NHS
University Hospital Southampton
NHS Foundation Trust

Pleurectomy and/or pleural abrasion (VATS or RATS)

Information for patients

We have given you this booklet because you are due to have a pleurectomy and/or pleural abrasion via either a video-assisted thoracoscopic surgery (VATS) or robotic-assisted thoracoscopic surgery (RATS) approach.

This booklet explains what a pleurectomy and a pleural abrasion are, what the procedures involve, and the benefits and risks. We hope it will help to answer some of the questions you may have. If you have any further questions or concerns, please contact us using the details at the end of this booklet.

What is a pleurectomy?

A pleurectomy is a surgical procedure to remove the lining between the lungs and the chest wall (known as the pleura).

What is a pleural abrasion?

A pleural abrasion is a surgical procedure to treat primary spontaneous pneumothorax (a collapsed lung). It involves irritating the lining of the chest wall (pleura) to cause inflammation and scarring to help the lung stick to the chest wall.

There are different ways to carry out these procedures. This booklet will explain the following two approaches in more detail:

- **Video-assisted thoracoscopic surgery (VATS)**
  This is a type of minimally invasive thoracic surgery (also known as 'keyhole' surgery). It allows a surgeon to use only small cuts and a thoracoscope (a special instrument with a small camera attached at the end) for procedures inside the chest and lungs.

- **Robotic-assisted thoracoscopic surgery (RATS)**
  Similar to VATS, RATS is also a type of keyhole surgery. However, instead of the surgeon holding the thoracoscope and surgical instruments, a robotic platform with robotic 'arms' holds and moves them. The robot is controlled by the surgeon sitting at a console in the operating theatre.

Why do I need a pleurectomy and/or pleural abrasion?

A pleurectomy and/or pleural abrasion can help to:

- reduce the risk of a pneumothorax (a collapsed lung) recurring
- reinflate the lung(s)

Your thoracic (chest) surgeon will explain why you need a pleurectomy and/or pleural abrasion and which treatment option is best for you.

Are there any alternatives?

Not everyone who has a pneumothorax will need to have a pleurectomy and/or pleural abrasion. Many people do not need further treatment once their lung has been reinflated. We usually only offer a pleurectomy and/or pleural abrasion after a person has had more than one episode of pneumothorax. Your doctor will discuss alternative treatment options or procedures with you, as appropriate.

What are the benefits of VATS and RATS?

Compared to other surgical approaches, VATS and RATS have many benefits, including:

- a shorter stay in hospital
- less pain and discomfort
- a quicker recovery time
- smaller skin incisions (cuts)
- a quicker return to your normal daily activities

The approach we will use for your procedure will depend on your condition and individual circumstances. Your surgeon will discuss this with you in more detail before your procedure.

What are the risks of a VATS or RATS pleurectomy and/or pleural abrasion?

As with all surgical procedures, there are some possible risks and complications associated with having a VATS or RATS pleurectomy and/or pleural abrasion.

Complications can include:

- damage to teeth
- a chest infection (moving around early on will help to prevent this)
- wound infection (using the antiseptic body wash we have given you can help to prevent this)
- a faster heartbeat (this can be treated with medication)
- a small amount of bleeding into the chest drain
- blood clots (to reduce this risk, we will give you blood-thinning injections, compression stockings to wear and we will also get you moving around as soon as possible after your procedure)
- recurrence of a collapsed lung (this happens in 5 to 10% of people after the procedure)

Occasionally, for technical reasons, the surgeon may not be able to perform the procedure using the VATS or RATS approach. If this is the case, the surgeon will perform an 'open' procedure called a thoracotomy.

To perform a thoracotomy, the surgeon will need to make a larger incision in your chest so that they can gain better access to your chest cavity. Your surgeon will discuss this with you in more detail before your procedure.

How should I prepare for the procedure?

Clinic appointment

Before the procedure, you will have a clinic appointment with your surgeon. During this appointment, your surgeon will explain:

- the type of procedure that you will need
- why a VATS or RATS pleurectomy and/or pleural abrasion is recommended
- what the procedure involves
- the benefits and risks of the procedure
- alternative treatments

Together, you will decide whether you wish to go ahead with the procedure. If you do wish to go ahead with the procedure, we will ask you to sign a consent form either at this appointment or on the day of your procedure.

Pre-assessment appointment

If you decide to have the procedure, you will need to come to hospital for a pre-assessment appointment.

During the pre-assessment appointment, we will:

- perform blood tests
- perform an electrocardiogram (a heart tracing test)
- take a full set of observations to check your blood pressure, pulse, oxygen levels, temperature and breathing rate
- measure your height and weight
- take swabs from your nose and groin to check for MRSA (a bacteria that usually lives harmlessly on the skin but can cause a serious infection if it gets inside the body)

We will also:

- explain the procedure to you and answer any questions you may have
- advise when to stop eating and drinking before your procedure
- advise if you need to temporarily stop taking any medications before your procedure
- give you an antiseptic skin wash solution to use and explain how to use it (you will need to wash your whole body and hair before your procedure in this solution to help prevent infections occurring after your procedure)

There is a slight risk that your teeth may be damaged during the procedure. To help reduce this risk, please let us know at this pre-assessment appointment if you have dentures, loose teeth or crowns.

General anaesthetic

The procedure will be performed under general anaesthetic (medication that sends you to sleep) so you will not feel anything. To ensure you are well enough for a general anaesthetic, an anaesthetist (a specialist doctor) will visit you before your procedure to ask you some questions about your medical history and your general health and lifestyle. This may be at your pre-assessment appointment or on the day of your procedure.

Smoking

We recommend stopping smoking before and after your procedure. You should also avoid smoky environments. This will help to reduce your risk of developing a chest infection and will also help to keep your oxygen levels steady after the procedure. We can provide you with nicotine patches after your procedure, if necessary. We can also give you details of services that can help you to stop smoking.

What will happen on the day of the procedure?

When you arrive for your procedure (please see your appointment letter for where you need to go), we will ask you to change into a hospital gown. We will also give you compression stockings to wear (these will help to prevent blood clots, also known as deep vein thrombosis or DVT, from developing in your legs).

The anaesthetist will then visit you (unless they spoke to you at your pre-assessment appointment).

We will explain the procedure to you again and answer any questions you may have. If you are happy to go ahead with the procedure, we will then ask you to sign a consent form (if not already done at your clinic appointment).

Before your procedure, we will use a marker pen to mark the side of your body that we are going to operate on. Please let a member of staff know if this mark comes off before your procedure.

We will give you two name bands to wear. These let staff know your:

- name
- date of birth
- hospital number

If you have any allergies, we will also give you a red band to wear. Please let a member of staff know if you lose your name band or red band, or if any of the information on either band is incorrect.

Before going to the operating theatre, we will complete a checklist with you (this will be repeated several times when you go to theatre). We will then take you to a room where the anaesthetist will give you a general anaesthetic. This will usually be given as an injection through a cannula (a thin tube) inserted into a vein in the back of your hand or arm. Rarely, it may be given as a gas through a face mask. The anaesthetist will decide which option is most appropriate for you and will discuss this with you.

What will happen during the procedure?

Once the anaesthetic has taken effect and you are asleep, we will move you to our operating theatre.

We will position you slightly on your side, with your arm above your head. This is so that we can gain access to the side of your chest. We will then clean the area of your chest that we are going to operate on with some antiseptic solution.

The surgeon will then make two to three small cuts (each about 2 to 4cm long) on your chest. One cut will be for a thoracoscope (telescope) to look around inside your chest and the other two cuts will be for the instruments to perform the procedure.

If you are having a pleurectomy, the surgeon will remove the lining of your chest wall (pleura) and any blister-like areas (bullae) they find.

If you are having a pleural abrasion, the surgeon will irritate (rub) the pleura to help your lung stick to your chest wall.

If you have had recurrent episodes of spontaneous pneumothorax (collapsed lung), the surgeon may also perform another procedure called **pleurodesis**. This procedure involves placing a mildly irritating medication, often a sterile talc powder, into the space between your lungs and your chest wall to help your lung stick to your chest wall.

Your surgeon will discuss all the possible procedures with you in more detail before your procedure.

Once the procedure is complete, the surgeon will close the wound sites with dissolvable stitches (stitches that do not need to be removed).

The surgeon will also insert a tube into your chest (known as a chest drain) to drain any excess air and fluid after the procedure. Please see the 'Chest drain' section on page 10 for more information about this.

We will place dressings over your wounds after the procedure.

How long will it take?

The procedure will usually take around one hour.

What will happen after the procedure?

After the procedure, we will take you to our recovery room where you will gradually wake up from the general anaesthetic. You will stay in the recovery room until you are more awake and stable (this usually takes between one and two hours). During this time, we will monitor you regularly to check that you are recovering well and your pain is controlled.

You may need to have oxygen for the first few hours after your procedure. If this is the case, we will give this to you through a face mask or nasal tubes.

We will then transfer you to E4 ward, where we will continue to monitor you.

You should expect to stay on the ward for two to three days after your procedure. We will advise you when it is safe for you to go home.

Side effects
After the procedure, it is common to experience some of the following side effects:
- tiredness
- a sore throat for a few days (we will send you home with pain relief medication to help ease this)
- a cough which brings up a small amount of blood (this should stop after a few days)
- low blood pressure (this will usually improve as you drink more fluids)
- a painful shoulder (this should improve with pain relief medication and movement)
- numbness, tingling and pins and needles around your wounds and at the front of your chest (this is normal and will usually improve as your wounds heal)
- a bulge at the lower part of the front of your chest and upper stomach area (this is normal and is due to loss of muscle tone from the procedure)

Pain
After your procedure, we will inject some local anaesthetic around your wounds to numb the area. We will also give you some additional pain relief medication to help ease any pain. This may be in the form of tablets or liquid that you take by mouth, or we may give you the medication via your cannula.

We will monitor your pain levels and amend your pain relief medication as needed.

Chest drain
We will monitor your chest drain and decide when it is safe to remove it (this will depend on what it has drained). After we have removed the chest drain, we will close the wound with one to three stitches. **These stitches are not dissolvable and will need to be removed seven to ten days later.** We will give you a letter telling you how to arrange this with a nurse at your GP surgery.

Eating and drinking
You can eat and drink as usual after the procedure. However, you may find that you have a reduced appetite. This is normal.

Movement
We will help you to get up and walk around as soon as possible after the procedure.

Moving after the procedure will help to:
- improve your blood circulation
- expand your lungs
- prevent chest infections

We will support you in doing this until you are confident moving around the ward on your own.

To help prevent blood clots, we will give you blood-thinning injections each day you are in the hospital. You will also need to wear compression stockings. If you need any help with moving or deep breathing, speak to a nurse who will contact a physiotherapist for support.

What should I expect when I go home?
When you are ready to go home, we will go through your discharge summary with you and give you aftercare instructions and advice.

We will return any medication you brought into hospital to you (unless it has been stopped by your doctors during your hospital stay). We will also give you a supply of medication. This will include:
- any of your own supply that has run out
- any new tablets that we have started you on (for example, pain relief medication or medication for your bowels)

All medication will be labelled with instructions on how and when to take it. Please make sure you understand these instructions before you go home.

You will need to arrange for someone to pick you up from the hospital when you are ready to go home as you will not be able to drive yourself home.

Pain relief medication

You should take pain relief medication regularly. Most people will need to take some form of pain relief medication for two to four weeks after the procedure. Your general practitioner (GP) will be able to prescribe you more pain relief medication if you need it. Please make sure you do not exceed the maximum dose of pain relief medication.

Once your pain starts to improve, you can gradually reduce how much pain relief medication you take.

Rest and activities

It is normal to feel tired for the first week or more after you arrive home. It is important that you rest during the day and you should try to go to bed at the same time each night.

We recommend having someone at home with you for the first few days, if possible, to help with heavier housework, such as vacuuming or loading the washing machine.

Gradually increasing your level of activity each day is important to helping you get back to your normal.

Wound care and dressings

It is normal to have some numbness, tingling and pins and needles around your wounds and at the front of your chest.

There may also be a slight bulge at the lower part of the front of your chest and upper stomach area. This is normal and is due to loss of muscle tone from the procedure. This will settle over time, but it can take several weeks. In rare cases, you may be left with a permanently numb area or slight bulge.

All dressings are usually removed before you go home. However, you may go home with light dressings over your wounds. If this is the case, you can remove these dressings 48 hours after your chest drain has been removed. The wounds should then be left exposed if clean and dry.

Your wounds will normally take two to four weeks to heal.

Contact the thoracic nurse specialist, the ward you were being cared for on or your GP if:

- you are worried about how your wounds are healing
- your wounds become more painful, red, inflamed or start to ooze

Washing

When you shower or bathe, you should:

- use warm water
- make sure there is someone nearby in case you need help
- take care when washing around the wounds
- pat the wound areas dry carefully with a clean towel

You should **not**:

- use very hot water (this may make you feel faint)
- soak the wounds in the water
- put lotions or powder on your wounds until they are fully healed

Driving

You will be able to resume driving once you have stopped taking strong pain relief medication and are comfortably able to sit in a car and perform all the manoeuvres safely (for most people, this is usually two to three weeks after the procedure).

If you find driving difficult because of pain or restrictions in your mobility, you should rest for a few days before trying again.

Returning to work
Most people will need to take approximately two to three weeks off work after their procedure. However, if your job is very physical (for example, a gardener or labourer), you may need to take a longer time off work.

You will be able to self-certify as sick for seven days. After that, your employer may want to see a medical certificate. Please ask us for a medical certificate (sick note) before you leave hospital. If you need an extended medical certificate, you can speak to your GP.

Will I receive any follow-up care?
Most people will not usually need a follow-up appointment with the surgeon after this procedure. However, you can contact the thoracic nurse specialists if you have any concerns or wish to have a follow-up appointment. The thoracic nurse specialists will be able to discuss your procedure and your recovery with you.

Contact us
If you have any questions or concerns, please contact us.

Thoracic nurse specialist
Telephone: **023 8120 8457** (Monday to Friday, 8am to 4pm, Saturday, 8am to 1pm)

Outside of these hours, contact:

E4 ward
Telephone: **023 8120 6498** (24-hour line)

Useful links
www.nlm.nih.gov/medlineplus/ency/article/000087.htm

www.blf.org.uk/support-for-you/pneumothorax

Notes

If you are a patient at one of our hospitals and need this document translated, or in another format such as easy read, large print, Braille or audio, please telephone **0800 484 0135** or email **patientsupporthub@uhs.nhs.uk**

For help preparing for your visit, arranging an interpreter or accessing the hospital, please visit **www.uhs.nhs.uk/additionalsupport**

www.uhs.nhs.uk

Version 1. Published August 2025. Due for review August 2028. 3206