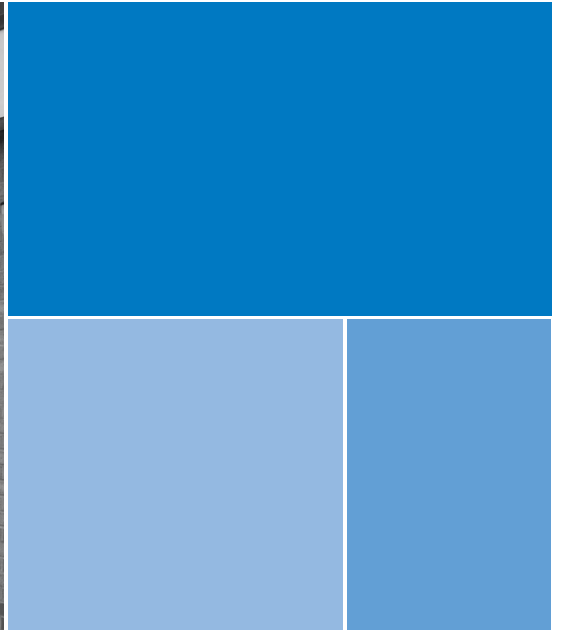


Insertion of a Chest Drain



[Patient Information](#)

Introduction

Your doctor has advised you to have a chest drain for one of the following reasons:

- You have a collection of air (pneumothorax) between the lung and the chest known as the “pleural space”.
- You have a collection of fluid (pleural effusion) inside the pleural space.
- You have a collection of pus (empyema) inside in the pleural space.

Any of these can cause problems with your breathing and can stop the lungs from working properly. The chest drain will allow the fluid or air to leave the body and allow your lungs to re-expand which will improve your breathing.

What is a chest drain?

A chest drain is a sterile, narrow tube that is inserted and sits in the space between the lung and the chest wall. This space is lined on both sides by a membrane called the pleura and is known as the pleural cavity or pleural space.

The external end of the chest drain tube is attached to a bottle containing water which acts as a seal to prevent air from leaking back into the pleural space.

Before the procedure

Your doctor will explain the procedure and where he is going to place the drain. You will be asked to sign a consent form to enable the procedure to take place and a chest x-ray will be performed.

- You may eat or drink prior to the procedure being carried out.
- You should still take your usual medicines however you may be advised to stop taking some blood thinning drugs before the procedure.

- You will be given a gown to wear.
- You may keep your dentures and hearing aids in.
- You will not need a general anaesthetic but will require analgesia (pain relief) prior to the procedure being performed.

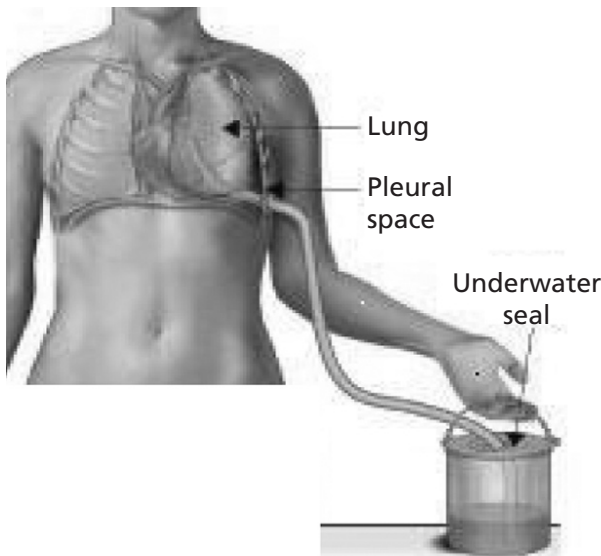
The procedure itself

The insertion of the chest drain takes between 20 to 40 minutes and takes place in the Central Treatment Suite or on the ward.

The doctor may use an ultrasound machine to help find the best place to insert the drain. Ultrasound, is a painless procedure. A gel is applied to the skin and then the ultrasound tip is moved around the skin which allows the doctor to “see” through the chest wall.

Then the area of your chest wall where the tube is going to be inserted will be injected with a local anaesthetic. This may sting a little at first but then numbs the area so that the procedure is more comfortable.

A small cut will be made in the side of your chest for the drain to be inserted and allow any fluid or air inside to come out.



Some specimens of fluid from inside the chest may be sent for analysis.

The external end of the chest drain is attached to a bottle with water in it, which is hooked to the side of the bed. The chest drain is stitched to the skin so that it does not fall out and is covered with a dressing.

After the procedure

You will have another chest x-ray taken to ensure that the chest drain is in the correct place.

If the procedure has taken place in the Central Treatment Suite, you will then be taken back to your ward and made as comfortable as possible. You may drink and eat after the procedure if you feel able to.

Your nurse will monitor and record your temperature, pulse, blood pressure, and breathing. They will also monitor your chest drain output.

Suction

Occasionally a lung needs some help to re-expand. Therefore the doctor may request that the drain is attached to suction for a period of time. Suction helps the fluid to be drawn from the chest cavity into the bottle. If this is required the chest drain is connected to a suction unit on the wall using another piece of tubing and then gentle suction applied.

What are the risks with having a chest drain inserted?

This procedure is generally very safe. However, as with any procedure, there are some recognised complications that you should know about.

The most common problem is the tube becoming dislodged, falling out or becoming blocked and needing to be replaced. The tube is stitched in place and so you must be careful when moving or walking that you always carry the bottle carefully. By adhering to the suggestions below, you can reduce the likelihood of this occurring.

A few simple rules to look after your chest drain

- Keep the drainage bottle on the side of the bed, below the level of your chest. If you are walking around remember to take the chest drain bottle with you. Always carry the bottle below the level of your waist. If you lift the bottle above the fluid level in the tube, it may flow back into your chest.
- Do not leave the ward environment.
- Do not swing the bottle by the tube.
- Do not pull on your chest drain or tangle it around your bed.
- Take care not to knock the bottle over. The water in the bottle acts as a seal to prevent air from leaking back up the drain.
- If the drain is on suction to encourage the lung to re-expand you must stay close to your bed, as the suction tubing will limit your movement.
- If you feel your tube may have moved or be coming out tell your nurse.

Pain

All patients experience some pain, but this is rarely severe. The local anaesthetic stings briefly and the chest tube can be uncomfortable. You will be given painkillers to control this. If you experience pain or discomfort in your chest after the procedure you must inform the nursing staff or doctor so that they can give you some painkillers and review the site of the drain insertion.

In some patients, talc may be injected into the chest to help stop the abnormal collections of fluid or air from occurring. This can cause some pain over 24 hours after the procedure, but will be treated with painkillers.

After discharge the chest wall will often remain sore for sometime, but painkillers will help with this.

For a few patients occasional sharp 'scar pains' can affect the chest for some months afterwards. These are usually very brief and not severe and do not suggest that anything has gone wrong.

Infection

Any tube when placed in the body carries a risk of introducing infection. This can happen with a chest drain but is rare. About 1 patient in every 50 who have a chest drain inserted suffers an infection at the site of the chest tube. If you experience increasing pain or notice a red area on your chest or feel unwell then you need to inform the nursing staff or doctor so that they can review the site. If this occurs it can usually be treated with antibiotics, but it may require a longer stay in hospital. There is also a small risk of introducing an infection into the chest itself is about 1 in 500 and very rarely such infections can be serious and require an operation (British Thoracic Society guidelines).

Subcutaneous emphysema – air in the soft tissues

Occasionally, if the tube has been inserted because you have air in the lining of your lung (pneumothorax or collapsed lung), some of the air can escape into the tissues under your skin in the chest, neck or face areas. This will not cause any problems to your health and will disappear when the air in your lung lining has been treated.

Bleeding

Bleeding can occur during chest drain insertion but this is not common and is usually effectively treated at the time of the procedure.

There is a risk that the tube could penetrate a blood vessel or other organ such as the liver, spleen, lung or heart. However this is very rare.

About one or two patients in 1,000 may develop significant bleeding during a chest drain insertion. If this does happen, it might require an operation (British Thoracic Society guidelines).

Deaths from chest drain insertion have been reported but are extremely rare.

The drain will usually be removed within 48-72 hours, although it may need to stay in longer depending on how well you respond to treatment. A chest x-ray will help decide when the chest drain can be removed.

Intercostal neuralgia – pain in the rib cage

This is a rare pain condition involving the intercostal nerves that supply the muscles between the ribs. The pain is often irregular and the intensity will vary from patient to patient. You may have tingling, itchiness or numbness and people can experience pain when laughing, breathing or coughing.

Intercostal neuralgia can develop if trauma or inflammation to the neurovascular nerves, muscles, cartilage or ligaments in the rib cage occurs. It can resolve on its own or may require specialist treatment.

Coughing

Coughing can occur when large amounts of fluid are removed from the chest. If you have a large amount of fluid to be drained this will be undertaken in a controlled way to prevent pulmonary oedema (rapid expansion of the lung) from occurring. If you start to cough the nurse or doctor may stop or slow the fluid from draining.

Chest drain removal

Removing the drain is a simple procedure and can be undertaken by a doctor or a nurse. Once any dressings to the site have been removed, the stitch holding the drain in place is cut and the drain is gently pulled out. The nurse or doctor will ask you to breathe in a particular way while the drain is being removed. This may feel a little uncomfortable but will only last a few minutes.

After the drain has been removed a dressing will be applied to the site. In some cases a stitch may be left where the drain was inserted to help close the hole where the tube has been. If a stitch has been left in place, this can be removed in five to seven days either at the hospital or by the community nurse if you are going home.

How long will I be in hospital?

This will vary. Most people should be able to go home within two to five days but you may need to stay longer.

Are there any alternatives to a chest drain?

There may be an alternative. It is sometimes possible to perform a procedure called an "aspiration" to remove air or fluid from the chest. This involves the use of a local anaesthetic and a needle or plastic catheter to withdraw the air or fluid.

However this procedure has a disadvantage as it may need to be repeated several times if there is ongoing air leak in the lung.

What happens if I decide not to have a chest drain or pleural aspiration?

If you have a serious air leak, you may become more breathless and you may lose consciousness if the air leak is not released. Insertion of a chest drain in this situation can be life-saving. If you have fluid on your lung (pleural effusion), your breathlessness will not improve until it is drained and it may become worse.

The doctor looking after you would be pleased to discuss the alternatives with you if you wish.

How to contact us / further information

If you would like any further information about this procedure, or if any problems arise after your procedure, you may telephone either:

Central Treatment Suite 01493 452299

Respiratory Secretary 01493 453371

Notes





James Paget University Hospitals **NHS**

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Courtesy and respect

- A welcoming and positive attitude
 - Polite, friendly and interested in people
 - Value and respect people as individuals
- So people feel **welcome**

Attentively kind and helpful

- Look out for dignity, privacy & humanity
 - Attentive, responsive & take time to help
 - Visible presence of staff to provide care
- So people feel **cared for**

Responsive communication

- Listen to people & answer their questions
 - Keep people clearly informed
 - Involve people
- So people feel **in control**

Effective and professional

- Safe, knowledgeable and reassuring
 - Effective care / services from joined up teams
 - Organised and timely, looking to improve
- So people feel **safe**



The hospital is able to arrange for an interpreter to assist you in communicating effectively with staff during your stay **communication for all** through INTRAN.

If you need an interpreter or a person to sign, please let us know.

If you require a large print version of this booklet, please contact PALS on
01493 453240

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