

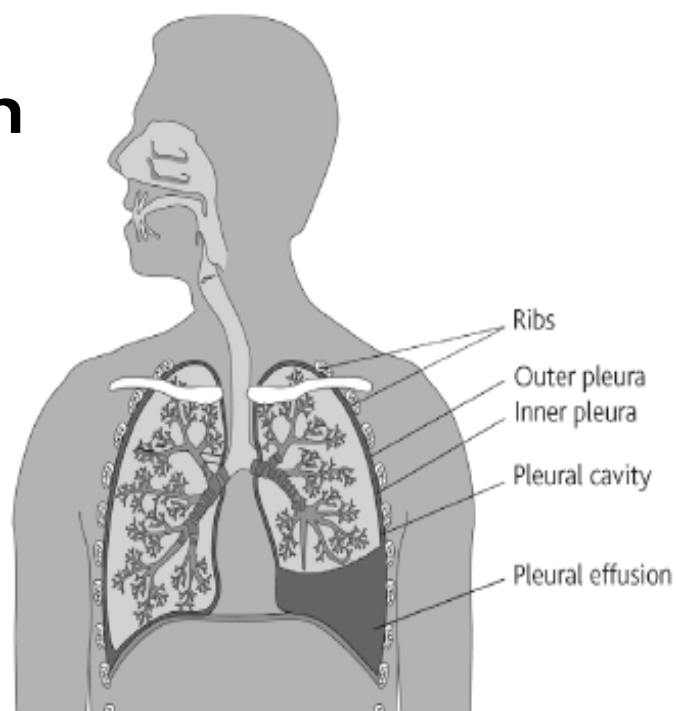
## Department of Respiratory Medicine

# Chest Drain Insertion

## Information for patients

### What is Chest Drain?

A chest drain is a 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.



A chest drain is inserted when air, fluid or pus has collected in the 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.

### What is a chest drain for?

You need a chest drain if you have an air leak (pneumothorax), a collection of fluid (pleural effusion) or a collection of pus (empyema) in the pleural space. Any of these can cause problems with 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.

### How does a chest drain work?

Once a chest drain is inserted it is connected to a bottle which contains water. The fluid or air then travels down the tube, into the bottle with the water acting as a seal preventing air or fluid coming back up the tube into your chest.

## How will the chest drain be put in?

About half an hour before the procedure you will be given painkillers to help make the procedure more comfortable.

You will either sit with your head and arms resting on a pillow on a table or lie on your bed with your arm above your head. The drain is usually put into the side of your chest below the armpit



The procedure is performed using an aseptic technique to minimise the risk of infection. Your skin is cleaned with an alcohol cleaner to kill any bacteria and a local anaesthetic is then injected to numb the area where the tube is to be inserted, this can 'sting' temporarily but resolves quickly. A small cut is then made in the anaesthetised area and the doctor gently opens up a path for the chest drain. It is normal to feel a sensation of pressure and tugging as the drain is gently eased into the chest.

The chest drain is held in place with stitches and the exit site is covered with gauze and a waterproof dressing. The end of the tubing is connected to a drainage bottle which acts as the underwater seal and collection chamber.

Your chest drain will be monitored regularly. You may be asked to cough, or take a deep breath. This enables the nurse to ensure the drain is still functioning. You will be given regular pain relief while the drain is in place. Pain may inhibit your movement and breathing which may prolong the time your lung takes to expand therefore it is important to report any pain and keep it under control.

## Suction

Occasionally a lung needs some help to re-expand. If so the drainage bottle can be connected to a suction unit on the wall using a long piece of tubing. The gentle suction provided will help the lung re-expand.

## Will it be painful?

Local anaesthetic is injected into the skin before the drain is put in so that you do not feel the drain going in and pain killing medication is given to control any pain.

## Looking after your chest drain

As the fluid or air around the lung drains you should be able to move more easily. There are a few simple rules that you can follow to minimise any problems:

- You can move and walk around with a chest drain but you must remember to carry the drainage bottle with you. Always carry the bottle below the level of your waist. If it is lifted above your waist level fluid from the bottle may flow back into the pleural space.
- If the drainage is on suction to encourage lung re-expansion it will be necessary to remain close to your bed as the suction tube will limit your movement.
- Whilst in bed keep the drainage bottle on the floor.

- Do not pull on your chest drain or tangle it around your bed.
- Do not swing the bottle by the tube.
- Do not leave the ward.
- Try not to knock the bottle over.
- If your chest is painful tell your nurse.
- If you feel your tube may have moved or may be coming out tell your nurse.
- Inform your nurse if you feel any increased shortness of breath.

## When is the drain taken out?

The chest drain will stay in between one day to many days depending on how well you respond to treatment during which time you may have several chest x-rays.

Removing the drain is a simple procedure. Once all the dressings are removed the drain is gently pulled out. The doctor or nurse may ask you to breath in a particular way while the drain is removed. This can feel a little uncomfortable but only lasts a few seconds.

After drain removal a stitch is often left where the drain has been which will be removed after five to seven days.

If you experience discomfort after the drain has been taken out you can take simple painkillers. If you develop any other worsening symptoms (lots of pain, difficulty breathing or a temperature) you must tell the doctors and nurses.

## Are there any risks with chest drains?

In most cases the insertion of a chest drain is a routine and safe procedure and most people find breathing is much easier once the chest drain is in place. However, like all medical procedures, chest drains can cause some problems.

## Chest drains sometimes fall out and need to be replaced.

The drain may be stitched in place and is always covered with a firm dressing to help to prevent this. You can reduce the likelihood of this happening by adhering to the suggestions above ('Looking after your chest drain').

## Pain

Most people experience some discomfort from their chest drain but painkilling medication should control this.

## Infection

Sometimes chest drains can become infected but this is uncommon (about 1 in 50 patients). Thorough cleaning of the skin before putting in the chest drain and a good aseptic technique will help to prevent this. If you feel feverish or notice any increase in pain or redness around the chest drain inform your nurse or doctor.

## Bleeding

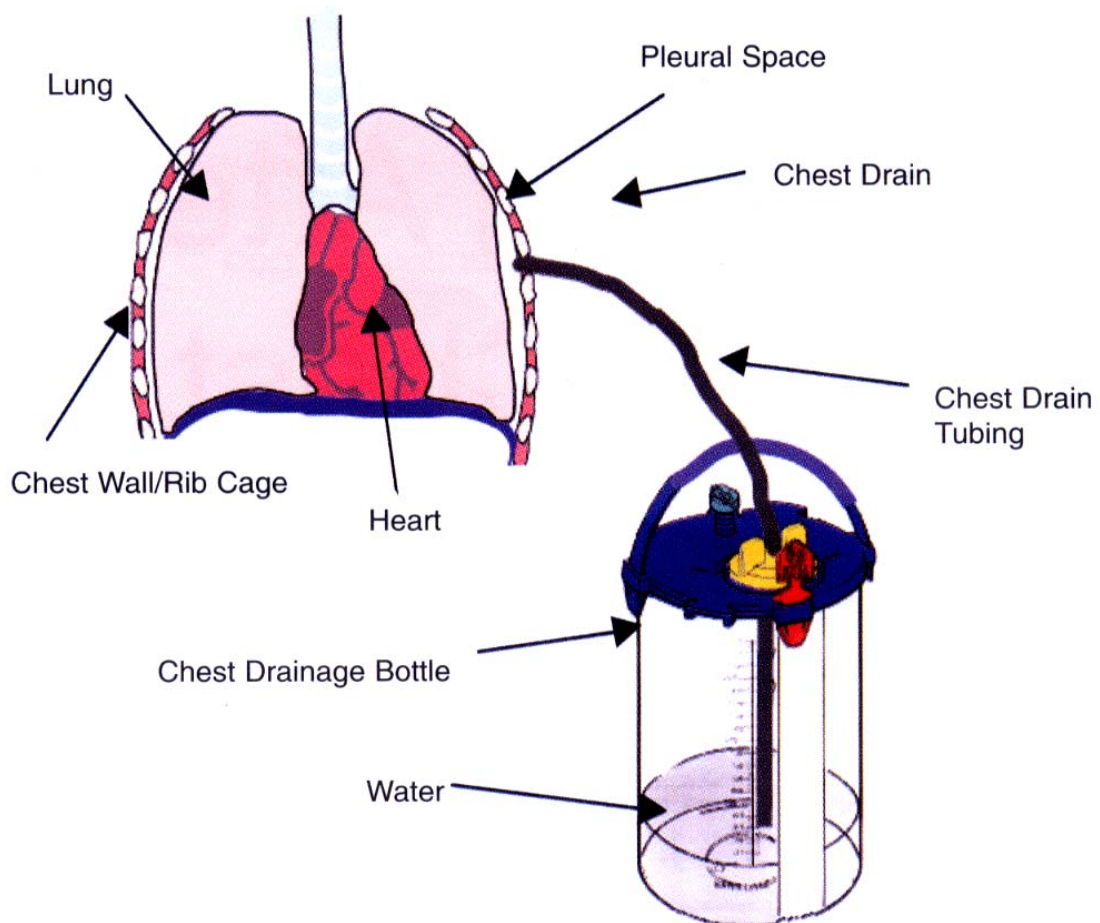
Very, very rarely, during insertion, the chest drain may accidentally damage a blood vessel and cause serious bleeding. About 1 in 500 patients may develop significant bleeding during tube insertion. If this does happen it might require an operation to stop it.

## How to contact us / further information

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

- Elaine Reid – Pleural Nurse Specialist - 01223 245151 ask for bleep 156-2197
- Sandy Bailey – Secretary to Dr Sivasothy – 01223 216646

Diagram showing chest drain bottle



It is against the law to smoke inside any building at either Addenbrooke's or the Rosie hospitals. Smoking is only allowed at the small number of purpose built smoking shelters on site. Please do not smoke anywhere else on site.



**For advice on quitting, contact your GP or the NHS smoking helpline free, 0800 169 0 169**

Please ask if you require this information in other languages, large print or audio format: 01223 216032 or [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Polish

Informacje te można otrzymać w innych językach, w wersji dużym drukiem lub audio. Zamówienia prosimy składać pod numerem: 01223 216032 lub wysyłając e-mail: [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Portuguese

Se precisar desta informação num outro idioma, em impressão de letras grandes ou formato áudio por favor telefone para o 01223 216032 ou envie uma mensagem para: [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Russian

Если вам требуется эта информация на другом языке, крупным шрифтом или в аудиоформате, пожалуйста, обращайтесь по телефону 01223 216032 или на вебсайт [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Cantonese

若你需要此信息的其他語言版本、大字體版或音頻格式，請致電 01223 216032 或發郵件到: [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Turkish

Bu bilgiyi diger dillerde veya büyük baskılı ya da sesli formatta isterseniz lütfen su numaradan kontak kurun: 01223 216032 veya asagıdaki adrese e-posta gönderin: [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

### Bengali

এই তথ্য বাংলায়, বড় অক্ষরে বা অডিও টেপে পোতে চাইলে দয়া করে 01223 216032 নম্বরে ফোন করুন বা [patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk) ঠিকানায় ই-মেইল করুন।

## Document history

Authors	Elaine Reid
Department	Cambridge University Hospitals NHS Foundation Trust, Hills Road, Cambridge, CB2 0QQ <a href="http://www.cuh.org.uk">www.cuh.org.uk</a>
Contact number	01223 245151
Published	September 2009
Review date	September 2012
Supersedes which document?	n/a
File name	Chest_drain_insertion
Version number	1
Ref	PIN2496