

# **Oesophagectomy**

**Surgery to remove part  
or all of the oesophagus**

**Information for you  
and your family**

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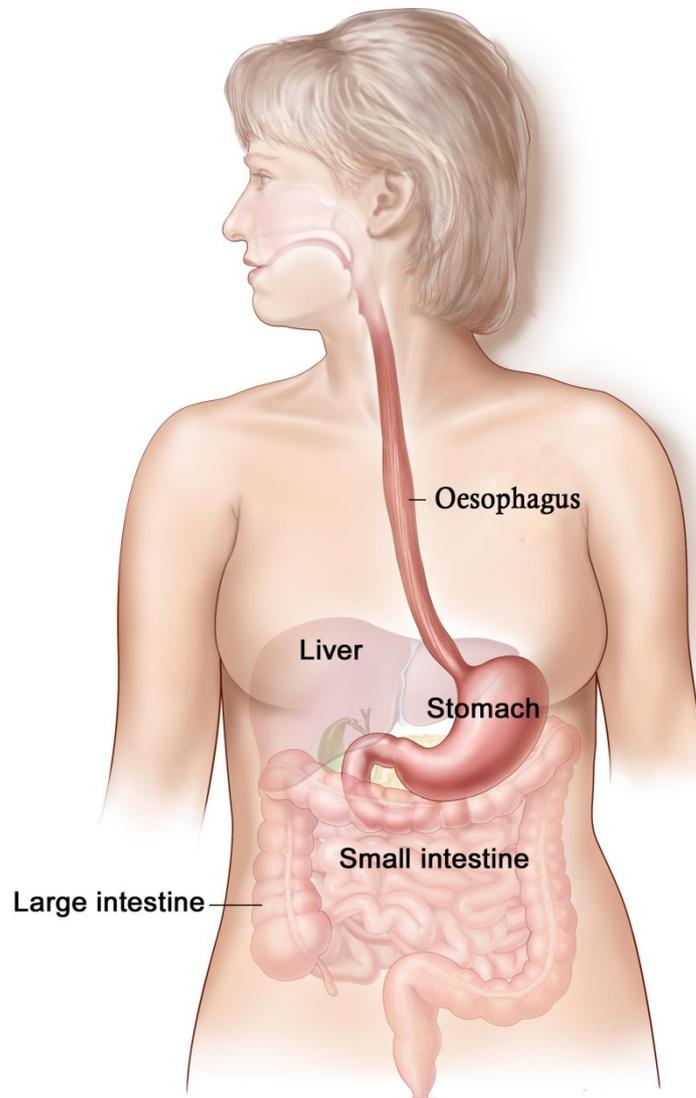
## Introduction

Oesophagectomy is an operation to remove part, or all, of the oesophagus. This information booklet has been prepared to help explain what an oesophagectomy operation involves. You may be reading this because you are going to have a oesophagectomy. You may be reading because you are trying to decide whether to have an oesophagectomy. This booklet aims to answer the questions you will have. It should provide all the information you need for you to give your consent for surgery.

The doctors and nurses you have already seen will have discussed surgery with you, and this booklet supplements the information you have already received. It may not cover all your concerns so if you have any other questions or worries after reading please discuss with us. Contact details are at the end of the booklet.

This booklet is also for your family and friends to help them understand the operation. Please encourage them to read it as well.

## What is the oesophagus?



The oesophagus (gullet) is a long muscular tube which carries food from the back of the mouth to the stomach. Most of the oesophagus is in the chest and lies next to the heart and lungs. A short section is in the neck, and another short section is the abdomen (tummy) where it joins onto the stomach. There is usually a valve at the bottom of the oesophagus. This valve should prevent food and fluid flowing back into the oesophagus from the stomach (reflux or regurgitation).

## Why do I need an oesophagectomy?

The most common reason to have an oesophagectomy is cancer of the oesophagus. The aim of the surgery is to remove the cancer, and may follow other treatment such as chemotherapy or radiotherapy. More information is in the booklet **“Understanding Oesophageal Cancer”** by Macmillan Cancer Support – please ask if you don’t have a copy.

Another condition which may require an oesophagectomy is achalasia. There are other treatments which would be tried before considering an oesophagectomy, such as stretching with a balloon, cutting some of the muscles, or injections into the muscles. If the oesophageal muscles stop working completely then an oesophagectomy may be needed.

Very rarely the oesophagus can get badly damaged by acid reflux, swallowing acid liquids, or during other medical procedures/operations. An oesophagectomy may be needed if this happens.

Recovering fully from major surgery will take time and effort. Please also read the booklet **“Living Well After Your Oesophagectomy Operation”** which explains what to expect after surgery when you leave hospital.

## Workup for an oesophagectomy

There are two main areas to consider in the workup for this operation.

Firstly there are tests to check that the condition you have can be successfully treated with surgery.

Secondly there are assessments to see if you are well enough to undergo major surgery.

If you have cancer of the oesophagus then some, or all, of the following tests will be done to get information about the cancer:

**Endoscopy:** examination of the oesophagus and stomach with a flexible camera (endoscope) to identify the cancer and show which part of the oesophagus it is growing in.

**CT scan:** body scan using X-rays to show location and size of the cancer, and whether it has spread to other parts of the body.

**PET scan:** body scan using radioactive tracers used to look for spread of cancer to other parts of the body.

**Staging laparoscopy:**— keyhole surgery to examine the inside of your abdomen (tummy), looking to see if surgery is possible and whether cancer has spread.

Depending on how well you are, and whether you have other medical conditions, then some of the following assessments will be used to help decide if major surgery is safe for you:

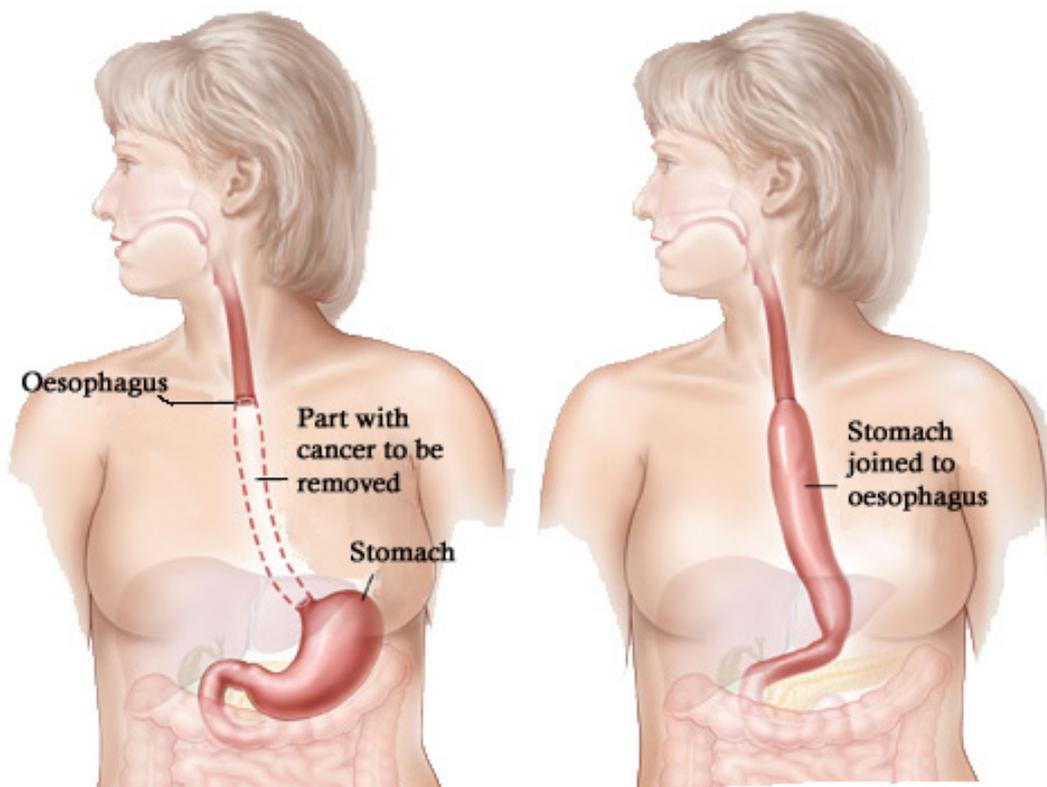
**Cardio Pulmonary Exercise Test (CPET or CPEX test)** involves cycling on an exercise bike while measuring heart and lung function. This is performed by a consultant anaesthetist who will produce, and discuss with you, a report detailing your risk profile for surgery.

**Lung function tests:** measurements of how well your lungs work.

**Echocardiogram:** ultrasound scan of your heart which shows how well it works and if there are any problems with heart valves.

## What does an oesophagectomy involve?

The aim of an oesophagectomy is to remove part, or all, of the oesophagus. Normally the top part of the stomach is removed as well, where the oesophagus joins to it. After removing part of the oesophagus the ends of the oesophagus and stomach need to be joined together. Usually this is done by moving the stomach up into the chest so it can be joined directly to the remainder of the oesophagus.



## What happens during the operation?

### **General Anaesthetic**

This operation needs to be done under a general anaesthetic. This means that you are completely asleep and not aware of any part of the operation. An anaesthetist will place a drip in one of your veins and give you drugs which will send you to sleep. A breathing tube will be put into your windpipe and connected to a ventilator machine which will control your breathing while you are asleep. This also allows the anaesthetist to collapse one lung during the part of the operation done in the chest. More information about general anaesthetics is available in the Patient Information Booklet “**Planned Surgery**” please ask if you don't have a copy.

### **Endoscopy**

The first thing the surgeon will do is perform an endoscopy. This is an examination of the oesophagus and stomach using a flexible telescope (endoscope). It is very likely you will have had an examination like this previously as part of the tests done on your oesophagus. The reason it is repeated is to check that nothing has changed which may influence the operation.

### **Surgery** (see diagram on page 8)

The first stage of the operation is done in the abdomen. This involves freeing up the stomach so that it can be moved into the chest later on. If the operation is being done for cancer then the lymph glands around the stomach are removed too as that is part of the treatment. This stage of the operation may

be done with an incision (cut) in the upper part of the abdomen, or with keyhole surgery using five or six small incisions.

The second stage of the operation is done in the chest. Usually this is the right side of the chest, but occasionally on the left. This is performed with an incision between two of the ribs. During this stage of the operation the lung on that side needs to be collapsed to allow the surgeon to get to the oesophagus. The relevant part of the oesophagus is removed, including surrounding lymph glands if it is a cancer operation. The stomach is then brought into the chest and joined onto the remaining portion of the oesophagus.

Occasionally, if most of the oesophagus needs to be removed, there is a third stage of the operation. This is done in the neck through an incision often on the left side. This allows the highest part of the oesophagus to be removed, and the stomach is then joined higher in the neck.

## Drips, drains and tubes

When you wake up after the operation you will have several tubes in different places which will have been put there during the procedure.

**Intravenous (IV) drip:** usually a smaller one in your hand/arm, and a larger one in a vein in your neck. These are used to give you fluid and medications.

**Naso-gastric (NG) tube:** passes down your nose into your stomach. This drains fluid and air from the stomach in your chest.

**Chest drains:** usually two on the right side, and often one on the left as well. These drain fluid from around the lung and are connected to bottles with water in.

**Urinary catheter:** placed in your bladder. This drains urine from your bladder which helps monitor kidney function after major surgery.

**Local anaesthetic catheters:** placed next to the incisions. These are used to deliver pain-killing medication directly to the incisions.

**Abdominal drain:** sometimes a drain may be placed in your abdomen to drain fluid from this part of the operation.

## Normal recovery in hospital

You will need to be in hospital for 6-7 days after this operation. The following diary details what you can expect to happen during this time. This is a simplified version of the recovery plan the doctors and nurses follow on the ward, and may vary from person to person. If your recovery is delayed for any reason then you will need to stay in longer.

### **Day 0:** day of surgery

The operation takes 5-7 hours. After this you will spend at least 1-2 hours in the recovery area before being transferred to Crownhill Ward on level 7.

### **Day 1:** first day after surgery

You will be allowed to drink up to 100mls water each hour. Some, or all, of this will drain out of the NG tube. The fluid your body needs will be given through an intravenous drip (IV).

You will be helped out of bed to sit in a chair. You will also be helped to go on short walks.

You must do regular breathing exercises, and will be seen by the physiotherapists to help with these.

**Day 2:** Very similar to Day 1 but you will spend more time out of bed, either sat in a chair or walking further. You must continue with regular breathing exercises.

**Day 3:** The NG tube will have a small bung placed in it (spigot) rather than be connected to a bag. You will be allowed to drink what you like (but not fizzy drinks). Your nurse will check the NG every 3-4 hours to see if

fluid needs to be drained.

**Day 4:** The NG tube will be removed if there is only a small amount of fluid draining from it. You will continue to drink freely.

One of the chest drains on the right will be removed, as well as the one on the left if present.

**Day 5:** You will start to have pureed food as well as drinks. The remaining right sided chest drain will be removed. Your pain killers can be taken by mouth, either tablets or liquid.

**Day 6:** You will be discharged home if:

- Your temperature, pulse rate, blood pressure and breathing are normal.
- All your drains have been removed.
- Your wounds are clean and healing well.
- Your pain is under control with tablets or liquid medication.
- You can walk without help.
- You have seen the dietitian and are eating pureed food.
- You have someone to support you at home.
- None of the hospital team have concerns about your recovery.

If any of the steps in the recovery process take longer than planned then you will need to stay in hospital longer than 6-7 days. An example could be if your NG tube continues to drain a lot of fluid after Day 3. This would mean the NG tube would not be removed on Day 4, and you would not be able to start food on

**Day 5.** This would delay your discharge until it is safe to remove the NG tube, and for you to start eating. Possible complications from oesophagectomy are described next.

## **Risks and Complications**

All operations carry the risk of complications, which is when things don't go according to plan. Some of these are minor, such as an infection developing in a wound. Some are potentially life-threatening, such as having a heart attack, or developing a blood clot in your lungs. The common complications from oesophagectomy are described here, as well as the less common but more serious ones.

### **Infection**

Wound infection occurs in 5-10% of patients. Antibiotics will often be needed, and sometimes an infected wound needs to be opened up and cleaned thoroughly.

Other skin infection can happen around any tubes such as intravenous cannulas (drips) and drains, and may need antibiotics.

Urine infection can happen from having a urinary catheter in place. Catheters are removed as soon as possible to try to avoid this.

Chest infection is common, affecting 25-30% of patients. Treatment involves antibiotics and chest physiotherapy. Sometimes it is serious and may require treatment on the Intensive Care Unit (ICU).

## **Bleeding**

Some blood is lost during an oesophagectomy, but usually not a significant amount. If there is more major bleeding during surgery then a blood transfusion may be needed.

Most bleeding after surgery is minor. Oozing from wounds, skin bruising and blood in the fluid from NG tubes is common, and usually settles by itself.

Major bleeding from internal blood vessels after surgery is rare, but will often need a second operation to stop further blood loss.

## **Swelling (oedema)**

It's very common to develop a lot of swelling of the legs, and sometimes the abdomen (tummy), after this operation. This happens as part of the body's response to a major operation, and because a lot of fluid is given to you through the IV drip. This swelling does settle with time, and occasionally needs medication to help get rid of the fluid.

## **Blood clots**

Deep Vein Thrombosis (DVT) and Pulmonary Embolus (PE) are more common after major surgery. DVT is a clot forming in a vein in the legs. Sometimes these clots can detach and move to the lungs, which is then a PE. Wearing elasticated stockings, keeping mobile, and having injections of blood thinning drugs all decrease the risk. DVT can cause problems with swollen, painful legs. PE can be life-threatening.

## **Heart problems**

It is quite common to get an irregular heart rhythm after an oesophagectomy, and this gets better with

medication.

Major surgery increases the risk of having a heart attack. This is now quite rare after oesophagectomy, but is serious if it does happen.

### **Anastomotic leak**

Any new join (anastomosis) in the gut can leak. The risk of this happening with the join between the oesophagus and stomach is less than 5%. If a leak develops then a second operation is often needed to repair it. Sometimes leaks may heal without further surgery, but this takes time.

### **Chyle leak**

Chyle is a milky fluid made from digestion of fatty foods. Lymph glands are removed as part of an oesophagectomy for cancer, and sometimes chyle can leak from areas where this has been done. Usually this fluid will be visible in the chest drains. A chyle leak will often settle by itself if the gut is rested from food. Occasionally a second operation may be needed to try to stop the leak.

### **Injury to structures near the oesophagus**

During any operation there is a risk of causing damage to organs in the area of the surgery. This is rare, but the oesophagus and stomach lie next to major organs (heart, lungs, liver and spleen) and a big cancer may be pressing onto these organs making surgery more difficult. Any damage recognised during the operation will be dealt with at that time.

Sometimes such problems aren't obvious until a few days after surgery, and may need a further operation.

## **Stomach not emptying**

There is a valve (the pylorus) at the way out of the stomach which sometimes doesn't open normally after surgery. This is usually obvious at Day 3-4 when you start drinking freely. It may settle down with medication over the next 2-3 days. If not then the pylorus may need stretching with a small balloon.

## **Delayed feeding**

Any of the complications described above can delay when you start to eat again. If this happens you may need to have feed given either directly into your veins through a special drip, or through a tube placed into your small intestines (see diagram on page 2). This type of feeding would continue until you are able to eat.

## **Risk to life**

There is a risk of dying with any major surgery. This is usually as a result of complications that develop in the days after an operation that don't respond to treatment. Currently the risk of dying in the first 30 days after an oesophagectomy is in the region of 2-5%.

## **Not able to do planned operation**

Occasionally it is not possible to do the operation that has been planned. The most common reason for this is if the cancer is more advanced than the scans suggest. This may only be obvious during surgery, and can make it impossible to remove the cancer. If this happens your surgeon will explain the reasons to you and your family once you are fully awake after surgery.

## Preparation for surgery

Having major surgery such as an oesophagectomy will put a lot of strain on your body, particularly on your heart and lungs. You will have a lot of tests to help assess whether you are able to have surgery, but there are some things that you must do to prepare yourself. The three important areas for you to work on are:

- **Stopping smoking**
- **Eating healthily**
- **Exercising regularly**

### **Stopping smoking**

If you smoke then you must stop before your operation. If you continue to smoke you are much more likely to get a chest infection or heart problems following surgery. Even stopping smoking for two weeks before surgery will decrease your risk of getting complications. The longer before surgery you can stop the better.

Help is available through the NHS so please talk to us about how we can help you.

### **Eating healthily**

It is important that you are not malnourished when you have surgery. You may have struggled to eat and lost weight in recent weeks. If that is the case, and if you are underweight, then we will help you with nutritional advice to help you put weight back on. This may require supplement drinks, or treatments to help you eat more easily. If you have chemotherapy before surgery for cancer then you will usually start

eating much better during that treatment.

If you are overweight then we will help you with nutritional advice so that you remain well nourished, but don't put any more weight on. Surgery gets more difficult if you are overweight, and we will suggest a special diet for 2-3 weeks leading up to your operation if you have a Body Mass Index (BMI) greater than 30.

### **Exercising regularly**

Keeping fit and active as much as possible before major surgery will help your recovery afterwards. This doesn't have to be strenuous. For example walking 2-3 miles every day will help keep your heart and lungs working well, and keep you in good condition ready for your operation. If walking this far is too much then any activity which gets you "out of breath" will help.

## **Research studies**

Plymouth Hospitals NHS Trust is involved in a lot of research studies. These studies aim to improve our understanding of how diseases like cancer happen, and how best to treat them. You may well be asked to take part in some of these studies during your treatment. Any studies will be clearly explained to you by members of the team, and you can choose if you want to take part. If you don't want to be involved this won't affect your treatment at all.

## **Surgical team**

There are 6 consultant surgeons based in Plymouth who perform oesophagectomy regularly. They are:

- **Arun Ariyathenam**
- **Joe Rahamim**
- **Richard Berrisford**
- **Grant Sanders**
- **Lee Humphreys**
- **Tim Wheatley**

They work together as a team, and discuss patients regularly through the week. You may meet one or all of them, both in the clinic and whilst in hospital. One of the consultants is always available 24/7 to deal with any issues that may develop on the ward following surgery. Ward rounds are done every day of the week including weekends.

## How to contact the hospital team

### Within office hours

Your specialist nurses (key workers) are available to you, your family and close friends for any questions, concerns or worries. All the surgical and oncology teams can be contacted via them.

### Plymouth Nurse Specialists

Marilyn Bolter 01752 431528  
Jen O'Reilly 01752 431528

### Exeter Nurse Specialists

Frances Robinson 01392 402775  
Kevin Mitchell 01392 402775  
Keith Mitchell 01392 402775

### North Devon Nurse Specialists

Sarah Dowson 01271 314147

### Torbay Nurse Specialists

Steve Harris 01803 655890  
Clare Harker 01803 655890  
Eve Holleran 01803 655890

### Truro Nurse Specialists

Lisa Nichols 01872 252177  
Wendy Dreyer 01872 252177

### Out of hours

Help is available by contacting Crownhill Ward directly

**Crownhill Ward (open 24hrs/day) 01752 431760**

**Plymouth Dietetic team: 01752 432243**

**Your notes:**



This booklet and other local patient information can be found on: [www.plymouthhospitals.nhs.uk](http://www.plymouthhospitals.nhs.uk)

**This leaflet is available in large print and other formats and languages.  
Contact: Oncology Department  
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