness medication. You will be able to drink from the first day and then you will go on a soft diet. You should no longer need to take your acid-reducing medication. You should be able to go home the next day. A responsible adult should take you home in a car or taxi and stay with you for at least 24 hours. Be near a telephone in case of emergency. You need to be aware of the following symptoms as they may show that you have a serious complication.

- Pain that gets worse over time or is severe when you move, breathe or cough.
- A high temperature or fever
- Dizziness, feeling faint or shortness of breath

- Feeling sick or not having any appetite (and this gets worse after the first one or two days)
- Not opening your bowels and not passing wind.
- Swelling of you abdomen
- Difficulty passing urine

If you do not continue to improve over the first few days, or if you have any of these symptoms, let the healthcare team know straight away. If you are at home, contact your surgeon or GP. In an emergency, call an ambulance or go immediately to your nearest emergency department.

Returning to normal activities

Do not drive, operate machinery (this includes cooking) or do any potentially dangerous activities for at least 24 hours and not until you have fully recovered feeling, movement and co-ordination. If you have had a general anaesthetic or sedation you should not sign legal documents or drink alcohol for at least 24 hours. To reduce the risk of a blood clot, make sure you follow carefully the instructions of the healthcare team if you have been given medication or need to wear special stockings. You will need to eat slowly and chew your food thoroughly. Eat only soft foods for a few weeks gradually moving on to a normal diet when you can cope with it. Do not have fizzy drinks. You should be able to return to work after three to four weeks depending on the extent of surgery and your type of work. Your doctor may tell you not to do any manual work for a while. Do not lift anything heavy for a few weeks. Regular exercise should help you return to normal activities as soon as possible. Before you start exercising, ask the healthcare team or your GP for advice. Do not drive until you are confident about controlling your vehicle and always check your insurance policy with your doctor.

The future.

You should make a full recovery, with the symptoms of acid reflux gone or much improved.

Summary

Acid reflux can cause heartburn or acid in your mouth. The acid can cause the lining of your oesophagus to become inflamed or scarred. Surgery may be recommended if your symptoms continue while you are taking medication. Surgery is usually safe and effective but complications can happen. You need to know about them to help you make an informed decision about surgery. Knowing about them early will also help to detect and treat any problems early.