

# Laparoscopic anti-reflux (GORD) surgery

Including dietary advice following surgery

 **Information for patients**



**PROUD TO MAKE A DIFFERENCE**

SHEFFIELD TEACHING HOSPITALS NHS FOUNDATION TRUST



If you suffer from "heartburn", technically referred to as gastroesophageal reflux disease (GORD), your surgeon may have recommended **laparoscopic anti-reflux surgery** to treat this condition. This booklet will explain to you:

- What gastroesophageal reflux disease (GORD) is
- Medical and surgical treatment options for GORD
- How laparoscopic (keyhole) anti-reflux surgery is performed
- Expected outcomes
- What to expect if you choose to have laparoscopic anti-reflux surgery
- What diet you will need to follow after your surgery

This booklet is intended to provide a general overview of GORD and laparoscopic anti-reflux surgery. It is not intended to serve as a substitute for professional medical care or a discussion between you and your surgeon about the need for laparoscopic anti-reflux surgery. Specific recommendations may vary among health care professionals. If you have a question about your need for laparoscopic anti-reflux surgery, your alternatives or your surgeon's training and experience, do not hesitate to ask your surgeon. If you have any questions about the operation or aftercare, discuss them with your surgeon before or after the operation.

## **What is gastroesophageal reflux disease (GORD)?**

Although "heartburn" is often used to describe a variety of digestive problems, in medical terms, it is actually a symptom of gastroesophageal reflux disease. In this condition, stomach acids reflux or "back up" from the stomach into the oesophagus (food pipe). Heartburn is described as a harsh, burning sensation in the area in between your ribs or just below your neck. This sensation may radiate through the chest and into the throat and neck. Many adults in the UK experience this uncomfortable, burning sensation at least once a month. Other symptoms may also include vomiting, difficulty swallowing and chronic coughing or wheezing.

## **What causes GORD?**

When you eat, food travels from your mouth to your stomach through a tube called the oesophagus. At the lower end of the oesophagus is a small ring of muscle called the lower oesophageal sphincter (LOS). The LOS acts like a one-way valve, allowing food to pass through into the stomach. Normally, the LOS closes immediately after swallowing to prevent stomach juices, which have a high acid content, coming back up into the oesophagus. GORD occurs when the LOS does not function properly, allowing acid to flow back and burn the lower oesophagus. This irritates and inflames the oesophagus, causing heartburn and eventually may damage the oesophagus.

Some people are born with a naturally weak sphincter (LOS). For others, fatty and spicy foods, certain types of medication, tight clothing, smoking, drinking alcohol, vigorous exercise or changes in body position (bending over or lying down) may cause the LOS to relax, causing reflux. A hiatal hernia (a common term for GORD) may be present in many patients who suffer from GORD, but may not cause any symptoms of heartburn.

## **How is GORD treated?**

GORD is generally treated in three steps.

### **Lifestyle changes**

In many cases, changing diet and taking over-the-counter antacids can reduce how often and how harsh your symptoms are. Losing weight, if you are overweight, reducing or eliminating smoking and alcohol consumption may help. Altering eating and sleeping patterns can also help.

### **Drug therapy**

If symptoms persist after these lifestyle changes, drug therapy may be required. Antacids neutralize stomach acids and over-the-counter medications reduce the amount of stomach acid produced. Both may be effective in relieving symptoms. Prescription drugs may be more effective in healing irritation of the oesophagus and relieving symptoms. This therapy needs to be discussed with your surgeon.

### **Surgery**

Patients who find no improvement of symptoms from lifestyle changes, medications or those who continually require medications to control their symptoms, will have to live with their condition or may undergo a surgical procedure. Surgery is very effective in treating GORD.

## **What are the advantages of the laparoscopic (keyhole) method of surgery?**

The advantage of the laparoscopic approach is that it usually provides:

- reduced post-operative pain.
- shorter hospital stay.

- a faster return to work.
- improved cosmetic result.

## **Is the laparoscopic method suitable for me?**

Although laparoscopic anti-reflux surgery has many benefits, it may not be appropriate for some patients. Obtain a thorough medical evaluation by a surgeon qualified in laparoscopic anti-reflux surgery, in consultation with your GP, to find out if the technique is appropriate for you.

## **What should I expect before the laparoscopic anti-reflux surgery?**

Your surgeon will discuss with you any potential risks and benefits of the operation and you will be asked to give informed consent for surgery. You will have a Pre-operative assessment during which we will need to carry out blood tests, medical evaluation, possibly a chest x-ray and an ECG depending on your age and some medical conditions.

## **What should I do to prepare for surgery?**

- It is recommended that you shower the night before or morning of the operation.
- After midnight on the night before the operation, you should not eat or drink anything. You can take medications that your surgeon has said you can take with no more than a sip of water on the morning of surgery.
- Drugs such as aspirin, blood thinners, anti-inflammatory medications (arthritis medications) and Vitamin E will need to be stopped temporarily for several days to a week before surgery. You will be advised of this.

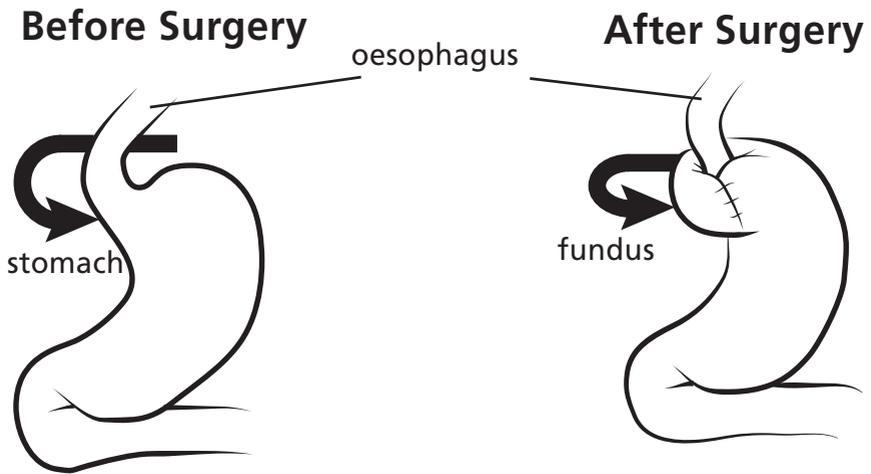
- Dietary supplements or St. John's Wort should not be used for the two weeks before surgery. Please ask about these at your pre operative assessment.
- Quit smoking and arrange for any help you may need at home after your surgery.

## **What will happen on the day of surgery?**

- You usually arrive at the hospital on the morning of the operation.
- You will be given a general anesthesia (asleep) for the operation which may last several hours.
- After your operation you will be taken to the recovery room until you are fully awake.
- Patients are increasingly able to go home on the same day as the operation (day case) or may need to stay in the hospital overnight after surgery. It is rare to have to stay in the hospital any longer than this.
- If you are discharged the same day as having a general anaesthetic, you must have a relative or friend to stay with you at home for the first 24 hours.

## **How is laparoscopic anti-reflux surgery performed?**

- Laparoscopic anti-reflux surgery (also known as Laparoscopic Nissen Fundoplication) involves reinforcing the "valve" between the oesophagus and the stomach by wrapping the upper portion of the stomach around the lowest portion of the oesophagus - much the way a bun wraps around a hot dog.
- In a laparoscopic procedure, surgeons use small incisions ( $\frac{1}{4}$  to  $\frac{1}{2}$  inch) to enter the abdomen through ports (narrow tube-like instruments). The laparoscope, which is connected to a tiny video camera, is inserted through the small incision, giving the surgeon a magnified view of your internal organs on a television screen.
- The entire operation is performed "inside" the abdomen after it is expanded by inflating it with gas.



## **What happens if the operation cannot be performed or completed by the laparoscopic method?**

In a small number of patients the laparoscopic method is not possible because of the inability to see or handle the organs effectively which may mean having to convert to an "open" surgery. Factors that may increase the possibility of this may include obesity, previous abdominal surgery causing scar tissue, or bleeding problems during the operation. Please ask your surgeon about this possibility beforehand.

Any decision to perform the open procedure may be made by your surgeon either before or during the actual operation. Any decision to carry out your surgery as an open procedure is not a complication, but rather sound surgical judgment and is strictly based on what is the safest option towards successful surgery for you.

## What should I expect after surgery?

- You are encouraged to engage in light activity while at home after surgery.
- Post operative pain is generally mild although some patients may require prescription pain medication.
- Medication will be given in liquid or syrup form.
- Anti-reflux medication may be continued for up to 4 weeks after surgery, although most patients will not have symptoms.
- You will need to make some dietary changes after surgery beginning with liquids followed by a gradual move to solid foods. This usually takes 3-4 weeks. This is discussed at the end of this booklet.
- You will probably be able to resume normal activities within a short amount of time. These activities include showering, driving, walking up stairs, lifting, working and engaging in sexual intercourse. Your insurance company should be informed about your operation and will advise you when you will be insured to drive again.
- You will be reviewed in outpatient clinic 6-8 weeks after your operation.

## **Are there side effects to this operation?**

- Some patients develop temporary difficulty in swallowing immediately after the operation. This usually resolves within one to three months after surgery.
- Occasionally, patients may require a procedure to stretch the oesophagus (endoscopic dilation) or rarely re-operation.
- The ability to belch and/or vomit may be limited following this procedure. Some patients report stomach bloating, or feeling 'full' quickly, particularly after eating.
- It is common to pass more wind afterwards.
- Rarely, some patients report no improvement in their symptoms.

Studies have shown that the vast majority of patients who undergo the procedure are either symptom-free or have significant improvement in their GORD symptoms.

Long-term side effects to this procedure are uncommon.

## **What complications can occur?**

Although the operation is considered safe, complications may occur as they may occur with any operation.

Complications may include, but are not limited to:

- adverse reaction to general anaesthesia.
- bleeding.
- injury to the oesophagus, spleen, stomach or internal organs.
- infection of the wound, abdomen, or blood.

Your surgeon will discuss these with you. They will also help you to decide if the risks of having laparoscopic anti-reflux surgery are less than those of not having surgery.

## **Is there anything I should look out for when I go home?**

Be sure to call your doctor, surgeon or the hospital ward you were discharged from if you develop any of the following:

- Persistent fever over 39°C
- Bleeding
- Increasing abdominal swelling
- Pain that is not relieved by your medications
- Persistent nausea or vomiting
- Chills
- Persistent cough or shortness of breath
- Discharge from any wound
- Redness surrounding any of your wounds that is worsening or getting bigger
- You are unable to eat or drink liquids

If you have any concerns when you go home you should contact your consultant's secretary or the ward you were discharged from for advice. These numbers are on the back cover of this leaflet.

## Do I need to follow a special diet?

After your surgery you may find swallowing is difficult because of swelling around the oesophagus. It may take a month or more for swallowing to feel normal again with all foods. If your swallowing has not improved after this time contact your consultant's secretary.

Four stages of altered diet are advised after surgery. In each stage, when swallowing feels normal, you can move on to the next stage. The exact time for progressing through the stages varies from person to person. Do not move onto the next stage before you are ready.

Whilst you are on stages 2 and 3 you should take a chewable complete A-Z multivitamin and mineral supplement until you are able to eat a normal diet. These supplements can be bought at the chemist, supermarket or on the internet.

### Most importantly

- Have small frequent meals and snacks, rather than large meals.
- Eat slowly and chew foods well.
- Have moist foods with extra sauce, gravy or custard.
- If you are not able to eat very much, remember to include plenty of milky drinks and nourishing snacks.
- If you feel unable to eat a meal or snack, have a nourishing drink instead, such as milk, milkshake or creamy soup.
- Sit in an upright position to eat as gravity will help food go down more easily.
- Avoid drinking large amounts of fluids 30 minutes before meals as this may fill you up. If you need to drink with meals to help the food go down, choose a nourishing drink such as milk.
- If any food sticks, stop eating, relax and allow time for food to clear. Try to have a drink to wash the food down. If that fails, try

some soda water. If food remains stuck, contact the hospital ward or your surgeon.

**Avoid the following until you are swallowing without difficulty (usually 4-6 weeks)**

- Fresh bread
- Cake
- Grilled and fried meat, especially steak and chicken (unless pureed, minced or finely chopped)
- Raw stringy or hard vegetables, for example celery, sweetcorn, raw onion or salad
- Fried eggs
- Fizzy drinks (unless soda water is required to relieve blockage)
- Nuts and dried fruit
- Highly spiced foods (avoid for 6 weeks)

## **Stage 1: normally for 2-5 days**

Fluids and semi-fluid items only – these should be smooth with no lumps. A food processor or blender may be useful. Aim for at least 1 pint of milk per day during this stage.

- Water, fruit juice, cordial (not fizzy drinks)
- Milk, milkshake, smoothies
- Tea, coffee, hot chocolate, ovaltine (not too hot)
- Soups (strained or finely pureed)
- Ice-cream, custard, jelly, instant whip, creme caramel, egg custard (no pastry)
- Smooth full fat yoghurt (not with seeds or pieces of fruit)
- Mashed or instant potato (sloppy)
- Gravy, white sauce (no lumps)
- Food pureed to a thin consistency (no lumps)

### **Food suggestions: Stage 1 (all meal options can be eaten at any time)**

#### **Breakfast ideas:**

Glass of milk, smooth yoghurt, custard, jelly, tea or coffee, smooth fruit juice

#### **Lunch ideas:**

Strained soup, finely mashed potato and pumpkin, gravy, white sauce, tomato sauce, jelly, custard, ice-cream, cordial, fruit juice

#### **Dinner ideas:**

Strained soup, mashed potato, mashed carrot or swede, gravy, cheese sauce, ice-cream, jelly, tea, coffee, fruit juice

## **Stage 2: normally for 1-2 weeks**

Mashed and very soft foods only – soft lumps that are soft enough to be mashed with a fork. If you are still in hospital a minced and moist menu is available if there is nothing suitable on the meal trolley.

You can still have all the items in stage 1 but also begin to include:

- Porridge or breakfast cereals such as Weetabix, Ready Brek, Cornflakes, Rice Krispies, well softened with milk
- Fruit – fresh fruit (soft well ripened) stewed or tinned fruit (soft or pureed)
- Yoghurt - any
- Vegetables – well cooked, soft, mashed or pureed
- Mashed or instant potato
- Pasta or noodles - well cooked, soft
- Pureed or minced meats including pureed chicken – can be with gravy in a thick soup, or served with mashed/pureed vegetables
- Fish - either fresh (take care to remove all bones) or tinned (mashed, no bones or skin)
- Eggs; soft boiled, scrambled, poached – avoid fried eggs
- Alternative protein sources; Quorn mince, houmous, lentils
- Rice pudding, tapioca, semolina

## **Food suggestions: Stage 2** **(all meal options can be eaten at any time)**

### **Breakfast ideas:**

Porridge or softened cereal for example weetabix or cornflakes with milk and sugar,

Soft boiled egg or scrambled egg

### **Lunch ideas:**

Smooth soup,

Macaroni cheese, cottage pie with mashed or pureed vegetables,

Pureed or mashed fruit or rice pudding with jam, syrup or honey

### **Dinner ideas:**

Pureed braised meat or casserole or poached fish fillets with white sauce, mashed potato, pureed vegetables,

Pureed or mashed fruit, custard

## **Stage 3: normally for 1-2 weeks**

Light foods with more texture – Be sure to chew well.

You can still have all the items in stages 1 and 2 but also begin to try:

- Tender meats, mince, stews, skinless sausages
- Poultry, mince or finely chopped
- Salads
- Toast
- Biscuits, crackers, crispbreads, breadsticks
- Alcohol in small quantities if desired

### **Food suggestions: Stage 3 (all meal options can be eaten at any time)**

**Breakfast ideas** - any of the options from stages 1 and 2 plus:

Toast with spreads, baked beans, cheese and tomato

**Lunch ideas** - any of the options from stages 1 and 2 plus:

Soup, tender braised meat and vegetables, fish in butter sauce, canned spaghetti, lentils and legumes (well cooked), cheese, salad, soft fruit, tinned or fresh

**Dinner ideas** – any of the options from stages 1 and 2 plus:

Pasta with bolognaise sauce, meat casserole, cottage pie, steamed fish, well cooked vegetables, soft fruit, fresh or tinned fruit

## **Stage 4: gradual return to normal eating**

Gradually add in firmer foods.

Try the foods in the 'avoid list' (on page 13) in small amounts one by one. Chew these foods well. If you are unable to tolerate them try again in a few days. After about 4 weeks it is hoped that you will be able to eat a full range of foods.

However, you are advised to:

- Continue with small meals rather than large meals, and have snacks between meals if needed to satisfy your appetite
- Continue to chew all foods well
- Try to avoid drinking fluids with meals

## **What should I do if I am losing weight?**

Although some weight loss is to be expected, it is important to try to maintain your weight and eat well after your surgery to help your body heal and recover. If you are overweight and want to lose weight, it is best to do this once you have fully recovered. Your GP can advise you on this once you are able to eat normally.

If your appetite is poor, you already have a low body weight, or you lose more than half a stone (4kg) of weight in the first two weeks please follow the suggestions below. These will add extra energy to your food until you are able to eat normally and help to meet your nutritional needs.

### **Breakfast cereals - add one or more of the following to breakfast cereals:**

- Full fat milk
- Full fat yoghurt
- Golden, maple or fruit syrups
- Soft or smooth pureed fruit in syrup
- Cream or cream substitute
- Evaporated or condensed milk
- Honey
- Sugar

### **Creamed potato - add one or more of the following to mashed potato:**

- Butter, margarine, oil or ghee
- Cream or cream substitute
- Full fat yoghurt, creme fraiche or fromage frais
- Milk powder
- Full cream milk
- Grated cheese, cheese spread or cream cheese

**Vegetables - add one or more of the following to vegetables:**

- Butter, margarine, oil or ghee
- Grated cheese, cheese spread or cream cheese

**Soups and Sauces - add one or more of the following to soups and sauces:**

- Cream or cream substitute
- Grated cheese, cheese spread or cream cheese
- Full fat yoghurt, creme fraiche or fromage frais
- Soft cooked rice or pasta
- Extra meat, poultry or pulses such as lentils or beans
- A well cooked egg

**Puddings - add one or more of the following to puddings:**

- Cream or cream substitute
- Ice-cream
- Jam
- Full fat yoghurt, creme fraiche or fromage frais
- Golden, maple or fruit syrup
- Soft or pureed fruit
- Honey
- Sugar
- Evaporated or condensed milk
- Dessert sauces

## **Nourishing fluids**

Fortified milk - add four tablespoons (2oz or 55g) of dried milk powder to a small amount of full fat milk to make a paste. Then add further milk to make up to 1 pint. This can be used to make custard, instant desserts, milk puddings, drinks, porridge, soups or sauces.

- Malted drinks (for example Ovaltine or Horlicks), hot chocolate, milky coffee
- Milkshakes or smoothies
- Creamy soup
- Complan or Build-up soups or shakes (available to buy in most supermarkets or chemists)

Other supplements are available such as nurishment, nutrament, sanatozen high protein powder and whey protein based shakes (such as body building products), which are usually high in energy and / or protein. These will help to boost intake but are often not nutritionally complete. Check with your doctor or dietitian to see whether they are appropriate for your needs.





Patient's name .....

This information has been given to you by:

.....

## Useful contact numbers

### Mr Ackroyd's secretary

- 0114 305 2411

### Mr Kelty's secretary

- 0114 305 2291

### Mr Patel's secretary

- 0114 305 2411

### Mr Tamhankar's secretary

- 0114 226 6707

### Mr Wyman's secretary

- 0114 305 2291

### Ward Firth 8

- 0114 305 2142

### Ward Firth 9

- 0114 226 6185

Alternative formats can be available on request.

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