

# Insertion of indwelling pleural (lung) catheter

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**This leaflet is for patients who are to undergo the insertion of an indwelling pleural catheter (IPC) for the management of their pleural effusion (collection of fluid around the lungs).**

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## What is an IPC (lung)?

An IPC (lung) is a small tube designed to drain fluid from around your lungs easily and painlessly whenever it is needed. The term indwelling means that it can stay in place for weeks or months. It avoids the need for repeated painful procedures every time the drainage of fluid is needed. The drainage can be performed either by you, a trained family member or with the help of a nurse. The pleural catheter is a soft flexible tube that is thinner than a pencil, which remains inside the chest 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.

## Why do I need an IPC (lung)?

The pleural space consists of two thin layers/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 inflate and function properly, making you short of breath. This collection of fluid is called a pleural effusion.

## What are the benefits of the IPC (lung)?

Draining the fluid collection helps relieve breathlessness for a short period, but the fluid then often re-collects, making you short of breath again and meaning a repeat procedure is needed. The IPC (lung) is a way of allowing fluid to be repeatedly drained without you having to come to the hospital and have lots of repeated procedures.

## What are the alternatives to the IPC (lung)?

There are several alternatives to an IPC (lung) which will be discussed with you prior to any operations. This includes finding medical ways of managing your breathlessness by use of medications, further aspiration of pleural fluid with a needle and syringe, and possibly an admission to hospital for a chest drain.

## What are the risks of the procedure?

In most cases, the insertion of an IPC (lung) and its use in treatment is a routine and safe procedure. However, like all medical procedures, they can cause some problems.

- **Pain** – The local anaesthetic used should mean the procedure is not painful. There can be a “catch” as the needle passes through the lining of the chest wall. Most people get some pain or discomfort from their indwelling pleural catheter in the first week. We recommend taking regular simple painkiller such as paracetamol for the first 7 days.

- **Bleeding** – Very rarely, during its insertion, the IPC (lung) can damage a blood vessel and cause significant bleeding. If it does happen it may require a further procedure to control the bleeding.
- **Infection** – Sometimes, indwelling catheters can become infected but this is uncommon (affecting about 1 in 50 patients). Your doctor will thoroughly clean the area before inserting the tube 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.
- **Organ puncture** – This is when the lung itself, or another organ such as the liver or spleen, is injured during the operation. By using ultrasound at the time of insertion the risk of this happening is extremely low.
- **Blockage** – Occasionally, an IPC (lung) can become blocked. If it stops draining, we may be able to flush and unblock the drain. Occasionally we may need to remove it completely.
- **Catheter migration** – In rare cases the IPC (lung) may move out of position and therefore stop draining any fluid.

## Preparing for the procedure

You will need to have some blood tests before your procedure, to ensure you are not at a high risk of bleeding. An IPC (lung) insertion is a day case procedure, currently performed in Kennet & Loddon Unit, Level 2, Centre Block.

You do not need to refrain from eating or drinking as the procedure is performed under local anaesthetic. Some patients will be given sedation as well. Please bring an overnight bag in case you are required to remain in hospital. You should take your normal medications unless you have been told otherwise.

## Anticoagulation

If you are on blood thinning medications, the doctor who arranged your procedure or the Pleural Team should have given you specific instructions about this:

- i) If you are taking Clopidogrel, Prasugrel or Ticagrelor, you should stop this 7 days before the procedure.
- ii) If you are using Tinzaparin injections, this should NOT be taken the day before the procedure.
- iii) If you are taking Warfarin, you will either be advised to stop a week prior with an INR blood test the day before the procedure OR if you are converted from Warfarin to Tinzaparin injections temporarily, you will have both .an INR test AND you must not take the Tinzaparin injections the day before the procedure.
- iv) If you are taking Apixaban, Rivaroxaban, Edoxaban or Dabigatran, you must not take the tablets for 48 hours before.

## What happens on day of operation?

You will be met by a nurse and the clinician performing the procedure. You will be asked to either sit or lie in a comfortable position by the team and they will undertake an Ultrasound of the chest to make the site for the drain. Once you are resting comfortably, the skin will be

cleaned with a sterilising solution and local anaesthetic is then injected to numb the area. The operator will then make two small cuts in the area and gently open a path for the IPC (lung). This should not be painful, although you may feel some pressure or tugging. The IPC (lung) is then gently eased into the chest and the skin is stitched and a dressing applied. The procedure takes about 30 minutes once started.

### **What happens immediately after operation?**

Following the IPC (lung) you will be monitored by the nurses and the tube will be attached to a drainage bottle to remove some of the existing fluid from your chest. You will have a chest x-ray which allows staff to assess whether you will be able to go home the same day or require you to stay in hospital overnight.

### **Planning for discharge**

Provided there have been no problems, the IPC (lung) insertion is done as a day case and after a short stay you will be free to go home. Someone will need to drive you home as you may have received sedative medication and will be unable to drive yourself and you may feel a little sore once the anaesthetic has worn off.

### **Aftercare advice**

Two sets of stitches will be put in when your tube is inserted. The district nurse will remove the first set 7-10 days after procedure and the second set 2-4 weeks after the procedure.

Initially after insertion there will be a dressing in place and we advise you to keep this dry until the stitches are removed. Providing the site is then clean and dry, you will be able to bath and shower normally. After a month it is even possible to go swimming.

You can take painkillers if necessary after your procedure – these may be more effective if taken regularly in the first few days but you can use less as time passes if your pain settles.

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

Drainage of the fluid is a straightforward procedure. We will arrange for a district nurse to do this for you once you leave hospital. If you prefer, they will also be able to teach you, a relative or a friend, how to drain the fluid so that it can be done in the comfort of your own home without waiting for a nurse. You will be given illustrated instructions on how to do this which clearly take you through the procedure, step by step. We will make arrangements for this if this is something you would prefer.

IPCs (lung) are designed to remain in position permanently. However, sometimes the fluid drainage dries up and the catheter is no longer needed. In this situation, the catheter can be removed as a day case procedure.

### **How often should I drain fluid?**

The rate the fluid re-accumulates varies between people and some patients need daily drainage while others require only weekly drainage or less. You can drain fluid as often or as infrequently as is needed. When your drain is inserted we will contact your district nurses who will order drainage bottles to be delivered directly to your home. It is sensible to bring 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 you are an inpatient.

### Things to look out for

On discharge from hospital you will be given an information sheet detailing after-care. Generally, IPCs (lung) are very well tolerated. The main risk is infection entering the chest down the tube and this is minimised by good catheter care and hygiene. The district nurse will teach you how to look after your IPC (lung). You should seek medical advice if you get symptoms of infection or if your drain shows signs of infection. Our Pleural Service answer phone can be contacted if you have any concerns or queries – please see numbers below.

If you have cancer, sometimes cancer tissue can affect 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 after it is inserted.

### Further information

- Rocket Medical: <http://sales.rocketmedical.com/products/indwelling-drainage-catheters>
- Patient information website: <https://mypleuraleffusionjourney.com/>

### Contact information

If you are experiencing any problems then please contact:

- Pleural Service answer phone – 07799 072517 (Mon-Fri 9am-5pm, excluding bank holidays) or email [rbft.pleuralservice-refs@nhs.net](mailto:rbft.pleuralservice-refs@nhs.net)
- Kennet & Loddon Unit – 0118 322 7491 (Mon-Fri 9am-5pm)
- The Department of Respiratory Medicine – 0118 322 8296 (Mon-Fri 8am to 5pm)
- For **urgent** issues out of hours, contact NHS 111 for advice

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**Please ask if you need this information in another language or format.**

Dr Lynne Curry, Consultant Physician, Department of Respiratory Medicine  
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