

Indwelling pleural catheter system explained

Respiratory Medicine

Patient Information Leaflet

Introduction

This leaflet is about the procedure to fit an indwelling pleural catheter (IPC) system. It is not meant to replace discussion between you and your doctor, but as a guide to be used along with what is discussed.

What is an indwelling pleural catheter?

It is a soft, flexible tube (catheter) that is inserted into your chest to drain fluid which builds up in the pleural space. The tube is thinner than a pencil. It remains inside the chest and passes out through the skin. There is a special valve on the outer end of the system to prevent fluid leaking out.

The pleural space is situated between the lung and the chest wall and consists of two thin layers, one lining the outside of lung and the other lining the inside of the ribs (see image below). These layers are normally separated by a very small amount of fluid which acts as a lubricant and allows them to slide effortlessly against each other during breathing.

In your case, a larger amount of fluid has collected in this space so the

lung cannot expand fully, making you short of breath.

Draining away the fluid can help relieve breathlessness for a short period, but the fluid often builds up again. It is better than a chest drain which can only be used for inpatients.

What are the benefits?

The IPC is a way of allowing fluid to be drained from around your lungs easily and painlessly, at your own convenience, in your own home. You can manage fluid build-up before it becomes too uncomfortable. The drainage can be performed either by yourself, family members or district nurse, whichever you prefer.

It reduces the frequency of hospital visits and avoids the need for repeated injections/chest tube insertion whenever the fluid builds up.

In about 20 per cent of cases, this procedure can seal the space and stop the fluid from returning.

Why do I need an indwelling pleural drainage system?

The reason your doctor has recommended this catheter is due to build-up of fluid around your lungs, which can cause difficulties with breathing. This is known medically as pleural effusion.

What does the drainage system consist of?

- Drainage catheter
- Drainage collection bottles
- Protective dressing

How is the catheter inserted?

We will give you a date and time to come to hospital for the procedure. It is usually carried out as a day case in the dedicated procedure room on ward C5 or Respiratory Assessment Unit (RAU).

For the procedure, the doctor will

- Ask you to lie down on your side, in a comfortable position.
- Use an ultrasound scan to locate a suitable position for the catheter.
- Clean the area to make sure it is sterile.
- Give you an injection of local anaesthetic to numb the area where the catheter will be inserted.
- Insert the catheter into your chest between the two layers (as mentioned above).
- Secure the catheter with two stitches.
- Put a protective dressing on to secure the outer part of the catheter to your body.

If there are no complications, you will be able to return home shortly after the procedure.

What are the risks of the procedure?

All procedures have some risks. Inserting the drainage catheter is a relatively simple and safe procedure, and the doctor will explain things to you carefully before you have it.

- Sometimes, indwelling catheters can become infected, but this is uncommon (affecting about one in 50 patients). Your doctor will clean the area thoroughly before the procedure to try and prevent this. 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 the insertion, the chest drain may accidentally damage a blood vessel and cause serious bleeding. This probably only affects about one in 500 patients.

We will monitor you closely during the procedure to prevent these risks from occurring wherever possible.

Will it be painful?

We will inject local anaesthetic into the skin beforehand so that you do not feel the drain going in. At the end of the procedure, your chest may feel bruised or sore for about a week, but this can be controlled with painkilling tablets.

How does the drain stay in position?

IPCs are designed to be a semipermanent solution to the problem of fluid in the pleural space (though they can be removed if they are no longer needed). There is a soft cuff around the tube, which is positioned under the skin. The skin heals around this cuff over a two-week period, making the drain much more secure.

How does the drainage system work?

When you need to drain fluid, you connect the end of the drainage catheter to the drainage line on a collection bottle. Then you release the clamp.

When you have drained enough fluid out (up to 1000ml), close the clamp and disconnect the drainage line and bottle. It takes about five to 15 minutes to drain the fluid.

We will give you two packs, each containing a drainage bottle and dressing. You can get more from the district nurse, who we will make aware of your procedure.

What are the alternatives?

You do not have to have this system fitted. If you prefer, you can continue to visit hospital to have the fluid removed from your lungs.

Aftercare advice

We will give you an information pack, showing how to attach the drainage bottle, how to drain the fluid and general care of your catheter.

Can I wash and shower normally?

Make sure that the catheter tube is completely covered by the self-adhesive dressing and that it is securely attached to your skin.

Do not allow the catheter to soak underwater in a tub, bath or pool.

What about the stitches?

We will remove the stitches 10-14 days after the procedure.

Can I drain the fluid myself?

Usually, a district nurse will visit you at home to drain the fluid. However, if you or your carer wish to learn how to drain the fluid, we will be happy to teach you.

How long will I have the catheter in for?

Indwelling catheters are designed to remain in position permanently. Often, the amount of fluid produced reduces or dries up after a period of weeks or months.

If there has been no or little drainage for 3 weeks, we will do a repeat ultrasound scan. If the drain appears blocked, we may instill a “clotbuster” to clear the blockage.

If the catheter is no longer needed, we can take out the catheter under local anaesthetic. It should take about 15 to 30 minutes. In very poorly patients, who are too frail to come to hospital, there is no harm if the catheter is left in.

Can anyone remove the catheter?

Healthcare professionals who are unfamiliar with the catheter must NOT attempt to pull it out. If they do, it will snap.

How often does the fluid need to be drained?

When your catheter is inserted, the doctor will remove most of the fluid from your chest cavity at the same time. How quickly the fluid drains varies between people. Usually, people need drainage once or twice a week.

Are there any risks associated with long-term IPC use?

Generally, indwelling catheters are very well tolerated, but again, there are some risks.

- The main risk is infection entering the chest through the tube. The risk is minimised by good catheter care and hygiene. We will teach you how to look after your catheter. Check the area regularly for signs of infection (redness, swelling, oozing, pain or fever). If any of these do occur, you should inform your district nurse, GP or the helpline as soon as possible so that you can be assessed and, if necessary, receive treatment with antibiotics.
- Sometimes, cancer tissue can affect the area around the indwelling catheter. Please let your doctor know if you develop a lump or any pain around your catheter in the weeks after it is inserted.

Useful link

<https://mypleuraleffusionjourney.com/>

If you have any questions, or if there is anything you do not understand about this leaflet, please contact:

Dr Chaudri's secretary on 01384 456111 ext. 1305

Russells Hall Hospital switchboard number: 01384 456111

This leaflet can be downloaded or printed from:

<http://dgft.nhs.uk/services-and-wards/respiratory-medicine/>

If you have any feedback on this patient information leaflet, please email dgft.patient.information@nhs.net

This leaflet can be made available in large print, audio version and in other languages, please call 0800 073 0510.

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Aceasta broșura poate fi pusă la dispoziție tipărită cu caractere mari, versiune audio sau în alte limbi, pentru acest lucru va rugăm sunați la 0800 073 0510.

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