

**PATIENT
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If you or the individual you are caring for need support reading this leaflet please ask a member of staff for advice.

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Indwelling Pleural Catheter



This box may be completed by your treating team

Please come to

On (date)

At (time)

Nothing to eat after.....

Medication changes.....

What is an indwelling pleural catheter (IPC)?

An indwelling pleural catheter is a small tube which stays in place and can be used to drain fluid from the cavity between your lungs and rib cage (the pleural cavity) whenever it is needed. It avoids the need for repeated painful injections and chest tubes every time the pleural fluid comes back. The drainage can be performed by you, a friend or family member or by a district nurse, whichever suits you.

The indwelling pleural catheter is a soft, flexible, plastic tube that is thinner than a pencil. One end is placed inside the pleural cavity. The tube is then tunnelled under the skin (to minimise the risk of infection and to help keep it in place) and passes out through the skin. There is a valve on the outer end of the tube to prevent fluid leaking out of the tube which can be connected to a vacuum bottle to drain the fluid when needed. The fluid is not drained continuously, so when it is not in use, the valve is covered by a cap and the external section of the tube is curled up under a dressing.

Why do you need an indwelling pleural catheter?

The pleural space consists of two thin membranes – one lining the lung and the other lining the chest wall. Between these layers, there is a very small space which is usually almost dry. In your case fluid has collected in this space so that the lung cannot function properly making you short of breath.

What can be done to help me when this happens?

Draining away the fluid collection using a needle or standard chest drain helps relieve breathlessness for a short period, but as the fluid re-collects it can make you short of breath again. Whilst it is possible to have repeated drainage of fluid in this way, it can be uncomfortable and often means many trips to hospital for it to be done. The indwelling catheter is a way of allowing pleural fluid to be repeatedly drained at home without needing further needles to be inserted into the pleural cavity.

Important instructions to follow before your indwelling pleural catheter insertion

- You may take your normal medications with a sip of water on the morning of the procedure unless you have been told not to by the doctor.
- If you are taking any medications that 'thin the blood', e.g. Rivaroxaban, Dabigatran, Apixaban, Edoxaban, Dalteparin, Clexane or heparin injections, Warfarin, or Clopidogrel, this must be discussed in advance with your hospital doctor so that he/she can provide you with further advice. In general, these medications must be stopped or withheld before an indwelling pleural catheter insertion can take place.

How is the indwelling catheter put in my chest?

The tube will usually be put into your chest as a day case so you will not need to spend a night in hospital. On the day of the procedure, you will be met by a nurse who will ask you some questions about the medication that you are taking. She will also check your blood pressure, pulse, temperature and breathing.

A small cannula will be put into your arm in order to give you sedation if required. Most patients do not require sedation.

The doctor will meet you before the procedure and you will have a chance to ask them questions. If you are happy to proceed, you will be asked to sign a consent form.

You will be asked to lie in a comfortable position on your side by your doctor. The doctor will then perform an ultrasound scan of your chest to find the best place for the drain to be inserted.

Once you are resting comfortably, the skin will be cleaned with an alcohol containing cleaner to kill any bacteria. This fluid often feels cold. An anaesthetic is then injected into the skin, to numb the place where the indwelling catheter will go. This can feel mildly painful, but this pain passes off quickly.

Your doctor will then make two small cuts in the numb area of skin and gently open a path for the indwelling catheter. This should not be painful, although you may feel some pressure or tugging. One cut is for the catheter to pass through the skin, and the second is for it to be passed into the pleural cavity.

Will it be painful?

Local anaesthetic is injected into the skin before the drain is put in so the insertion should not be painful.. At the end of the procedure the chest may feel "bruised" or "sore" for about a week. We will provide you with pain killing tablets to relieve this discomfort if needed.

How long do I have to stay in hospital?

Provided there have been no problems, the catheter insertion is done as a day case. After the procedure a chest x-ray will be performed and after a short stay on the ward you will be free to go home. Someone will need to drive you home.

How does the drain stay in position?

Indwelling pleural catheters are designed to be a permanent solution to the problem of pleural fluid (though they can be removed if they become unnecessary). There is a soft cuff around the tube which is positioned under the skin and the body makes scar tissue around this, to secure the drain in place.

Two stitches will be put in when your tube is inserted. The nurse will remove these after a week after the insertion.

Who will drain the fluid from my tube once it is in place?

Drainage of the fluid is a straightforward procedure. There are a number of ways that this can be undertaken.

Usually we arrange for a district nurse to come to your home to perform the drainages. We will make these arrangements so you will not need to organise any of this for yourself.

If you would like, the nurses may be able to teach you, a relative or a friend, how to drain the fluid.

How often can I drain fluid and how often do I need to do this?

When your catheter is inserted the doctor will remove some of the fluid from your chest cavity at the same time so you will hopefully feel less breathless shortly after the procedure. The rate the fluid re-accumulates varies between people and some patients need daily drainage whilst others require only weekly drainage or less. You can drain fluid as often or as infrequently as is needed. Your doctor will advise you about this. Normally we start with drainages three times per week after the catheter goes in, but this can be adjusted if necessary.

How will drainage bottles be supplied to me?

As soon as you have been given a date for your pleural catheter placement we will contact your local district nurses who will order catheter drainage bottles to be delivered directly to your home address. These will usually arrive within 2-3 days of your clinic appointment and in plenty of time for your catheter placement appointment. You will also receive a booklet to record how much fluid is drained. It also contains useful advice about how to care for your drain and what to do if there's a problem with it.

It is sensible to take 2-4 bottles with you if you are ever admitted to hospital in the future to ensure that there are no delays in your pleural drainages while an inpatient.

Are there any risks with indwelling catheter insertion?

In most cases, the insertion of an indwelling pleural catheter and its use in treatment is a routine and safe procedure. However, like all medical procedures, they can cause some problems:

- Most people get some pain from their indwelling catheter in the first week. We will provide you with pain killing medication to control this.
- Sometimes indwelling catheters can become infected but this is uncommon (affecting about one in 50 patients). Your doctor will thoroughly clean the area before putting in a chest drain to try and prevent this and we will teach you how to keep your catheter clean. Tell your doctor if you feel feverish or notice any increasing pain or redness around the chest drain.
- Very rarely, during its insertion, the IPC may accidentally damage a blood vessel and cause serious bleeding. This affects less than 1 in 500 patients. This may (very, very, rarely) require an additional procedure or operation to help stop it. Any medical procedure carries a very small risk to life, but for indwelling pleural catheter insertion this is very low indeed (less than 1 in 1,000).

Are there any risks associated with long term indwelling catheter use?

Generally indwelling pleural catheters are very well tolerated in the long term.

- The main risk is infection entering the chest down the tube. This risk is minimized by good catheter care and hygiene. We will teach you how to look after your catheter.
- Sometimes, IPCs are used to manage pleural effusions caused by cancer. If this is the case, very rarely the cancer can begin to grow in the area around the indwelling catheter. Please let your doctors know if you develop a lump, or any pain, around your catheter in the weeks or months after it is inserted. If this problem does develop, your doctor will advise you on appropriate treatment.

Can I wash and shower normally?

In the first week or two after insertion the dressing placed on the catheter and must be kept dry, so your ability to wash and shower normally will be slightly restricted. However, once the area has begun to heal, you will be able to bath and shower normally as long as the dressings and area around the tube are kept clean (the dressing may need to be replaced afterwards). After a month it is even possible to go swimming.

When and how is the indwelling catheter taken out?

Indwelling pleural catheters are designed to remain in position for as long as they are needed. However, sometimes the fluid drainage from the chest dries up and the catheter is no longer needed. In this situation the catheter can be removed.

This is done as a day case procedure and is usually quite straightforward. You will be asked to lie on your side (just like you did when it was inserted) and the skin will be cleaned thoroughly. Local anaesthetic will be injected around the cuff and exit site of the catheter, which may sting to start with but the pain passes off quickly. After that, it should not be painful although you may feel some pulling or tugging.

The doctor may make a small incision where the indwelling pleural catheter goes under the skin and will use instruments to release the scar tissue around the cuff. After the indwelling catheter has been removed, the hole will be stitched up and covered with a dressing. In rare cases the doctor may need to make an additional hole to help release the drain.

You will need a chest x-ray afterwards and after a short stay on the ward you will be free to go home.

The stitch needs to be removed after 7 to 10 days.

Are there any risks with removing the indwelling pleural catheter?

Generally it is a quick, straightforward procedure to remove an indwelling pleural catheter. It may feel sore and bruised for around a week after it's been removed, but this should be controlled with simple painkillers. There is a small risk of infection and bleeding, although this is rarely serious.

Very occasionally it is not possible to remove the indwelling pleural catheter completely and the tip may be left inside, although every effort will be made to get it all out. If this happens, it rarely causes a long-term problem but you will be carefully monitored by the doctors.

Your feedback is encouraged.

We are keen to make indwelling pleural catheter care as straightforward and as comfortable as we possibly can. Please feel free to make any suggestions for improvements to your doctors or nurses.

References and further information

Pleural Disease Guidelines 2010. British Thoracic Society Pleural Disease Guideline 2010. Thorax, Vol 65, Suppl 2

NHS Constitution. Information on your rights and responsibilities. Available at www.nhs.uk/aboutnhs/constitution

Name:

Date of Birth:

Hospital No:

Name of procedure(s)

Insertion / Removal of Indwelling Pleural Catheter

on the Left / Right side

(indicate as appropriate)

Statement of patient

You have the right to change your mind at any time, including after you have signed this form.

I have read and understood the indwelling pleural catheter patient information sheet, including the benefits and any risks.

I agree to the procedure described in this booklet and on the form.

I understand that you cannot give me a guarantee that a particular person will perform the procedure. The person will, however have appropriate experience. Where a trainee performs this procedure, this will be undertaken under supervision by a fully qualified practitioner

Signed

Date

Name (print in capitals)

Confirmation of consent (to be completed by a health professional prior to the procedure)

I have confirmed that the patient/parent understands what the procedure involves including the benefits and any risks. I have confirmed that the patient/parent has no further questions and wishes the procedure to go ahead.

Signed

Date

Name (print in capitals)

Job title