

Oxford Centre for Respiratory Medicine

Chest drain/tube insertion

Information for patients



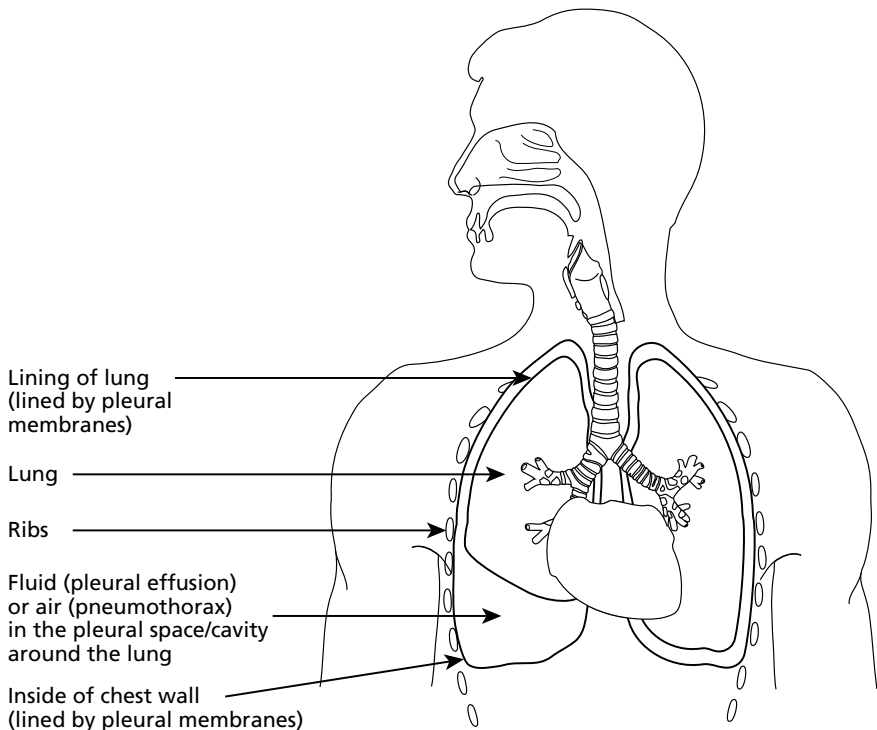
Provisional appointment date and time.....

What is a chest drain?

A chest drain is a small tube which is inserted through the skin and lies between the lung and the inside of the chest wall (the pleural space).

Why do I need a chest drain?

We have recommended that you have a chest drain because fluid or air, which should not be there, has collected in your pleural space. This is called a pleural effusion (collection of fluid) or pneumothorax (collection of air). Either of these can cause problems with breathing and can stop your lungs from working properly.



The chest drain will allow this fluid or air to leave your body. You may also need to have medicines injected into the pleural space, and the chest drain will allow us to do this more easily. Your doctors and nurses will be able to explain whether air or fluid (or both) is the problem in your case, and why it needs treating with a chest drain.

How does a chest drain work?

Once the chest drain has been inserted, it will be connected to a bottle which contains sterile water. The air or fluid in your chest then travels down the tube, into the bottle. The water acts as a seal, preventing air or fluid from coming back up the tube and into your chest.

How should I prepare for my chest drain?

If you are an outpatient (so not currently in hospital), please make sure we have your correct telephone number. We will contact you by telephone a few days before your procedure to confirm that you are still able to come. If we are unable to reach you, your appointment will be given to someone else who is waiting for this procedure.

Please let us know if you may be pregnant, as this may affect the medications we use for the procedure.

On the day of your chest drain, before your procedure, we will need details of **all** your medications (including any over the counter remedies), allergies and any other medical conditions.

It is important to let us know in advance if you take blood thinning medications, as we will need you to temporarily stop taking these before your procedure. You should take all your other medications as usual on the morning of the procedure.

The following tables explain what to do with your medications. Please contact us if you are not sure what to do.

Blood thinning medications

Medication	Instructions
Warfarin	Usually stopped 5 full days before the procedure. You will need an 'INR' blood test 1-2 days before your procedure to make sure your 'INR' is below 1.5, otherwise we will need to cancel the procedure.
Aspirin	Do not take on the morning of the procedure.
Clopidogrel (Plavix) Dipyridamole (Persantin) Ticagrelor (Brilique)	Usually stopped 7 full days before the procedure.
Apixaban (Eliquis) Dabigatran (Pradaxa) Rivaroxaban (Xarelto)	Usually stopped 2 full days before the procedure.
Dalteparin (Fragmin) injections	Usually stopped 1 full day before the procedure.

All other medications

Medication	Instructions
All other medications (including those for high blood pressure)	Please take as normal.

Please bring enough belongings for a five night stay in hospital. Please also bring all of your medications with you when you come for the procedure. You should also bring any glasses that you need for reading. Please do not wear jewellery or nail varnish or bring in any valuables.

What will happen on the day?

If you are not already an inpatient, please come to the reception desk in Theatre Direct Admissions, on Level 1 of the John Radcliffe Hospital, at the time you have been given.

When you arrive, a nurse will greet you and take your blood pressure, heart rate and temperature. They will also ask you questions about your medical history, medications and any allergies you might have.

The nurse or doctor will insert a cannula (tiny plastic tube) into a vein in your hand or arm, in case we need to give you medication during the procedure.

The procedure will be explained to you again and you will have the opportunity to ask any questions you might have. You will then be asked to sign a consent form to confirm you are happy for the procedure to go ahead. The nurses will then ask you to change into a hospital gown.

How will the chest drain be put in?

Chest drains are inserted while you are in either a procedure room or on the ward. You will be asked to either sit or lie in a comfortable position by your doctor. Your blood pressure, oxygen level and heart rate will be monitored using a cuff on your arm and a sensor on your finger. The doctor will usually do an ultrasound scan to find where best to place the drain. This involves putting gel onto your chest and using a hand-held device to roll over your skin. The ultrasound uses sound waves to create an image on a screen. It is not painful.

The drain is usually put into the side of your chest, below your armpit, as this will be more comfortable and means you can sleep on your back.

Once you are resting comfortably, the skin over the area where the drain will be placed will be cleaned with an alcohol based liquid, containing cleaner, to kill any bacteria. This fluid often feels cold. A local anaesthetic will then be injected into your skin, to numb the place where the chest drain will go. This may sting to begin with, but the pain will disappear quickly.

Your doctor will then make a small cut in the numb area of your skin and gently open a path for the chest drain. This should not be painful, although you may feel some pressure or tugging. The chest drain will then be gently eased into your chest. The tube will be attached to a bottle, which will be placed on the floor.

Can anything go wrong?

Insertion of a chest drain is generally a very safe procedure, with serious complications being rare. However, like all medical procedures, chest drains can cause some problems, all of which can be treated.

- Chest drains sometimes fall out and need to be replaced. Your doctor will use a firm dressing or a stitch to try and stop this from happening. You can help reduce the chance of this occurring by being very careful not to pull on your chest drain, or allow it to get tangled around your bed, etc. If you are concerned the chest drain is in danger of falling out, you should tell your nurse immediately.
- Some people get pain from their chest drain, but this is usually mild. You must tell your doctors and nurses if you start to feel any pain. They will give you painkilling medication to control this. After you are discharged from hospital, your chest is likely to remain sore for some time. We can also give you painkillers to control this. You may experience occasional sharp 'scar pains', which can affect your chest for some

months afterwards. These are usually very brief and not severe. They do not mean that anything has gone wrong with the procedure.

- Sometimes chest drains can become infected, but this is uncommon (affecting about one in 100 people). Your doctor will thoroughly clean the area before putting in the chest drain, to try and prevent this. Tell your doctor if you feel feverish (shivery or cold) or notice any increasing pain or redness around the chest drain.
- Sometimes air can collect under the skin, next to the chest drain. This can cause mild swelling or a 'crackly' feeling in this area. It is not usually a major problem, but may need treatment if it becomes worse. If you are concerned about the appearance of your skin near your chest drain site, please tell your doctor. If you have been discharged, either contact us or your GP.
- Very rarely, during its insertion, the chest drain may accidentally damage a blood vessel and cause serious bleeding. This only affects about 1 in 500 people. Unfortunately, if it does happen it can be a serious problem which requires an operation to stop the bleeding. Very, very, rarely such bleeding can be fatal. Your doctors and nurses will do everything they can to avoid this problem.

Will it be unpleasant?

Local anaesthetic is injected into your skin before the drain is put in, so that you do not feel the drain being inserted. We can also give you further painkilling medication to control any pain you might feel after the procedure.

What happens after the chest drain is inserted?

The chest drain insertion usually takes between 30 and 45 minutes. Afterwards, you will have a chest X-ray to confirm the location of your chest drain. Your drain will be connected to a bottle. As the fluid or air around your lung drains off, you should be able to breathe more easily.

You may feel some discomfort from the chest drain, but your nurse will give you painkillers to help with this. If your chest becomes increasingly painful or you feel any increased shortness of breath, please tell your nurse immediately.

If needed, we may attach your drainage bottle to some gentle suction, to help the drainage. You may feel a little bit more discomfort from this but you can have more painkillers if you need them.

Your nurse will regularly record your temperature, pulse, blood pressure and breathing. They will also check your oxygen levels, the site of your chest drain and the how well your chest drain is working.

Looking after your chest drain

Your doctors and nurses will look after your chest drain. However, there are a few simple rules that you can follow to minimise any problems, particularly the risk of your chest drain being pulled out:

- If you need to move around, always keep the drainage bottle below your waist. This will prevent fluid from going the wrong way and back into your chest.
- If your chest drain is attached to suction, you will need to stay close to your bed (as the suction tube will limit your movement).
- Keep the drainage bottle on the floor when you are not moving around.
- Do not swing the bottle by the tube.
- Take care not to knock the bottle over.
- If you feel your drain may have moved or may be coming out, please tell your nurse.

When is the drain taken out?

Your doctors will discuss with you how long the drain needs to stay in. This may be from between one day to one to two weeks, depending on how well you are responding to treatment. You may need to have several chest X-rays during this time to see how much fluid or air remains.

Removing the drain is straightforward and will be done by your nurse. Once all the dressings have been removed, the nurse removing the chest drain will encourage you to take a couple of deep breaths. They will then ask you to hold your breath, and while you are doing this, will gently pull the tube out. This can feel uncomfortable but only lasts a few seconds.

If you had a stitch to hold the drain in place, this will be pulled tight by the nurse to close the wound. Sometimes, for small chest drains, no stitch is required and the wound will naturally close. A dry dressing will be placed over the wound. A chest X-ray may be taken to confirm that your lung remains re-expanded.

If you have any stitches, these should be kept dry for five days. They will need to be removed by your GP's nurse after seven days.

If your chest remains uncomfortable after the drain has been taken out, you can take simple painkillers to ease the pain (such as paracetamol or ibuprofen). If you develop any other worsening symptoms, such as increasing pain, difficulty breathing or a temperature, you should tell the doctors and nurses about this, so they can check whether there is a problem. If you have any of these symptoms when you return home, you should either see your GP or come to your local Emergency Department.

How to contact us

If you have any questions or concerns, please contact:

Theatre Direct Admissions

Tel: **01865 221 050** or **01865 221 055**

(Monday to Friday, 8.00am to 4.00pm)

Outside these hours please call the Hospital switchboard:

Tel: **01865 741 166**

Ask for either the On-call Respiratory doctor or the Chest Ward.

If you are not staying in hospital as an inpatient, when you are ready to be discharged, you can be collected from the:

Transfer Lounge (Level 2, John Radcliffe Hospital)

Tel: **01865 222 848**

If you have a specific requirement, need an interpreter, a document in Easy Read, another language, large print, Braille or audio version, please call **01865 221 473** or email **PALSJR@ouh.nhs.uk**

Dr John Wrightson, Consultant in Respiratory Medicine
October 2015
Review: October 2018
Oxford University Hospitals NHS Foundation Trust
Oxford OX3 9DU
www.ouh.nhs.uk/information

