Lung Operations

Introduction
We expect you to make a rapid recovery after your operation and to experience no serious problems. However, it is important that you should know about minor problems which are common after this operation, and also about more serious problems which can just occasionally occur. The sections of this booklet headed “What are the risks of a lung operation” describe these, and we would particularly ask you to read them.

BEFORE THE OPERATION

Why do I need a lung operation?
This question should have been answered already by your surgeon. If you are still not sure why you need a lung operation please ask him again. The commonest reason for having a lung operation is to remove something. This may be a lung cancer or even a “shadow on the lung” which might be a lung cancer. Sometimes the only way we can find out what a shadow is caused by is to remove that part of the lung to look at it under a microscope. Other reasons for operations on the lung include mending a leak from the lung (pneumothorax), removing widened air passages (bronchiectasis) or cysts (bullae) or removing the lining of the lung after pneumonia (decortication).

How can I prepare for my operation at home?
If you are a smoker, the most important thing you must do is to stop smoking immediately. Cigarette smoke damages the “cleaning system” in your lungs and stopping smoking immediately before a lung operation reduces the risk of you getting a complication like pneumonia. Taking plenty of exercise is helpful, walking or swimming if you are able to. If you are overweight try to cut down on eating fatty foods.

What happens in hospital before my operation?
You will probably be admitted to hospital the day before your operation. Occasionally patients are admitted a few days earlier if they need more intensive preparation with physiotherapy and antibiotics. You will be admitted to a surgical ward. You will be seen
by several different people before your operation including the nurses from the ward, the surgical trainee, the anaesthetist and the surgeon. The physiotherapist will see you and teach you some breathing and shoulder exercises and show you how to use a simple breathing exerciser (spirometer).

Any of these people will be happy to answer any questions you still have.

YOUR OPERATION

**How much lung will the surgeon remove?**

If your operation involves removing some lung tissue, the amount taken can vary between a small wedge the size of a cheese triangle (a “wedge resection”), through a lobe (1/3 to 1/2 a lung - a “lobectomy”) to a whole lung (a “pneumonectomy”). It is not always possible to tell how much lung will have to be removed, especially for patients who are having a lung cancer removed. Your surgeon should be able to give you some idea of how much lung he hopes to remove; this will be as little as possible to do the job properly.

**What happens to the space where the lung was?**

This depends on how much lung is taken away. For most people, the remaining lung on the operated side quickly expands to fill the space that is left. If a lobe of lung is taken away, your diaphragm on that side will rise up a bit to take up some of the space. If the whole of one lung is taken, the residual space gradually fills up with fluid so that only a small space is left. The left lung expands a bit to take up some of the space.

**Where will the incision be?**

Lung operations are done through a cut which runs in the line of a rib on your back underneath the shoulder blade (a “thoracotomy”). Most of the cut is at the back and side of your chest about half way down. The surgeon will go between the ribs to get to your lung.

**How much pain will I have?**

We will take the utmost care to make sure that you have as little discomfort as possible after your operation. Making you pain free is critical to the success of your operation and to speed up your return home. We use a variety of pain killing drugs in combination with local anaesthetics to prevent discomfort. These may include an
“epidural” or similar tiny catheter with local anesthetic to numb your side for the first few days after your operation. You may be given a button to press to give you a small dose of morphine (PCA) for any breakthrough pains you have.

**What should I expect when I wake up?**

When you wake up after your operation you will be in theatre recovery room. You will have an oxygen mask on at first. You may have some soreness in your back which we will quickly sort out for you. There will be two tubes (“chest drains”) coming from your side to drain any blood or air from around your lung. There will be a drip in your arm. After you are settled we will take a chest X-ray before you go back to the ward.

**AFTER THE OPERATION**

**What will happen during my recovery on the ward?**

The main aim of your care after your operation is to get you moving about quickly and exercising your lungs fully. We will continue to make sure you have minimal pain so that you can do the breathing and shoulder exercises properly.

The tubes coming from your side are usually removed on the first or second day after your operation. (Occasionally they need to stay longer if any air is still leaking from your lung. This is not a serious problem). The drip usually comes out the day after your operation. We will give you some injections under your skin to prevent blood clots in your leg veins (“DVT”) and some regular “inhalers” to help with your breathing.

**How can I help myself to recover quickly?**

If you work with the nurses and physiotherapists you will progress rapidly. You should practise regularly with the breathing exerciser which the physiotherapist will give you. The staff will regularly let you know how you are progressing.

**How long will I be in hospital?**

Most patients having a lung operation go home between 5 and 10 days after their operation.
AFTER GOING HOME

Will I have stitches?
Most patients do not have clips or stitches; we often use a dissolvable stitch buried underneath the skin which does not need to be removed.

What should I do to speed up my recovery?
Continue to do your breathing exercises regularly and use the “spirometer” as the physiotherapist has taught you. Also continue with your shoulder exercises. Walking is the best overall exercise; do as much as you are able, gradually increasing the distance.

You will have a tendency to lean towards your operation side. Try to stand up straight in front of a mirror and use both sides of your body equally. Avoid lifting for six weeks. You will be able to manage light work around the house and garden when you feel able, gradually increasing this as you become stronger and more active.

What will my breathing be like?
This depends on two things; what your breathing is like before your operation and how much lung the surgeon has to remove. The surgeon will have told you what to expect after your operation based on his experience of previous patients. Sometimes it is not possible to predict exactly how your breathing will be, only how you will manage with the lung with which you are left.

Some patients will feel short of breath in the early days after their operation. If this is the case for you, it is likely to improve in the days and weeks to come as your chest gets used to its new sized lungs.

How long will I be taking pain killers?
Most people take pain killers for about six weeks after a lung operation. You will be given suitable pain killers to take home with you which you can take as necessary. About one in twenty people have more prolonged pain which may need special treatment. It will take about three months to feel back to normal.

How long will I be off work?
Most people stay off work for three months after a lung operation. If you are keen to go back to work earlier than this, provided it is only light duties, this may be possible.
When can I drive again?

Many insurance companies demand that patients who have had any major surgery do not drive for 3 months. It may be that you feel ready to drive after six weeks and you no longer have any discomfort; we would suggest that you talk to your insurance company if you want to drive earlier than three months. We strongly advise that you do not drive for the first six weeks.

When will I be seen again?

We will see you in Outpatients at 4-6 weeks after your operation, then at 3 months, then 6 months, then once a year. If you have any worries at any time after your operation, you will be given an outpatient appointment straight away.

RISKS

What are the risks of a lung operation?

There are risks to any surgical treatment, but the greatest care will be taken to keep these as low as possible. The chance of dying as a result of a lung operation is about 2% for removing part of a lung and about 4% for removing a whole lung.

Even with the extensive tests we do before your operation, very occasionally the surgeon finds something inside the chest which prevents him from going ahead with removing the lung. Usually this means that surgery is not the best treatment for you, so alternative treatment is arranged instead after you have recovered.

After operations on the lung there is quite commonly some air leaking out of one of the chest drains. This almost always stops on its own, but until it does stop the drain needs to stay in your side. Occasionally this can last several days. After a whole lung has been removed there is a small risk (3-15%) that the air pipe ("bronchus") to the lung can leak where it has been closed. This usually requires further surgery to repair it.

Another uncommon problem which can occur after removing a lung is that the other lung can get too much fluid in it ("water on the lung") in 2-5% of cases. You will probably be given tablets to help get rid of the water after your operation and some inhaled medicine to help prevent this. It is a problem which more commonly happens after removing a whole lung. If your whole lung is removed you will also be given a tablet to prevent your heart from beating fast which sometimes happens (this is not a serious complication). You will be given some injections to thin the blood slightly to
prevent a small risk of thrombosis in your leg veins. This is standard practice for most operations.

Any major operation carries with it the possibility of bleeding (less than 1% of cases). The surgeon will take the utmost care to avoid this but very rarely patients need to be taken back to the operating theatre if there is any worry about bleeding. Occasionally patients require blood transfusions if they have lost a significant amount of blood during the operation.

**The risks of a general anaesthetic**

General anaesthetics have some risks, which may be increased if you have chronic medical conditions, but in general they are as follows:

- Common temporary side-effects (risk of 1 in 10 to 1 in 100) include bruising or pain in the area of injections, blurred vision and sickness (these can usually be treated and pass off quickly).

- Infrequent complications (risk of 1 in 100 to 1 in 10000) include temporary breathing difficulties, muscle pains, headaches, damage to teeth, lip or tongue, sore throat and temporary difficulty in speaking.

- Extremely rare and serious complications (risk of less than 1 in 10000). These include severe allergic reactions and death, brain damage, kidney and liver failure, lung damage, permanent nerve or blood vessel damage, eye injury, and damage to the voice box. These are very rare and may depend on whether you have other serious medical conditions.

**What should I do if there is a problem?**

If there is an acute problem such as persistent severe pain, bleeding or fever, it is best to contact your own family doctor first. Your doctor may suggest that you see the surgeons at the hospital, and if this is necessary, he/she will make the arrangements.

Should you be unable to get urgent medical help from a General Practitioner, then come to the Emergency Department of the Royal Devon and Exeter Hospital or your nearest district general hospital.

If you attend hospital urgently, you may be looked after by a different surgical team initially. If there is any concern in the longer term, the surgeon responsible for your operation will see you in clinic at the request of your family doctor.
Further complications of major lung surgery

These include:

- Infection of the remnant lung (pneumonia) in about 7% of cases and some patients will experience various degrees of shortness of breath (respiratory failure) for some days after the operation (3-17% of cases).
- Infection of the chest cavity (empyema) after removal of the whole lung occurs in about 1-3% of patients.
- In about 2 out of 10 patients blood clots can be found after major lung surgery in one of the deep leg veins (deep vein thrombosis) which may have an impact on breathing (pulmonary embolism) in about 1-5% of cases.
- An under perfusion of the coronary arteries during or after surgery (myocardial ischaemia) has been reported in up to 4 out of 100 patients.

We will do the utmost to prevent these complications (physiotherapy, prophylactic antibiotics, TED stockings, early mobilisation).
Smoke-free at the RD&E

From September 2006 the RD&E hospitals became totally smoke-free sites. This means that no smoking is allowed in and around any of the RD&E buildings, in parked cars, in our courtyard gardens or anywhere on the hospital sites. This applies to patients, visitors and staff. We are very keen to help people in their efforts to stop smoking, so please see your GP before coming into hospital or talk to your nurse about this.

For information on how to give up smoking, phone the Smoking Advice Service on 0845 1111142. The benefits begin the minute you stop smoking.

For further information on other health topics, please contact the:

Health Information Centre
Royal Devon and Exeter NHS Foundation Trust, Barrack Road, Exeter, Devon EX2 5DW
Tel: 01392 402071

Helping us to help you

- We offer a number of services for people with disabilities.
- We can offer information in large print and Braille.
- We can offer information on audio tape.
- We can offer to interpret information into a language other than English.

For any of the above, please contact the Health Information Centre on 01392 402071

Website address:
www.rdehospital.nhs.uk

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