

My lung surgery



Introduction

If you or someone you care for has lung cancer and surgery is a possible treatment, then it's almost certain that you will have a lot of questions.

We have produced this booklet in partnership with lung cancer experts and people affected by lung cancer to help you make positive, informed choices about your care and treatment. Use this booklet along with the information provided by your healthcare team.

Remember that most healthcare professionals are only too happy to answer your questions and help with things that may be unclear or causing you concern.

We hope this booklet answers most of your questions about lung surgery. If you would still like to talk to someone about lung cancer, call us free on **our nurse-led helpline free on 0800 358 7200.**

You can also contact one of the many support organisations available on page 58 of our *Living with lung cancer booklet*. Order a copy by calling us on 0333 323 7200 (option 2), or look on our **website: www.roycastle.org/usefulcontacts.**

Please remember to bring this booklet into hospital with you

“We meet a lot of patients facing lung surgery and this has made us appreciate knowledge is power! Our patients who have gone through surgery said knowing what to expect helped them cope with the journey. Please keep hold of this booklet so you can refer back to it and read different sections as needed. Wishing you all the best for the future.”

Nicola Oswald and Amy Kerr Heart of England NHS Foundation Trust Thoracic Surgery Research Department

Acknowledgement - Roy Castle Lung Cancer Foundation recognises the generous help and support of Heart of England NHS Foundation Trust Thoracic Surgery Department and members of the Leeds Support group in the development of the booklet.

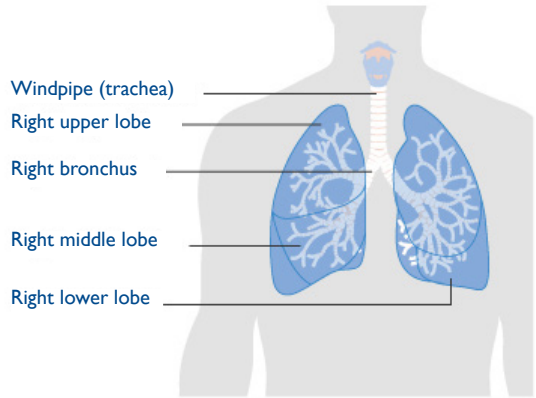
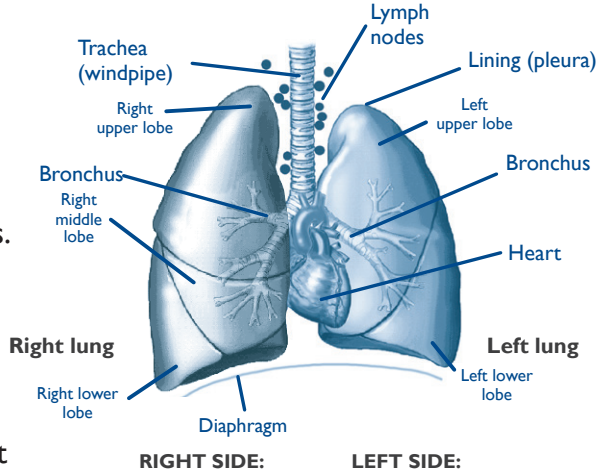
Contents

○ About your lungs	
Understanding lung surgery	4
Your surgical team	5
Pre-operative lung surgery tests	6
Methods used for lung surgery	11
Types of lung surgery	12
○ Preparing for your operation	
What will happen before my operation?	15
Can I do anything to help prepare me for the surgery?	15
Should I change my diet before my operation?	17
Preparing your home	19
What will I need to take to hospital?	20
What will happen about risk of infection?	20
○ When you are in hospital	
What happened when I arrive at hospital for my surgery?	21
What happens to me before my operation?	21
What will happen to me in theatre?	22
Will I be in pain after my operation?	23
Milestones to your recovery after surgery	25
When will I know that my operation has been successful?	29
○ Recovering at home – what to expect	
How will I feel when I get home?	30
I need to go home with a chest drain – how do I look after it?	33
How will I be followed up?	34
Can I stop cancer coming back?	36
Will I have side effects from the surgery?	36
○ Life after surgery	
How long will it take me to recover from my operation?	38
When will I be able to return to work?	38
Life-changing experience	38
Where can I get support after surgery for lung cancer?	39
○ Questions to ask your surgeon or thoracic nurse specialist	41
○ Your surgery	42
○ About us	43

About your lungs

You have one lung in each side of your chest. The right lung has three lobes and the left has two to allow space for the heart. With each lobe divided further into segments. There are 19 segments in total, 10 in the right lung and 9 in the left, see diagram.

The inside of your lungs are like a large sponge. Every part of you body needs oxygen to function. When you breathe in, fresh air brings new oxygen into your body and when you breathe out, “used” breath is removed. Each time you breathe in, the air flows into your nose or mouth down through your throat and into your windpipe (trachea). This then divides into the right and left main (bronchi), one going into each lung. These air passages divide repeatedly until they end in tiny air sacs called alveoli. Within these air sacs, oxygen and carbon dioxide are exchanged.



Understanding lung surgery

What does your lung surgery involve?

Surgery is usually suitable for people with early stage disease, who are fit enough for an operation.

The surgery you will undergo will involve removing part of the lung with tumour in it and the surrounding lymph glands. This tissue is sent to the laboratory and tested. The results help confirm the stage of the cancer, and guides whether you would benefit from additional treatments such as chemotherapy or radiotherapy. (see our *Chemotherapy for lung cancer* and *Radiotherapy for lung cancer* booklets.)

How will it be decided if I am suitable for surgery?

A team of health professionals (including a thoracic surgeon) will work together on your care, directly or indirectly. This is the multi-disciplinary team or MDT. This team will review your CT scans, PET scans and lung function tests, to decide on the best treatment.

They will also discuss the need for further tests to accurately diagnose your tumour. You will then see the appropriate specialist to treat your lung tumour, such as a thoracic surgeon or oncologist. An oncologist is a cancer doctor who specialises in chemotherapy and radiotherapy treatments.

“Being told I was going to have surgery, was the ‘best’ possible news for me personally, as I felt there was going to be a ‘positive outcome.’”

Pat

Your surgical team Who will carry out my operation?

Lung operations are done by thoracic or cardiothoracic surgeons. Your surgeon will have regular experience of lung cancer surgery, and should work as part of the multi-disciplinary team or MDT. Your surgery will be carried out in our nearest thoracic (lung) surgery department or unit.



What will affect whether I am able to have surgery?

Deciding whether surgery is right for you depends on three factors;

1. the type of tumour you have
2. how far it has spread, known as the stage
3. how fit you are.

The tests you will have before surgery aim to answer these three questions.

Surgery is usually offered for cancers limited to the lung, lymph nodes or local structures in the chest. Occasionally, if your cancer is more advanced (where the cancer has spread to outside the chest) you may be offered surgery together with other treatments.

For more information on the MDT and staging for lung cancer, see our *Living with lung cancer* booklet. See page 2 for details on how to get a copy.



Pre-operative lung surgery tests

Before your operation, your surgeon and their team of nurses and other healthcare specialists will make a plan regarding your tests and treatment. Some of these tests will not involve anaesthetic and some tests will be performed under anaesthetic. It is usual to be admitted one day before your operation. Be prepared that it may be necessary to admit you several days in advance for some final tests to physically help you prepare you for surgery. Please bring your medicines, tablets or inhalers (in their original containers) with you.

What tests may I have before the surgery?

Before your operation tests will be arranged to assess your general state of health and fitness for surgery.

Tests that do not involve an anaesthetic:

Blood test

This can help in finding out about your general health and the possible spread of lung cancer. It can provide information on many aspects of health including:

- How well your kidneys and liver are working (Creatinine/LFT's)
- If your body's biochemistry is balanced (for example, does it have enough calcium and protein)
- Ongoing/vulnerability to infection (white cell count)
- Anaemia/lack of circulating oxygen (haemoglobin)
- Susceptibility to bruising/bleeding (platelets)

Chest X-Ray

A simple x-ray of the chest which can sometimes show abnormalities such as inflammation, infection, scarring or growths.

Echo (echocardiogram): This is an ultrasound scan of your heart. Jelly and a probe are placed on the skin, in the same way as pregnant women have scans. The test is not painful but the operator may need to press on the skin. It may be needed if you have had heart problems or breathing problems.

Exercise tests: Exercise tests measure your overall fitness. They are sometimes needed if other tests show you may have a problem with your heart or your breathing. These tests may be done in various ways, such as measuring how far you can walk or how long can exercise on a bike whilst monitoring your pulse and fitness levels.

Perfusion or ventilation scan: This tests the function of different parts of the lung. A perfusion scan measures blood flow, while a ventilation scan measures airflow. A small dose of radioactive fluid is needed for the scan.

“I felt prepared for the tests. The respiratory consultant kept me informed about what the tests would entail. There were leaflets that provided information about the tests.”

Brian

Lung function tests: As a surgical patient, you may be asked by your doctor to do some breathing tests. These will help to determine how well your lungs are working. It is important to follow the directions of your technician and blow into machines via a mouthpiece as long and hard as you can. This will record how much air you can breathe in and out and how much air (oxygen) your lungs absorb. The results will be accurate and help to predict how your body would cope if part of a lung was removed.

Imaging tests

Imaging tests use x-rays, magnetic fields, sound waves, or radioactive substances to create pictures of the inside of your body. Imaging tests might be done for a number of reasons both before and after a diagnosis of lung cancer, including:



Source: Provided by the North West Lung Centre

CT (computerised tomography) scan

This scan is carried out by a radiographer and takes a series of X-rays to build up a 3D image of the inside of your body. This helps to find the exact area and size of a cancer and whether it's spread to other organs in your body, your lymph nodes (a key part of your immune system) or your blood vessels.



The scan is painless and should take around 10–30 minutes. You may be given a drink or an injection of a dye to help highlight areas in your body more clearly.

Once the scan is over you'll probably be allowed to go home.

PET (positron emission tomography) scan

A scan that gives pictures showing where there is active cancer throughout the body. A PET scan should be used before lung cancer surgery and radical radiotherapy, to make sure that curative treatment is possible (a PET scan is more accurate than a CT for this purpose). A PET scan can also be used to investigate a suspected cancer, if diagnosis has not been possible using other tests. An injection containing a radioactive substance is given to highlight any active cancer cells. The scan is painless and quiet and you will not be fully encased during the examination. Modern PET scans are usually combined with a CT scan which is performed at the same time – a PET-CT scan.



Source: Photo kindly supplied by The Christie.

MRI (magnetic resonance imaging) scan

This test uses magnetism rather than X-rays to create a detailed image of areas of your body. Sometimes people are injected with a dye (contrast medium) to help make images show up more clearly.

The procedure is painless and carried out by a radiographer. Because you have to lie in a long tube for about 30 minutes, you may find it a little uncomfortable. You will also have to complete and sign a checklist about whether any metal may be contained in your body. This will determine whether you can have the scan.

CT guided biopsy

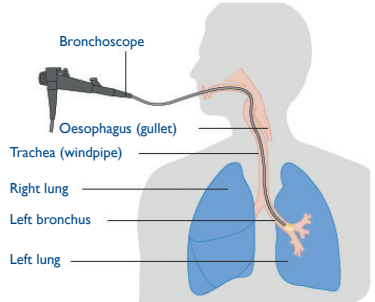
A radiology doctor will decide the best place to take a sample by using the CT scanner. You will be given an injection of local anaesthetic by your doctor to numb part of your chest. The doctor will then take a sample using a needle. Your healthcare team will try to make sure you are comfortable whilst having the biopsy. If you experience discomfort, or want to stop, let them know.

Tests performed under anaesthetic (local or general):

Listed below are some tests that take place under anaesthetic. One or more of these may be carried out first to see if you need further surgery:

Lung biopsy

Most patients with lung cancer are diagnosed at advanced stage, and diagnosis is often based on a sample biopsy. This test usually takes place during a CT scan. There are various biopsy procedures which are as follows:



Bronchoscopy

This normally involves a doctor or specially trained nurse using a thin, flexible tube (bronchoscope) to examine inside the lung airways and take sample cells. The procedure isn't painful but it can be uncomfortable, as the tube will be inserted down your nose or throat for a few minutes.

You will usually have this procedure as an outpatient, or day case. To relieve any discomfort, you may be given a mild sedative to help you relax. Once you are comfortable, a local anaesthetic will be sprayed in the back of your throat to make it numb.

Endobronchial ultrasound (EBUS)

This involves a doctor passing a bronchoscope down your windpipe. The bronchoscope features a small ultrasound probe to create images of around your heart and lungs, and to show if any nearby lymph nodes are bigger than normal. A needle may also be passed down the bronchoscope to take a sample of tissue.

Your doctor will carry out the procedure under local anaesthetic. You will also be offered a mild sedative to help you relax during the procedure. It will usually take less than an hour, and you should be able to go home the same day.

Fine needle aspiration

This type of biopsy involves a doctor inserting a fine needle into an area

of abnormal swelling or lumps located under the skin such as cysts (fluid-filled lumps), nodules or masses (solid lumps) and enlarged lymph nodes. A numbing medication may be injected under your skin to reduce discomfort. Overall, the procedure should take less than 10 minutes.

Mediastinoscopy

This is a surgical procedure that's used to examine the lymph nodes under the breastbone (those closest to the lungs). A doctor will make a small cut at the base of your neck, just above the breastbone, and insert a thin, flexible tube with a camera on the end of it. A monitor will be used to look out for anything that may need further investigation.

This procedure is done under a general anaesthetic and will require you to have a short stay in hospital.

Getting the result

Your doctor may ask you to go to hospital when your test results come through. But this is bound to take a little time, even if only a few days. This is a very anxious time for most people. You can contact your thoracic nurse specialist if you have any concerns or questions or contact our free **nurse-led helpline on 0800 358 7200**.

Methods for lung surgery

Your surgeon will discuss with you which operation is most suitable to remove your tumour, and let you recover as quickly as possible.

Thoracotomy: An incision is made around the side of your body, below your shoulder blade and between your ribs. The ribs are spread to get access to the lungs.

VATS - Video Assisted Thoracoscopic Surgery (Keyhole Surgery): Your surgeon uses a video camera and one to three small cuts (1-5cm) to perform the operation. Incisions are generally made under the arm and/or just below the shoulder blade. The ribs are not spread.

Median sternotomy: This is a cut made vertically down the chest over the breastbone, which allows the surgeon to see both the left and right side of the chest. It is occasionally used for some lung operations.

Your surgeon will discuss with you which operation is most suitable to remove your tumour, and let you recover as quickly as possible.

“Before my surgery, the surgeon explained that when I woke up, what would be in me (drains, pain relief, etc) and what sort of machines I’d be wired up to. This was really helpful and helped reduce fear as I’d not had surgery since tonsillectomy aged 4. It helped reassure me that things were normal.”

Janette

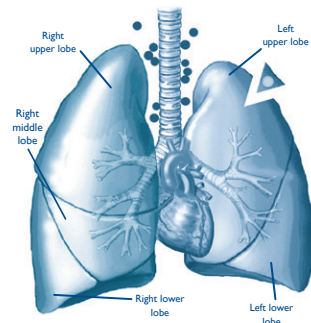
Types of lung surgery

What are the different types of operation that can be performed on the lung?

During surgery, a part or all of a lung may need to be removed, particularly if it contains a tumour. The amount of lung that is removed will depend on location, size of your tumour, biopsy results, spread of your cancer; and sometimes on your levels of fitness before surgery.

After your operation, you will be encouraged to exercise regularly in order to make the remaining lung tissue recover and work harder for you.

Segmentectomy/Wedge resection - Each lobe of the lung is made up of several segments. If your fitness will not allow more extensive surgery, or the cancer is small, your surgeon may be able to remove just a segment, or a small piece of lung tissue surrounding the cancer, rather than the whole lobe.



Lobectomy - This is the most common operation for lung cancer. It is chosen if your cancer is contained in a single lobe, and you are reasonably fit. There are 2 lobes on the left and 3 on the right. It involves the removal of a lobe of the lung. The remaining lung will expand to fill the space left by the tissue that has been removed.

A bi-lobectomy is the removal of two lobes of the lung on the right side.

Sleeve lobectomy - This is removing part of the main airway or lung artery, with the lobe being removed. The two ends are sewn together. This procedure can avoid removing the whole lung for some patients.

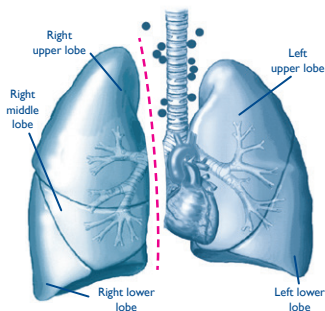
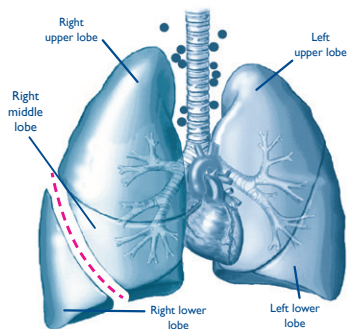
Pneumonectomy - This means removing a whole lung and is chosen when the tumour extends beyond just one lobe. You may feel breathlessness after surgery this a little more common after this procedure.

Along with removing the tumour using one of these techniques, the surgeon will remove lymph glands or nodes from your chest. This helps decide if further treatment, such as chemotherapy, is needed after surgery.

Weighing up the benefits and problems of surgery

At your pre-assessment appointment with your surgeon, you will discuss removing the lung tumour and the benefits and risks of the operation.

The benefits of the operation are to remove the lung tumours and if this is an early cancer then to cure. As well as talking to you about the benefits of surgery, your surgeon will discuss what the risks might be for you. The risks of surgery depends on several things including the type of operation you are having, whether you have other medical problems and your fitness for surgery.



There is a chance of having some problems after the surgery such as chest infection (pneumonia), wound infection, and an irregular heart rhythm which may require further treatment or even additional support for your breathing. Other complications of surgery can include excessive bleeding, blood clot in your leg (deep vein thrombosis or DVT) or blood clot in your lung (pulmonary emboli), which may or may not delay your discharge home. Again your surgeon will discuss this with you.

You can help prevent some problems after surgery by getting in the best possible condition for surgery, if you smoke and are waiting for an operation then it's very important that you stop smoking as soon as possible. This will increase both your body's ability to heal and your ability to recover from the anaesthetic. Stopping smoking will reduce your risk of complications after surgery.

Health professionals understand how difficult it can be to stop smoking, especially around the time of cancer diagnosis, and are there to help you succeed.

Ask your GP, cancer doctor or lung cancer nurse specialist for advice on giving up smoking. Contact details of stop smoking support and helplines can be found at the back of the *Living with lung cancer* booklet. See page 2 for details on how to get a copy.



Preparing for your operation

What will happen before my operation?

If you have been to a pre-surgical assessment clinic, it is more than likely you will be admitted on the day of your surgery. Sometimes you may need to be admitted sooner to make sure you are ready for surgery. If, for example, you take warfarin you may need to be admitted for alternative blood thinning medication such as heparin.

Other hospitals routinely admit patients the day before surgery.

How fit are you and your lungs?

You and your lungs must be fit enough to cope with the surgery. The surgeon will ask you about any symptoms you have, assess how far you are able to walk and will ask about any other medical problems.

Can I do anything to help prepare me for the surgery?

The weeks before surgery are a good opportunity to prepare yourself physically and emotionally. You can increase your fitness significantly in just a few weeks.

Activity and fitness: Exercise is good for your body and for your well-being. Simple walking for 20-30 minutes every other day is sufficient if you are able to do so. This varies from person to person, but try and build up your activity. You should do enough that you feel mildly short of breath. Being active before surgery can help your fitness for the operation; and help your recovery. The exercise you choose will depend on your level of fitness, but it is important for you to find ways of introducing exercise into your daily routine.

Here are some other things you can do.

Ways to Keep Active:

- Swimming
- Cycling
- Exercise class
- Using the stairs, rather than taking the lift
- Active hobbies such as; gardening, bowling, golf.

Before starting to exercise, ask your surgical team or GP if you have any questions.

Pre-habilitation programme

It is important to remain physically active while you wait for your operation. Some hospitals offer exercise and education classes or support before surgery. The following are cardiovascular exercises. You do not need to do all of the exercises every day, but you should choose activities from each section and try to do something at least five days of the week if you are able.



Walking upstairs or doing step ups.



Raising a ball above your head. This is a good exercise to improve your shoulder mobility and improve your breathing.



Marching on the spot. This is a good lower limb exercise to improve lower leg strength and overall fitness. It can be done in a variety of ways.

Do each type of exercise for 5 times at a time. Stop if you feel too tired before resuming and building up.

Should I change my diet before my operation?

Before your operation, it is important to eat a balanced diet as this will help your body recover from surgery. If you are underweight and/or losing weight, it can be more difficult and can take longer to feel better. Try to make sure that you are eating regularly, including snacks and nutritious drinks, such as milkshakes or fruit smoothies, to keep your weight stable. If you are struggling with breathlessness, try to eat little and often and take smaller mouthfuls of food. Soft or moist foods are often easier to eat, if your mouth gets dry.

“Good nutritional care and adequate hydration can improve health and well-being, eat a varied, balanced diet.”

*Mhairi Donald, Macmillan Consultant Dietitian
– Oncology specialist group secretary Sussex Cancer Centre*

For further information to help you improve your nutrition before surgery, ask your doctor or nurse for a referral to a dietician.

Alcohol units

Limit the amount of alcohol you drink. The current UK guidelines recommend men and women are advised to consume no more than 14 units per week.

For further information on calculating units, see NHS Choices Alcohol units <http://www.nhs.uk/Livewell/alcohol/Pages/alcohol-units.aspx>



Here are a couple of simple everyday recipes that give you some ideas to include in your diet.

Fruit Smoothie - Serves 1

Calories: 450

Protein: 21.1g

Ingredients

- 125ml of small volume, high energy, high protein oral nutritional supplement (vanilla or banana flavour)
- 100g frozen berries
- 1 scoop of vanilla ice cream
- Crushed ice

Blend all the ingredients together and pour into a glass to serve.



Honey Porridge - Serves 1

Calories: 392

Protein: 21.5g

Ingredients

- 125ml of small volume, high energy, high protein oral nutritional supplement (vanilla or banana flavour)
- 30 porridge oats
- 1tbsp honey
- 1 banana (optional)

Place the porridge oats into a bowl and mix with the bottle of oral nutritional supplement. Place in the microwave and cook for 90 seconds. Add the honey, return bowl to microwave and cook for a further 30 seconds. Stir and serve.

If you are concerned talk to your healthcare professional or ask to be referred to a dietitian who will be able to give you further advice on fortifying foods, and can recommend a prescription for oral nutritional supplements if you need them.

When will I have to go into Hospital?

In many areas you will have a pre-surgical assessment clinic appointment. This is a meeting where all the specifics of your treatment will be discussed. You will be asked about your general health, previous operations, allergies and medications. You will usually be examined, and your height, weight, blood pressure and other details recorded. Blood tests, swabs and other tests needed before surgery may be done here. You will often meet other team members like anaesthetists or physiotherapists. You may be asked to sign the consent form for your operation here, and may be given information on your surgery. This visit is a great opportunity to ask any questions that you have about surgery.

You will be given advice about not eating and drinking for a certain length of time before your surgery, it is important to follow these instructions.

Many people are invited to take part in research. You do not have to do this, it is voluntary. Taking part may help others in the future and many patients who have taken part in research feel good about it. The treatments that you are offered today have been made possible by previous patients taking part in research.

“Patients feel reassured that there is someone who they can contact if they are unsure or need advice about their recovery.”

*Sandra Dixon, Macmillan Thoracic Surgical Nurse Specialist,
St James’ University Hospital*

Preparing your home

It will help reduce stress to have your home ready to go back to. You may find the following checklist helpful.

- Stock up on food that will not go off, like tea, coffee, sugar, tins, dried and frozen food
- Cook extra portions and freeze them for later
- If you live alone, arrange for a relative or friend to stay with you, or stay with them until you feel strong enough to be on your own
- Arrange for a relative or friend to call during the day to check if you need anything
- Make sure you have a good supply of your regular medications
- If you have young children, arrange help to care for them for at least the first week after discharge
- Arrange for a friend or relative to care for your pets e.g. feeding the cat
- Make sure you have clean comfortable clothes and bedding.

What will I need to take to hospital?

You will need to check with your own hospital but as a general rule pack a bag containing the following:

- All tablets that you are taking, in the correct containers
- At least two sets of nightwear, ideally pyjamas with loose fitting tops
- Dressing gown and well-fitting slippers
- Toiletries – soap, flannel, toothbrush and paste, tissues, comb, shaving items
- Walking aids – frames/sticks/crutches, false limbs, these could be labelled with your name, address and hospital number
- Hearing aids/glasses labelled with your name, address and hospital number
- Something to occupy your time – magazines, books, music etc
- A small amount of loose change.

It is not advisable to take expensive items or large amounts of money. Your property is your responsibility unless you decide to hand it to the hospital for safe keeping.

**TOP
TIP**

What will happen about risk of infection?

MRSA (Methicillin Resistant Staphylococcus Aureus) is antibiotic-resistant form of a common bacterium called staphylococcus aureus which is found growing harmlessly on the skin and in the nose in around one in three people in the UK. Most hospitals will screen for MRSA by taking samples from your nose, throat and groin. If you carry this infection it is safer for you and other patients to have it treated before you come into hospital.

When you are in hospital

What happens when I arrive at hospital for my surgery?

When you arrive, a member of the nursing staff will meet you and show you to your bed or waiting area. Once you have settled in, the nurse will come and ask you a range of questions. Your temperature, pulse and blood pressure will be taken. You will have the opportunity to ask questions and discuss your planned care.



If you have a Living Will or Advance Directive, take a copy with you and make sure it's added to your notes.

You may also meet other members of the hospital team who will be responsible for your care such as a doctor from the thoracic surgical team, a member of the nursing team, the anaesthetist and the physiotherapist. Your operation will be explained to you. If you haven't already done so, you will be asked to sign a consent form.

Please feel free to ask further questions at this point. Remember to mention any previous adverse reactions to medications, so that alternatives can be found.

The above will vary slightly from hospital to hospital.

What happens to me before my operation?

You may not be allowed to eat or drink for several hours before your operation. This is to prevent sickness and vomiting during the anaesthetic.

You will be given special stockings to wear. These help to improve your circulation and prevent blood clots developing in your legs (DVT or Deep Vein Thrombosis). A nurse will help you if required (see page 32 for more information).



You may need to have hair removed from the area of skin where the cut will be. The nurse will help you if this is required.

A member of the surgical team will mark the site of the surgery on your skin. The anaesthetist is the doctor who will put you to sleep. They will discuss the best method of pain control for you. (see page 23-24 for types of pain control section).

What will happen to me in theatre?

When it is your turn to go theatre you will be taken by a nurse and a theatre assistant.

The theatre staff will check your details and then take you into the anaesthetic room. Here you will have a small needle inserted into the back of your hand.

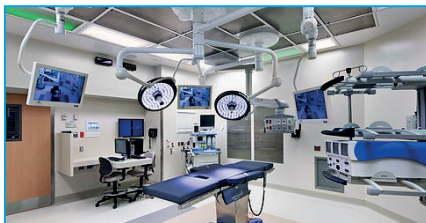
This will be used to give you the medication that will help you to fall asleep. The theatre staff may start a 'drip' to prevent you from becoming dehydrated. A catheter may be passed into your bladder to enable you to pass water easily and to monitor your urine output. A fine tube (epidural or paravertebral) may be passed into your back in order to give you pain relief after the operation.

You will then be taken into theatre where the surgical team will carry out the operation.

After the operation, you will go to the recovery room. This is where you will wake up from your anaesthetic. You may feel a little confused and unsure where you are. The nurses and doctors will monitor you closely until they feel you are ready to leave the recovery area. They will give you oxygen and check that you have enough pain relief.

As you wake up you may notice that you have some tubes and wires attached to you. These are there to help with your monitoring. Chest drains are usually placed to remove any fluid collections that may build up in your chest as a result of the surgery.

You may have some or all of these tubes and lines in place after theatre, depending on your type of operation.



Source: *Memorial Sloan Kettering Cancer Centre*

What happens to me after I leave theatre?

When you leave theatre you will go to a ward or to the high dependency unit. You will feel drowsy but will be able to wake up. During the first hour of your return the nurses will make sure you are comfortable and will set up the monitoring equipment, drips and other equipment. You will be given extra oxygen to help your breathing.

Your chest drains will remove any blood or air in the chest. This is normal and is nothing to worry about. The drains are removed when the drainage is minimal and there is no air leaking from the lung. The drains may be put on suction to help the lungs expand. Getting up and about with the drains and drips is actively encouraged.

When will I be able to eat and drink?

When you are fully awake you will be able to have sips of water. Once you can manage sips of water you will be able to have a cup of tea or squash. This will usually be about one to two hours after returning from theatre. You may not feel like eating much until the following day.

Will I be in pain after my operation?

Surgery is uncomfortable and it is not possible to take all the discomfort away. However this should be controlled. Please let the nurse or doctor know if you have any pain.

You must have enough pain relief to cough and breathe comfortably. A combination of regional techniques like epidural or paravertebral catheters, intravenous and tablet painkillers is common.

“All hospitals have pain management guidelines which will differ from hospital to hospital, but in general pain is managed better if there is regular assessment and to work in partnership with the patient.”

*Sandra Dixon, Macmillan Thoracic Surgical Nurse Specialist,
St James' University Hospital*

If you have an **epidural** it will normally be in for a few days after your operation. This is a fine plastic tube that leaks local anaesthetic and sometimes strong painkillers like morphine into the area near the spinal cord, creating numbness in the chest wall. If you are able you can move around the bed area and sit in a chair. The nurse will ask you about your pain relief regularly.

A **paravertebral** catheter may be used instead of an epidural for pain relief. A small tube is placed in the paravertebral space, in the vicinity of the thoracic spinal nerves.

Patient Controlled Analgesia (PCA) is often used in the initial period after surgery. It uses a pump that allows you take control of your own pain relief. You can give yourself a small dose of morphine (commonly used to treat cancer pain), by pressing the button on the handset. It is injected through a needle in the back of your hand.



You cannot overdose with a PCA no matter how often you press the button. It is a good idea to use the PCA before doing anything physical, like moving around or doing your physiotherapy exercises. If you still have pain despite using the PCA regularly then other methods of pain relief can be used.

Will I feel sick?

Pain relief and the anaesthetic can make you feel sick. This does not happen to everyone but if it happens to you the nurse can give you anti-sickness medicine to help.

Am I allowed visitors?

Once the nurses have set up the monitoring equipment and you are comfortable, you will be allowed to see your visitors. You will need plenty of rest, so a short visit only is recommended at this point. Your family or friends can contact the ward at any time for information. If there is a change in your condition a member of the nursing staff will contact your next of kin.

“I was in pain at times at times but the hospital did everything they could to manage the pain. I would wait to see if the pain would subside but as soon as I requested pain medication it was available immediately.”






Brian

TOP TIP

Your pain relief is likely to cause you to feel constipated. You should take laxatives as prescribed. They, like pain tablets work best when they are taken regularly. Drink plenty of water and eat fresh fruit and vegetables every day.

Milestones to your recovery after surgery

This table outlines the key milestones in your recovery. It covers a typical stay in hospital. The time that you spend in hospital depends on several factors including your fitness and the surgery.

Milestones					Checklist
AFTER OPERATION	DAY 1	DAY 2	DAY 3	FROM DAY 4	LAST DAY
Coughing and deep breathing exercises	Help with coughing and deep breathing	Help with coughing and deep breathing	Increase walking	Prepare for going home	Getting up and down on my own <input type="checkbox"/>
Drink once awake	Sit in chair	Wash independently	Dress independently	Collect tablets to take home	Able to eat and drink <input type="checkbox"/>
Eat when ready	Walk with support	Walk independently	Fitness assessment with Physiotherapist		Passing urine freely <input type="checkbox"/>
	Wash with assistance	Use of tablet pain relief			Bowels working <input type="checkbox"/>
	Removal of some tubes, drips & drains	Removal of tubes, drips & drains			Discharge summary collected <input type="checkbox"/>
					Tablets to take home <input type="checkbox"/>
					Organised transport home <input type="checkbox"/>
					My lung surgery booklet <input type="checkbox"/>

What will happen on the first day after my operation?

Your team will visit and will discuss your operation with you. It may be possible to remove your drips and monitoring equipment. A chest x-ray and blood tests may be taken. You may see the physiotherapist. They will encourage you to deep breathe, cough, move around and exercise your arms and shoulders. This is particularly important on the operation side to prevent stiffness or a frozen shoulder.

You should be able to eat a light breakfast. After this the nurse will help you to have a wash. You will be helped to get up and out of bed on the first morning after your surgery and walk.

What will happen on the second day after my operation?

Your team may be able to remove further tubes, drips and drains. Another chest x-ray might be taken.

The order of these events vary from hospital to hospital and from person to person.

How will the nurses remove my chest drain?

Two nurses will remove the tube, and seal the hole with a stitch that was inserted in theatre.

How will my wounds heal?

It will take two or three weeks for your wound(s) to heal. Whilst in hospital the nurses will check them regularly.

Try to avoid using soap, cream, and talcum powder directly on the scar, as this can cause irritation. Numbness around the scar and the front of your chest is common.

Most stitches are dissolvable, except the stitches used to close your chest drain site. Sometimes clips or staples are used along your wound.

Your nurse will advise you if any stitches or clips need removing by your GP or district nurse. This is usually done 5 to 7 days after your drain is removed.

How soon will I be active?

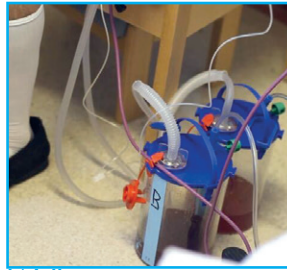
As soon as you are out of bed you should start to exercise. When sitting in your chair or lying in bed, your lungs are not fully expanded. They need to be exercised to get them working properly again.

The physiotherapist may visit you. Mucous and blood can collect in the airways after a lung operation. Deep breathing and supported coughing techniques help to get rid of this. The physiotherapist may take you for a short assisted walk. If your chest drain is attached to wall suction the distance you can move is restricted. If you have a digital drain it can be picked up when you need to walk. If the drain becomes disconnected or alarms let the staff know immediately.

Types of chest drains



Portable suction



Wall suction

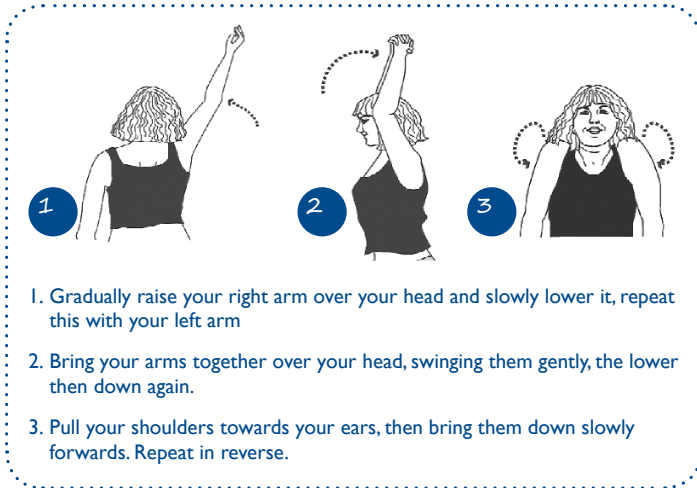


The physiotherapist may ask you to walk on the spot or try a short session on an exercise bike. You may feel short of breath following exercise. This is normal and shows that you are exercising at the correct level. However, you should not be gasping for breath.

Once you are steady on your feet you can walk around on your own, as long as you feel comfortable. This encourages your lungs to expand and may let you get home faster.

Shoulder exercises

After your surgery, you may find your shoulder feels stiff. The following exercises will help maintain your shoulder range of movement. Try and do these exercises regularly. Spend a few minutes on these exercises every day.



Will I be able to rest?

It can be difficult to sleep in hospital and you may have a few unsettled nights. You will feel more tired than usual, drowsy and sleepy. Once you are discharged and you become more active your sleep pattern should return to normal.

When will I be able to go home?

This depends on your fitness, the operation you have had and whether you experience any complications. Hospital stay is usually between 5-10 days, with an average of 6 days*.

You will be able to go home when your doctors are satisfied that you are eating and drinking, and any problems identified before discharge are addressed. It is hoped that the chest drains will be removed before discharge but it is possible to go home with the chest drain in if longer term drainage is required. This sometimes happens if you have a persistent air leak from the remaining lung. This will eventually stop, but can take several weeks. Being active at home can often help the air leaks to stop.

*These numbers come from the NHS England Lung Cancer Clinical Outcomes Report 2016 (2014 Data)

What will I be given before I go home?

To go home you may be given:

- Medication. In most cases the hospital will supply you with 7-14 days of your necessary tablets. Your nurse or pharmacist will discuss with you how and when to take your tablets. You will need to see your GP for further supplies of medication
- Thoracic/lung nurse specialist contact details
- Chest drain information and equipment, if required
- Spare pair of stockings, if required
- A copy of your discharge summary (the same summary will be sent to the GP)
- A practice/district nurse letter and date for removal of any clips or stitches.

When will I know that my operation has been successful?

The surgeon will be able to tell you straight away how much of your lung tissue was removed but will not be able to be specific in relation to the diagnosis. Pathologists will test the tumour which has been removed, tissue from the surrounding area and lymph nodes. This usually takes between 7-14 days after your operation.

The results from your operation will be discussed again at the MDT meeting to decide if further treatment is necessary. These results along with any recommended treatment will be discussed with you at your next appointment.

Patient transport service

If you need to use your hospital's patient transport service, a member of the team needs to assess whether you are eligible at least 48 hours before your surgery. This involves a brief telephone interview and is completely confidential. This may vary from hospital to hospital.

If you think you may be eligible for this transport service, please speak to a member of the team responsible for looking after you.

Recovering at home – what to expect

This section gives key information so that you know what is considered normal, when to ask for advice and who to contact if there is a problem once you have been discharged home.

Once home, you should continue to walk regularly, gradually increasing distance and pace. If you do any specific activities, for example, swimming, golf or bowls, ask your physiotherapist for advice on returning to these hobbies. Maintain a good posture to avoid unnecessary strain on your spine, which can cause back pain and restricts the movement of your lungs and rib cage.

	Everyday Activities	Outside activities	Seek advice
Week 1	<ul style="list-style-type: none"> - Walk around the house - Breathing exercises - Arm exercises - Shower 		<p>Speak to your surgeon prior to attempting:</p> <ul style="list-style-type: none"> Heavy lifting Sexual activity Playing sport Flying/holiday
Week 2	<ul style="list-style-type: none"> - Light tasks (e.g. washing up, cooking, dusting) - Arm exercises - Shower 	<ul style="list-style-type: none"> - Walking outside the house 	
Weeks 4-6	<ul style="list-style-type: none"> - Ironing - Arm exercises 	<ul style="list-style-type: none"> - Light shopping - Gentle gardening - Cleaning the car 	
Weeks 6-12	<ul style="list-style-type: none"> - Hoovering - Light lifting 	<p>If you are taking medicines check with your doctor or pharmacist if you are fit to drive</p> <p>Resumption of driving (check with your insurance provider)</p>	
After 12 Weeks	<ul style="list-style-type: none"> - Return to full activity around the house 	<ul style="list-style-type: none"> - Resumption of normal outside activities 	

How will I feel when I get home?

Following your operation it is normal to have feelings of stress, anxiety or depression. Being affected emotionally is normal. It may help to talk about how you feel with a member of your family, a friend or your nurse specialist. Sometimes your friends and family need to talk things over as well.

It helps if you are able to set yourself realistic achievable goals so that you can see that you are moving forward. It helps you to think positively. Relaxation may be helpful as you can train the mind to relax the body. This may reduce the stress and anxiety you feel. One relaxation technique is to learn to breathe more deeply and slowly. You may have already been taught this.

Here are some general relaxation guidelines:

- Choose a place and time where you will not be disturbed for at least 15-20 minutes
- Practice your chosen technique at least twice daily (minimum four times a week)
- It may take a few weeks before you notice any benefit – stick with it and do not expect instant success
- Relaxation should be helpful. If you find it makes you more anxious or increases your pain, speak to your nurse specialist who may be able to suggest other methods of reducing your symptoms.



Please see our *Living with lung cancer* booklet for more information on relaxation, guided imagery and complementary therapies. See page 2 for details on how to get a copy.

How should I look after my wound?

Try not to touch your wounds: if you do there is more chance of infection. Use a mirror or get a member of your family to check your wound(s) every day. If your wound is clean and dry it should be left without a dressing. This will help it to heal more quickly. Don't worry about the scabs they will fall off in their own time. You will usually have at least one stitch where your drains were placed which should be removed by the practice nurse at your GP surgery. The stitches should be removed around five-seven days after drain removal. Some swelling around the wound is perfectly normal and should go down after a few weeks.

Will I be able to look after myself?

You will be able generally to care for yourself, for example, washing and dressing. You will probably be most comfortable in loose fitting clothing (ladies - bras may be uncomfortable for a little while). You may have a bath or a shower but do not scrub the wound or use perfumed products.

Although you will be able to cook, don't lift heavy pots and pans. Ready meals are often ideal for the first few days after going home. You may have a reduced appetite and may even lose some weight. Try to eat small meals often that are high in calories. Light dusting is fine but avoid vacuuming or moving heavy objects.

You should consult your GP for advice if your wound becomes red and inflamed, if you have pain from around the wound, or if fluid is coming from the wound.



How long do I need to wear stockings for after surgery?

You will have been given special stockings to wear following surgery. These help to improve your circulation and help prevent blood clots developing in your legs (DVT or Deep Vein Thrombosis). You should wear the stockings until you have returned to your normal level of activity. Your healthcare team will confirm how long you should wear them for. Tell your healthcare team if you have difficulty putting on/taking off the stockings. You should remove the stockings when you go to bed at night and wash them. They will then be ready for use in the morning.

“Initially I was able to walk around the house to get to the toilet or bed. It was useful to sleep in an upright position. I was taught how to cough using a towel to support the wound.”

Brian

For the first few nights after you come home from hospital, you may find it more comfortable to sleep propped up in bed with extra pillows.

**TOP
TIP**

How do I improve my posture and shoulder movement?

Try and maintain an upright position. Check your posture in the mirror and keep your shoulders moving. Gentle side stretches away from the operated side may help your posture. If problems with your shoulder or posture persist it may be that you will need a referral to your physiotherapist. Your GP should be able to help you with this. See page 28 for exercises to help with shoulder movement

Will I be able to get out and about?

The amount of activity you can do (both in the short term and the long term) will depend on a number of factors, including the amount of lung you have had removed. You may feel that you lack confidence for a few days after you go home – this is normal. Your confidence will soon return. Try to get a balance between activity and rest. It is important that you try to remain active.

Aim to take a walk once or twice a day. Gradually increase the distance you can walk. Cold weather will not cause you any harm. You can also go shopping with your family and friends - lean on the trolley if it helps!

I need to go home with a chest drain - how do I look after it?

If you need to go home with a chest drain it will be because a small amount of fluid is still draining into the bag or you have a small air leak caused by the internal wounds taking a while to heal. You will not be sent home with a drain unless the doctors and nurses are sure that you are able and confident to care for a drain. If you live alone and do not have anyone to support you, tell the nurses on the ward.

A district nurse will be asked to visit you every few days. They will check the drain and change the dressing if necessary. The doctors and nurse specialist may want to see you approximately one week after you have gone home to see whether the drain needs to be removed. They will want to know how much fluid has drained each day. It is a good idea to record the drainage every night and then empty the bag to prevent spillage. Here are some simple rules for you to remember:

DO

- Empty your bag before you go to bed each night
- Record the amount and colour
- Continue to exercise
- Follow and read the instructions you will have been given
- Get advice if your breathing becomes difficult
- Contact the ward you were on or your nurse specialist if you are worried.

DON'T

- Disconnect your drain
- Pull at the drain or the stitches
- Allow the bag to lay flat as it may spill
- Block the port for emptying the bag
- Forget that the bag is connected to you!

Your follow up in lung surgery

How will I be followed up?

Following discharge you will usually be sent an appointment by the hospital. This will vary from one hospital to another but is usually two to six weeks after discharge. At this appointment, you may have a chest x-ray and your wounds checked to see they are healing. You will be given the results of your operation.

You will need to be followed up long term following your lung cancer operation. This is called lung cancer surveillance and is important as even though the operation may have been a complete success there is still unfortunately a chance your lung cancer may recur.

Your follow up will vary depending on your hospital's local policy but will involve clinic appointments with a chest x-ray and CT scans over a period of five years. It may be with your surgeon, specialist nurse, your cancer doctor if you had further treatment such as chemotherapy after the surgery or with respiratory doctors who have looked after you.

Will I need any other type of treatment along with the surgery?

Some people may need further treatment. For some patients further operations may be necessary. This will depend on the exact stage of the tumour, if it is large or for those that have spread to lymph nodes, chemotherapy may be offered after surgery. Research shows that chemotherapy may reduce the risk of cancer coming back or spreading.¹ If you are offered this treatment option you can discuss if it is right for you with your clinical team. It is known as adjuvant chemotherapy.

Please see our Patient Decision Aids (PDA) for Chemotherapy after surgery. These PDAs will help those who have stage 2 or 3 non-small cell lung cancer, to decide whether or not to have chemotherapy after surgery. Call our **free nurse-led helpline on 0800 358 7200**.



If the surgery has not completely removed the cancer you may be offered post-operative radiotherapy or chemotherapy treatment. Your doctor will talk to you about this.

“Surgical follow up will differ slightly from region to region in terms of who sees the patient and when. In Leeds the patient is seen once in the surgical clinic with a chest x-ray and then discharged back under the care of the referring physician. Those not needing adjuvant treatment are usually put on a survivorship programme organised by the chest physicians. Again the frequency and when imaging is repeated will differ slightly from one hospital to another.”

*Sandra Dixon, Macmillan Thoracic Surgical Nurse Specialist,
St James' University Hospital*

¹Morgensztern D, et al. Adjuvant Chemotherapy for Patients with T2Nomo NSCLC. Journal of Thoracic Oncology, June 2016, VII, No 10, 1729 – 1735.

Can I stop the lung cancer coming back?

The most important thing to reduce your chances of having the lung cancer return if you are a smoker is not to continue to smoke. Otherwise, try and stay as healthy as possible by keeping active, watching your weight and eating a healthy and balanced diet.



Will I have any side-effects from the surgery?

Surgery for lung cancer is a serious operation and most people have side-effects of one sort or another. Side-effects vary from person to person and depending on the type of lung cancer surgery you have had.

Many people find their breathlessness improves in the first 4-8 weeks after their operation. Breathlessness after surgery depends on how breathless you were before surgery, and how much lung your surgeon has removed.

Side effects	Practical advice
Breathlessness	This will depend on the type of surgery you have had and your general fitness level before your surgery. Some shortness of breath is to be expected and is normal. When you are up and about you may feel more breathless. This is normal and shows that you are working hard enough. You may have to adapt your lifestyle to cope with longer term breathlessness.
Constipation	You may find your bowel habit is altered. You may become constipated because of the change in eating habits or the painkillers you are taking. Eating three to five pieces of fruit and vegetables a day can help with constipation. Ask your GP or your nurse specialist for advice.

Side effects	Practical advice
Cough	If your cough was caused by the tumour, it may get better, but cough is often not due to your cancer. You may cough up some mucous or blood after a lung operation. If this continues when you are at home, ask your GP or your nurse specialist for advice.
Numbness	Numbness is common, particularly around the front of the chest, the scar and the drain sites. This may ease with time although some may be permanent. Seek advice from your GP a specific medication will be able to help.
Pain	It is normal to feel occasional shooting or stabbing pains. The nerves and tissues damaged at the time of surgery require time to repair themselves. It is very important to take your pain relief as prescribed. Paracetamol works well if taken regularly (two 500mg tablets four times a day for most adults). Pain due to your surgery should ease with time. If the tablets are not controlling your pain ask your GP or your nurse specialist for advice. When you feel ready to stop your pain tablets reduce them slowly over a period of time.
Weight loss/ change of appetite	It is common to lose some weight after the operation. This is due to the physical demands of going through a major operation, the natural emotional reaction and worry around the time of the surgery. Many patients following the surgery lose or have a change of appetite. Sometimes food tastes different. Try eating small meals that contain more calories than you normally eat. With time your appetite should return to normal and you will return to your normal weight.

“When I was recovering from my operation I made sure that I took regular pain relief – whether I felt I needed it or not. This kept my pain under control, which meant that I could start moving around easily and helped me to get better.”

Lyn

Life after surgery

How long will it take me to recover from my operation?

You are an individual and will recover in your own time so try not to compare your recovery with anyone else's.

At times, you will feel more tired than usual. You may need to adapt some daily activities. Try to remember the three Ps: **Prioritise**, **Plan** ahead and **Pace** yourself.

See Page 37-38 of our *Living with lung cancer booklet* for more information on managing everyday activities.

TOP TIP Ask your GP or lung cancer nurse specialist for advice and support if you are at all concerned.

Will I be able to return to work?

Discuss with your GP or cancer doctor about when you will be fit enough to return to work. It will depend upon how fit you were before the operation, the type of operation you have had, whether the surgery was performed as a keyhole (VATS) or open operation (thoracotomy) and whether you need further treatment, such as chemotherapy. Returning to work may take anything from 1-3 months and will depend on how quickly you recover from the operation. It may also depend on the type of work you do, for example, how physically demanding your job is or whether you have to stand for long periods of time.

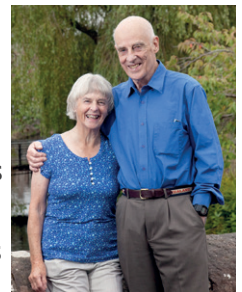
“Everybody recovers at different rates from surgery, but I was out of hospital within a week. It was hard at first and I was terrified but I am now back at work part-time and so glad I went ahead with the surgery.”

Wendy

Life-changing experience

Jim Robinson was diagnosed with lung cancer in January 2012, he had his surgery in the April, followed by 48 hours of pneumonia. That was at Edinburgh Royal Infirmary. Following his surgery, he spent two to three weeks in Blairgowrie Cottage hospital, before he was allowed home. He received 4 weeks of radiotherapy at Ninewells

Hospital in Dundee.



Jim found it all a dramatic and traumatic experience. “Well, I’ve lost half of my right lung, so that means I’ve only got three-quarters of my breathing left.” Jim got involved in a physical activity programme for people affected by cancer after attending a Roy Castle Lung Cancer Foundation support group organised through the respiratory clinic and held in Maggie’s Centre, Ninewells Hospital. The Move More programme at Dundee University was something that Jim jumped at as it was exactly what he wanted to do. He had a personal programme created for him that involved working on the equipment in the fitness centre.

Jim enthuses that the benefits from attending the Move More course have been numerous: “When you’ve suffered a traumatic illness, such as cancer of any kind, it’s very easy to feel down. But one of the great side effects of the fitness regime is that it makes you feel positive. You get better motivation all round, everything seems to work better. Your mind works better, you have more appetite for things. I feel much more alive and much better motivated. And I’ve also lost a stone and a quarter in weight, which is great”.

A little goes a long way. Certainly, Jim’s physical and mental health have improved significantly from becoming more active, which is why he advises other people living with lung cancer to do the same, although under guidance and at their own pace. “I would say, try to be as physically active as you can. Sometimes that might be very limited. Sometimes, if you’re lucky like me, that might be quite extensive. But any amount of activity will do you good. You will not only feel better, but I am advised by many authorities that it actually reduces the chance of recurrence as well”.

Where can I get support after surgery for lung cancer?

Everyone has different needs when it comes to lung cancer support. There are support groups around the UK, which can help you meet other people who have had lung surgery and share experiences. To find your nearest group, visit www.roycastle.org/supportgroups.

Surgery for lung cancer is a topic often talked about on our on-line discussion forum HealthUnlocked. To visit our forum go to www.healthunlocked.com/lungcancer. It is easy to join and you can search for other people’s experiences of life after surgery. There is more information on the help and support available in our *Living with lung cancer* booklet. See page 2 for details on how to get a copy.

How long will it be before I can drive?

Don't drive until you have been reviewed by the doctor and are thought to be fit. You must be able to do an emergency stop without pain before you start driving again. The time taken varies from one person to another. Remember your insurance may be affected if you drive before you are fully fit. Further guidance can be found from the DVLA <https://www.gov.uk/lung-cancer-and-driving>.

When will I be able to fly?

It is recommended, following major surgery such as a lung operation, you may have to allow up to three months before travelling involving flying. Speak to your surgeon about your fitness to fly at your first outpatient appointment after the surgery. It will also depend on the regulations of your airline. Each airline will have its own regulations about flying after surgery, so always check with them. The Civil Aviation Authority (www.caa.co.uk) also give guidelines.

Please remember to let your insurance company know that you have had a chest operation.

Please see our *Travelling, going on holiday and lung cancer* booklet for more information on travelling and lung cancer including travel insurance. Call our free nurse-led helpline on **0800 358 7200** if you have questions or concerns.



Sex and Intimacy

Sexual relations can be resumed when your wounds are healed, when you feel comfortable and when you and your partner are ready. This may take several weeks. Remember your partner may be worried about hurting you. Try taking a passive role until you feel more confident.

You may find your confidence or interest in sex has decreased. Your partner may be anxious about hurting you. For some people close contact, such as kissing and cuddling is important to remind them they are loved.

You will be able to resume your normal sexual contact once your wound has healed. Do what is right for you and your partner when you feel ready.

Questions to ask your surgeon or thoracic nurse

Questions to ask your thoracic surgeon or lung nurse specialist.

Before choosing surgery as a treatment option, you should understand the expected benefits, side-effects, and risks. Ask your thoracic surgeon or lung cancer nurse specialist these questions at your next visit. Learn as much as you can about your treatment, and get an idea of the expected outcome.

1. What type of surgery will I be getting?
2. What is the aim of the surgery?
3. Are there other types of treatment that could be suitable for me instead of surgery?
4. What are the risks and side-effects of the surgery I will be having? How do these side-effects compare with side-effects of other treatments?
5. How long will I have to wait before I get the surgery?
6. Where will I go for the surgery?
7. What can I do to prepare for treatment and reduce the chance of side-effects?
8. Will I need to change my lifestyle in any way?
9. If the surgery isn't successful, are there any other treatments I can get?
10. Are there any clinical trials I would benefit from?

Thoracic surgeon

Name:

Phone number:

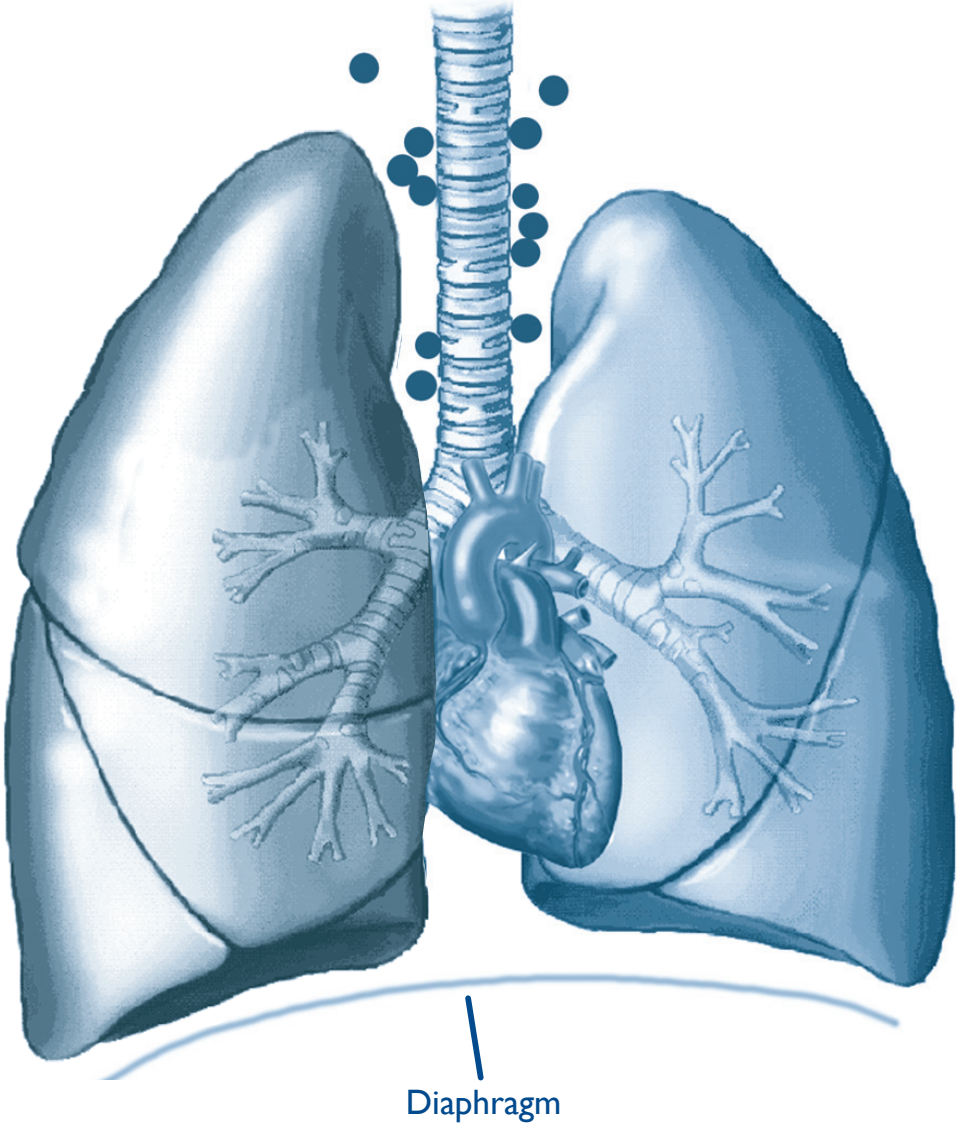
Thoracic nurse specialist

Name:

Phone number:

Your surgery

You might find it useful to ask your surgeon to draw the location of your tumour and the kind of surgery that is planned on the diagram below.



About our lung cancer information

All of our information is written either by our information team or by lung cancer experts. We have a panel of lung cancer experts made up of doctors, nurse specialists and other healthcare professionals involved in the care of people affected by lung cancer. These people help us on a voluntary basis. You can find out about our Expert Panel at www.roycastle.org/expertpanel

Our information is also reviewed by members of our Reader Panel (made up of people who have experience of lung cancer). This ensures that our lung cancer information meets their needs. You can find out about our Reader Panel at www.roycastle.org/readerpanel

This booklet was produced in partnership with National Lung Cancer Forum For Nurses



Our information is accredited by The Information Standard, which makes sure that it is trustworthy, easy to read and reliable. It also must be based on the best clinical evidence that is available.

The information is evidence based and follows national clinical guidelines for the management of lung cancer. You can find references to sources of information within this booklet at www.roycastle.org/evidence

First Edition Published: July 2017

Next Review Date: July 2019

© Roy Castle Lung Cancer Foundation

Registered charity number England and Wales 1046854 - Scotland SC037596

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, including photocopying, recording or otherwise, without the prior permission of Roy Castle Lung Cancer Foundation.

We value your feedback

If you would like to tell us what you think about this information booklet or would like to join our Reader Panel and review our lung cancer information, please e-mail us at info@roycastle.org

Roy Castle Lung Cancer Foundation is the charity that gives help and hope to people affected by lung cancer. The charity has two aims – supporting people living with lung cancer and saving lives.

Supporting people living with lung cancer

Working closely with lung cancer nurses, we provide information, run lung cancer support groups and offer telephone and online support. Our patient grants offer some financial help to people affected by lung cancer.

Saving lives

We fund lung cancer research, campaign for better treatment and care for people who have lung cancer, and raise awareness of the importance of early diagnosis. Our lung cancer prevention work helps people to quit smoking and encourages young people not to start smoking.

Contact us

For more information please call our **Free nurse-led helpline on 0800 358 7200** or visit our website at **www.roycastle.org**

Head Office

Roy Castle Lung Cancer Foundation
Enterprise Way, Liverpool L13 1FB
Email: foundation@roycastle.org

Information and Support Services

Roy Castle Lung Cancer Foundation
98 Holm Street, Glasgow G2 6SY
Email: info@roycastle.org

Expect Better



[Roycastlelungcancer](https://www.facebook.com/Roycastlelungcancer)



[@Roy_Castle_Lung](https://twitter.com/Roy_Castle_Lung)

