

Oxford Centre for Respiratory Medicine

Indwelling pleural catheter (IPC)

Information for patients



Provisional appointment date and time.....

Important information about your IPC insertion

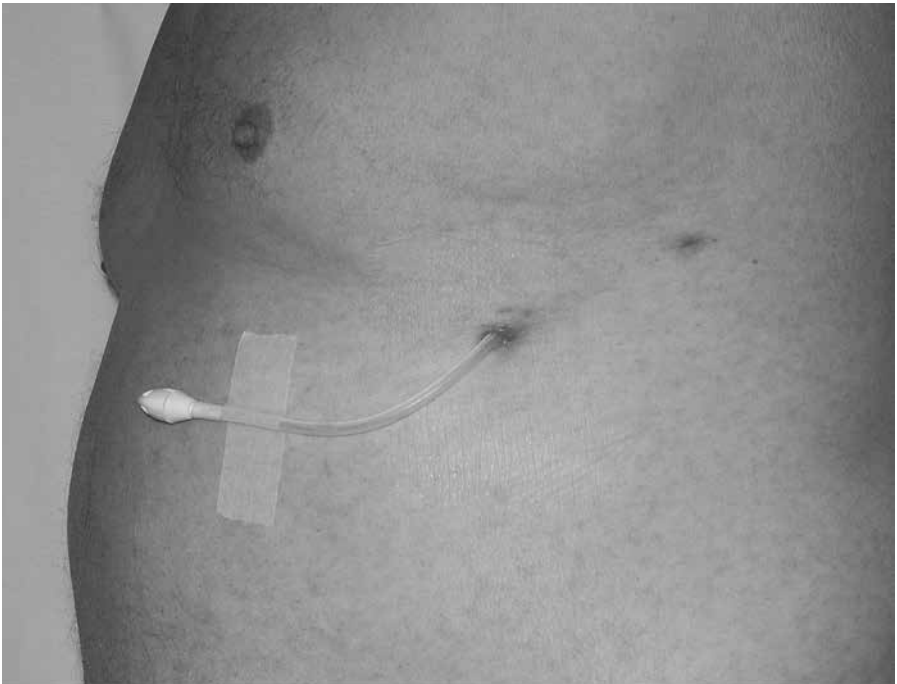
- Do not eat or drink anything for 6 hours before your procedure. You can take any medicine you need to have with a sip of water up until 2 hours before your procedure.
- Tell your doctor about all the medication you take and any medical conditions you have.
- Tell us if you are on any blood thinning or diabetes medications – these are normally stopped before your procedure. It is important that you continue to take any other medications (including those for high blood pressure).
- Arrange for someone to bring you in and take you home from the procedure. You should also not be alone overnight after your procedure.
- If you are given sedation medicine during the procedure, for 24 hours after the procedure you should not drive, return to work, operate machinery, drink alcohol, sign legal documents or be responsible for small children.
- Contact your doctor if you have increasing chest pain, fever or any redness around the IPC, or if you are concerned the IPC has become dislodged.

What is an indwelling pleural catheter (IPC)?

An IPC is a specially designed small tube used to drain pleural fluid from around your lungs easily and painlessly, whenever needed. It avoids the need for repeated uncomfortable injections and chest tubes every time the fluid needs to be drained. The drainage can be performed either by you or a friend/relative, or by a district nurse.

The IPC is a soft flexible tube, thinner than a pencil, which will remain inside your chest. The end of the tube passes out through your skin. There is a valve on the outer end of the tube to prevent fluid leaking out.

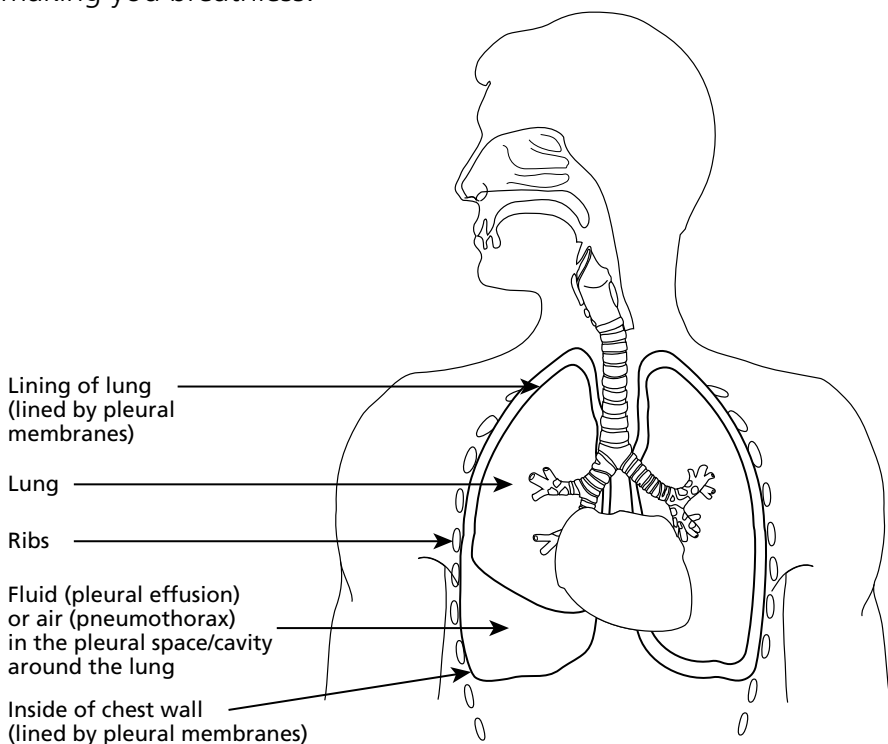
Recently inserted IPC



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Why do I need an IPC?

Within your chest there is an area called the pleural space. This is made up of two thin membranes – one lining your lung and the other lining your chest wall. Between these layers there is usually a very small space which is almost dry. In your case, fluid has collected in this space so that your lung cannot work properly, making you breathless.



Draining away the fluid using needles and syringes helps relieve breathlessness for a time, but the fluid will often re-collect, making you breathless again. Whilst it is possible to have repeated drainage of fluid in this way, it can be uncomfortable and means many trips to hospital. The IPC is a way of allowing fluid to be repeatedly drained without you having to come to the hospital to have repeated uncomfortable fluid drainage procedures.

How should I prepare for my IPC?

Please make sure we have your correct telephone number. We will contact you by telephone a few days before your procedure to confirm that you are still able to come. If we are unable to reach you, your appointment will be given to someone else who is waiting for this procedure.

Please let us know if you may be pregnant, as this may affect the medications we use for the procedure.

Fasting instructions:

Do not eat or drink anything for 6 hours before the procedure. You can have small sips of water up to 2 hours before the procedure, if you need to take any medicines. Your procedure will be cancelled if you do not follow these instructions.

It is also better not to smoke before the procedure, because this can reduce the amount of oxygen your blood can carry.

On the day of the procedure, before we insert the IPC, we will need details of **all** your medications (including any over the counter remedies), allergies and any medical conditions.

It is important to let us know in advance if you take blood thinning or diabetes medications, as we temporarily stop these before your procedure. You should take all your other medications as usual on the morning of the procedure – these should be taken with a sip of water at least two hours before you arrive.

If you take medication for high blood pressure, it is particularly important that you continue taking your tablets. We would also ask that you get your blood pressure checked at your GP practice two or three days before the procedure, to make sure that it is well controlled.

The tables below explain what to do with your medications.
Please contact us if you are not sure what to do.

Diabetes medications

Medication	Instructions
Diabetes tablets <i>e.g. glibenclamide, gliclazide, glimepiride, glipizide, tolbutamide, metformin, pioglitazone and sitagliptin.</i>	Do not take on the morning of the procedure.
Insulin injections	The dose of your insulin will usually need to be either reduced or stopped on the morning of your procedure. If in doubt, please don't take your insulin and bring it with you, along with all your other medicines.

Blood thinning medications

Medication	Instructions
Warfarin	Usually stopped 5 full days before the procedure. You will need an 'INR' blood test 1-2 days before your procedure to make sure your 'INR' is below 1.5, otherwise we will need to cancel your procedure.
Aspirin	Do not take on the morning of the procedure.
Clopidogrel (Plavix) Dipyridamole (Persantin) Ticagrelor (Brilique)	Usually stopped 7 full days before the procedure.
Apixaban (Eliquis) Dabigatran (Pradaxa) Rivaroxaban (Xarelto)	Usually stopped 2 full days before the procedure.
Dalteparin (Fragmin) injections	Usually stopped 1 full day before the procedure.

All other medications

Medication	Instructions
All other medications (including those for high blood pressure)	Please take as normal, at least two hours before the procedure, with a sip of water.

Please bring all of your medications with you when you come for the procedure. You should also bring any glasses that you need for reading. Please do not wear jewellery or nail varnish or bring in any valuables.

Sedation during the procedure

If you find the procedure uncomfortable, we may be able to offer you sedation medication. This will make you feel sleepy and will reduce any discomfort.

Before you come for your procedure it is important that you follow the fasting (starving) instructions noted on page 5. Fasting is very important before any sedation or anaesthetic. If you have anything in your stomach whilst you are under sedation, it might come back up and get into your lungs.

What will happen on the day?

Please come to the reception desk at Theatre Direct Admissions, on Level 1 of the John Radcliffe Hospital at the time you have been given.

When you arrive, a nurse will greet you and take your blood pressure, heart rate and temperature. They will also ask you questions about your medical history, medications and any allergies you might have.

The nurse or doctor will insert a cannula (tiny plastic tube) into a vein in your hand or arm, in case we need to give you medication during the procedure.

The procedure will be explained to you again and you will have the opportunity to ask any questions you might have. You will be asked to sign a consent form to confirm you are happy for the procedure to go ahead. The nurses will then ask you to change into a hospital gown.

When your IPC insertion is due to start, you will be shown into the procedure room and will be asked to lie on a couch. Your blood pressure, oxygen levels and heart rate will be monitored using a cuff on your arm, a sensor on your finger and some

stickers attached to your chest. You will be given some oxygen into your nose or mouth to keep the oxygen in your blood at a safe level.

If you are uncomfortable during the procedure, we can give you sedation medication into the cannula to make you feel sleepy, although we do not normally need to do this.

The doctor will do an ultrasound scan to find where best to place the IPC. This involves putting gel onto your chest and using a hand-held device to roll over your skin. The ultrasound uses sound waves to create an image on a screen. It is not painful.

The IPC is usually put into the side of your chest, below your armpit, as this will be more comfortable for you and means you will be able to sleep on your back afterwards.

Once you are resting comfortably, the skin over the area where the IPC will be placed will be cleaned with an alcohol based liquid (containing cleaner) to kill any bacteria. This fluid often feels cold. A local anaesthetic will then be injected into your skin, to numb the place where the IPC will go. This may sting to begin with, but the pain will disappear quickly.

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

What are the risks?

In most cases, the insertion of the IPC and its use in treatment is a routine and safe procedure. However, like all medical procedures, IPCs can cause some problems. All of these can be treated by your doctors and nurses.

- Most people get some discomfort from their IPC in the first week. You can take simple painkilling medication to control this.
- Sometimes IPCs can become infected and need treatment, but this is uncommon (affecting about 1 in 50 people). Your doctor will thoroughly clean the area before putting in the IPC, to try to prevent this. You will also be taught how to keep your IPC clean. Tell your doctor if you have any problems such as fever, increasing pain or redness around the IPC.
- Very rarely, during its insertion, the IPC may accidentally damage a blood vessel and cause serious bleeding. This only affects less than 1 in 500 people. Unfortunately, if this does happen it can be a serious problem which will require an operation to stop the bleeding. Very, very rarely such bleeding can be fatal. During the procedure everything possible will be done to avoid this.

Are there any risks associated with long term IPC use?

Generally IPCs are usually fine to be left in place for as long as they are needed.

- The main risk is infection entering the chest through the IPC. This risk is reduced by carrying out good IPC care and hygiene. We will teach you how to look after your IPC, to help prevent an infection.
- Sometimes malignant (cancerous) tissue can affect the area around the IPC. Please let your doctors know if you develop a lump or any pain around your IPC after it is inserted. If this problem does develop, your doctor will advise you on appropriate treatment.

Will it be unpleasant?

The local anaesthetic that is injected into your skin means that you should not feel the drain going in. If needed, we can give you additional painkillers to control any discomfort. If you are still in any discomfort, we can offer you sedation medication, but this should not be necessary.

At the end of the procedure your chest may feel bruised or sore for about a week. Simple painkilling tablets, such as paracetamol and ibuprofen, are usually enough to relieve this discomfort.

What happens after the IPC insertion?

The IPC insertion procedure usually lasts between 30 and 60 minutes. Afterwards, you will be monitored by a nurse in our Recovery Area for 2 hours. During this time, we will drain your chest using the IPC. You will also have a chest X-ray to confirm the IPC is in the correct place.

After 2 hours, provided your X-ray is satisfactory and you feel well, you will be taken to the Transfer Lounge (Level 2, John Radcliffe Hospital). You can wait here until you are ready to be collected and taken home. Before you leave, the nurse will remove the cannula from your hand/arm.

It is essential that someone accompanies you home, either driving you home or traveling with you in a taxi. You should not go home on public transport after this procedure. You will need to be taken home by car. This will be more comfortable for you and also quicker for you to return to the hospital if there are any complications on the journey home. You should also not be alone overnight after your procedure, even if you haven't had sedation, in case you feel unwell.

If you were given any sedative medication during the procedure, you should not drive, work, operate machinery, drink alcohol, sign any legal documents or be responsible for small children for 24 hours after the procedure. This is because the sedation can affect your judgement and behaviour slightly (even if you think you are feeling fine).

How does the IPC stay in place?

IPCs are designed to be a permanent solution to the problem of pleural fluid (although they can be removed if they are no longer needed). There is a soft cuff around the IPC under your skin, around which your skin heals. This keeps it in position and prevents it from falling out.

Two stitches will be put in when your IPC is inserted. The stitch which has been used to close one of the incisions used to insert the IPC will need to be removed after seven days, whilst the other stitch (the stitch which holds the IPC securely in place) should be removed after three weeks. These stitches should be taken out by your GP's nurse.

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

Drainage of the fluid is a straightforward procedure. There are a number of ways that this can be done. Our Chest Ward nurses will 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.

If, however, you or your relative/friend are unable to drain the fluid, then we can arrange for a district nurse to do this for you.

We will discuss these arrangements with you further before you are discharged after the procedure.

IPC equipment - bottle and accessories used to drain fluid



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

When your IPC is inserted, most of the fluid from your chest will be removed at the same time. The rate at which the fluid comes back varies; some people need daily drainage whilst others require only weekly drainage or less.

You can drain fluid as often as is needed. We will discuss with you how often this may need to be done.

Can I wash and shower normally?

Initially, after the insertion of the IPC, you will have a dressing covering the area where the IPC comes out of your side. We advise you to keep this dry until the first stitch is removed seven days later. Providing the site is then clean and dry, you will then be able to have a bath and shower as you would normally. After a month it is even possible to go swimming, as long as you are healing well.

When will the IPC be taken out?

IPCs are designed to remain in position permanently. However, sometimes the fluid drainage from the chest dries up and the IPC is no longer needed. If this happens, the IPC can be removed as a day case procedure (where you go home the same day).

What should I do if something happens to the IPC

If you have any problems with the IPC, or if you have any questions, please contact:

Theatre Direct Admissions

Tel: 01865 221 050 or 01865 221 055

(Monday to Friday, 8.00am to 4.00pm)

Outside these hours please call the Hospital switchboard:

Tel: 01865 741 166

Ask for either the on call Respiratory doctor or the Chest Ward.

If you are not staying in hospital as an inpatient, when you are ready to be discharged you can be collected from the:

Transfer Lounge (Level 2, John Radcliffe Hospital)

Tel: 01865 222 848

If you have a specific requirement, need an interpreter, a document in Easy Read, another language, large print, Braille or audio version, please call **01865 221 473** or email **PALSJR@ouh.nhs.uk**

Dr John Wrightson, Consultant in Respiratory Medicine

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Oxford University Hospitals NHS Foundation Trust

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www.ouh.nhs.uk/information

We are grateful to Rocket Medical for providing the photograph used in this leaflet

