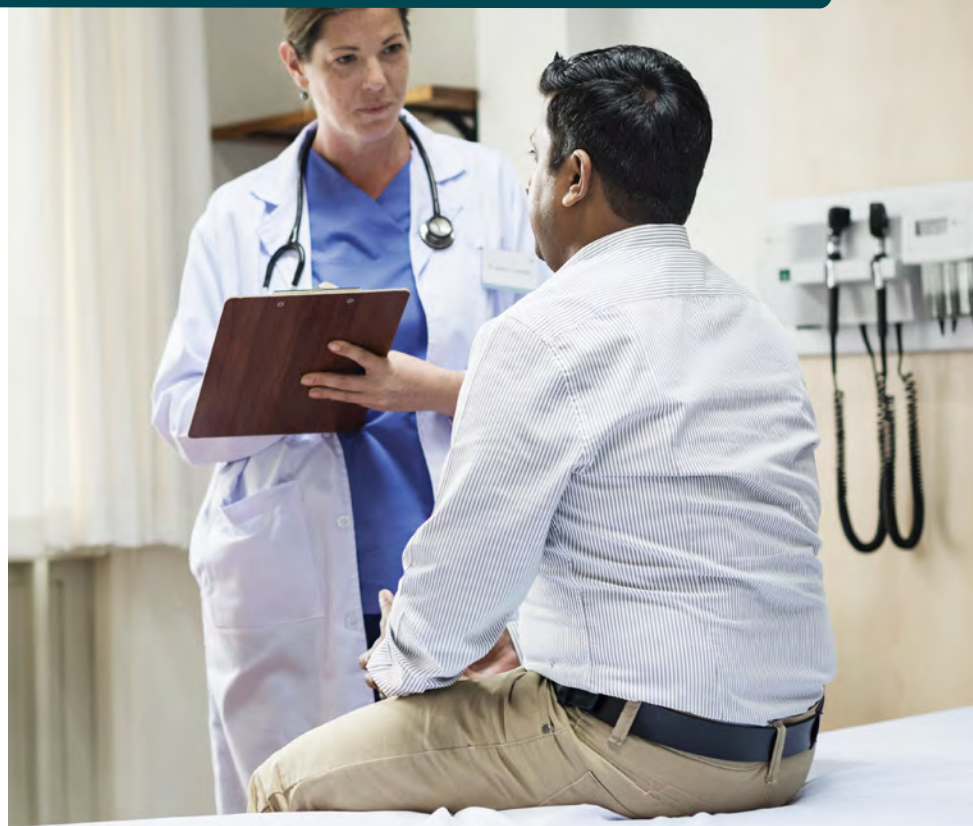


Inserting your tunnelled haemodialysis catheter (permcath)



If you are planning to have or are currently receiving haemodialysis for chronic kidney disease (CKD), you may need to have a dialysis catheter inserted into your body if a fistula or graft formation has not been possible or appropriate for you. A dialysis catheter will allow your healthcare team to access your blood so that it can be filtered by the haemodialysis machine. There are different types of dialysis catheters and your healthcare team will discuss which is the best option for you. This may depend on how quickly you need to start dialysis.

This leaflet explains more about tunnelled haemodialysis catheters, also known as lines or permcaths. Your healthcare team will be happy to answer any further questions you have before your haemodialysis catheter is inserted.

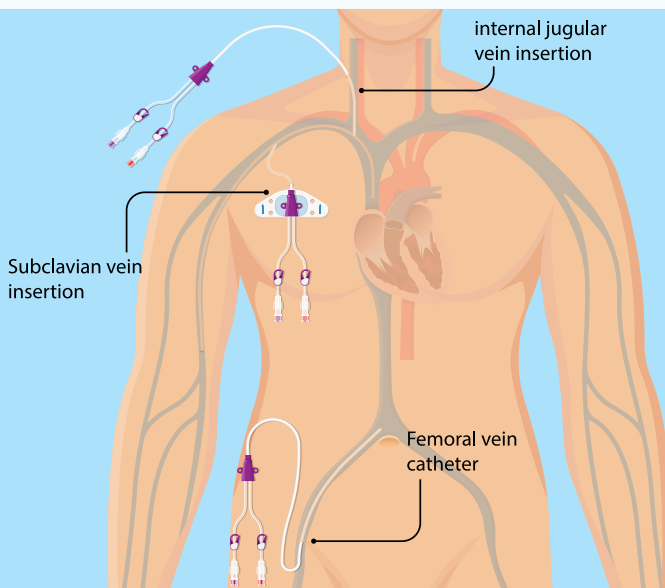


What is a tunnelled haemodialysis catheter?

A tunnelled haemodialysis catheter is a soft plastic tube, which is inserted into one of the large veins in your neck or, occasionally, in your groin. This catheter gives your dialysis team access to your blood so that it can be filtered by the haemodialysis machine. Your blood is then returned to your body through the catheter.

The catheter is about the width of a standard pencil and twice as long. It will pass under your skin (tunnelled) for a short distance, to the front of your chest (if it goes in through your neck), or the front of your thigh (if it goes in your groin), before coming out of the skin. The external part of the catheter may be kept in place with stitches. The part of the catheter running under your skin has a small cuff of material which helps your body to form scar tissue. This helps to reduce the risk of infection and keep the line in place after the stitches are removed.

A tunnelled catheter can stay in place for as long as it is required. This may be until an arteriovenous fistula has been created and ready for use, or, occasionally your renal team may decide that the catheter is the best form of dialysis access for you and will keep it in for longer. This is different from a **temporary haemodialysis catheter (vascath)** which is intended for short-term use – usually one-four weeks.



Why do I need a haemodialysis catheter?

Haemodialysis is needed when your kidneys are not working well enough to remove the toxins and fluid that build up in the body. It involves pumping blood out of your body and around a dialysis machine. The blood is then returned to your body. A fistula or graft or haemodialysis catheter is needed for this to take place.

The main benefit of having a tunnelled haemodialysis catheter is that it can be used for dialysis straight away. Other types of dialysis access such as fistulae need an operation and should not normally be used for three-six months after creation. However, for longer term haemodialysis an arteriovenous fistula is usually recommended.

A haemodialysis catheter is usually recommended if your doctor feels that you should start haemodialysis very soon.



How is a haemodialysis catheter inserted?

Your haemodialysis catheter is inserted in hospital. This is usually under a local anaesthetic so you will be awake during the procedure. You can usually eat, drink and take your medication as normal beforehand. You may need to have some blood tests to check that it is safe for you to have the procedure.

The procedure will usually take place in the kidney department. Sometimes x-rays are needed to make sure the line is positioned correctly, especially if you have a pacemaker, so the catheter may be inserted in the x-ray department.

How can I prepare for the procedure?

Let your doctor know if you take any medications to thin your blood or make it less likely to clot. There are lots of medications that do this (e.g. aspirin, clopidogrel, warfarin, apixaban), and some may need to be temporarily stopped before your procedure. This is usually a few days to one week beforehand.

You may be given a special liquid to wash with for a few days before the procedure and a cream to rub inside your nostrils three times a day. These help reduce the risk of infections.

Do not stop or change any medications without discussing it with your doctor.



What will happen during the procedure?

Your doctor will explain what will happen and answer any questions you may have. They will ask you to sign a consent form to agree to the procedure.

You will be asked to change into a hospital gown and lie flat on your back on the bed. A small plastic tube (cannula) will be inserted into the back of your hand. You will also be attached to a heart monitor.

The doctor or nurse will clean the area where the catheter is to be inserted with an antiseptic solution to reduce the risk of infection. A large sterile drape will be used to cover the surrounding area.

Your doctor or nurse will then inject a local anaesthetic to numb the skin where the catheter is going to be placed. This may sting for a second or two before going numb.

Your doctor will use an ultrasound machine to guide a needle into the vein through your skin. You may feel a slight pushing at this point. A flexible wire is put through the needle into the vein and the needle is removed. A small cut will be made at the insertion point, approximately 1cm in length.

The dialysis catheter will be pushed under the skin and will be inserted into the vein over the wire. The wire will then be removed.

The line will be checked to make sure it is working. It will be held in place by small stitches and a sterile dressing will be placed over the exit site.

The whole procedure should take around 20-30 minutes.



Will it hurt?

Having a haemodialysis catheter inserted should not be painful as you will have a local anaesthetic which will numb the area. You may feel some 'pushing and pulling' during the procedure, especially when the catheter is pushed under your skin, but this should not hurt. Let your doctor know if you are in any pain during the procedure.

You may feel a little sore when the local anaesthetic has worn off and there may be some bruising.



What happens afterwards?

Once the line has been inserted, you will have a chest x-ray to make sure it is in the right place.

You may then have a short (e.g. two hour) session of haemodialysis to make sure the line is working well before going home.

You should avoid strenuous exercise for around a week after the procedure.

The stitches around the insertion site can usually be removed after seven-ten days and those around the exit site after three weeks. This can be done at your GP surgery or at your dialysis unit.

The dressings round the insertion and exit sites must be kept dry and you should not have a bath or shower until the wound heals and the stitches are completely removed. After the stitches are removed, you can take a shower, but make sure that the exit site is kept dry and, if necessary, apply a new dressing afterwards which you can get from your dialysis nurse. Special pouches are available to protect the line while you shower. Please ask your dialysis nurse if you would like to try these.

Covering your line and exit site under water increases the risk of infection, so taking a bath and going swimming is not recommended.

For more information see our leaflet on
'Looking after your haemodialysis line'



Are there any risks to having a haemodialysis catheter inserted?

The vast majority of haemodialysis catheters are inserted without any problems. However, as with any procedure, there are potential risks. Your doctor will discuss these with you before the procedure.

Possible risks include:

Bleeding

Some mild bleeding or “oozing” from either the exit or insertion site is common and usually stops quickly. Heavy bleeding is rare but can be serious. If this occurs you should seek urgent medical attention.

Pain

During the procedure, you may experience a sharp stinging from the local anaesthetic, but this should quickly fade. If you experience any pain after this, tell your doctor, who may give you some more anaesthetic.

Some mild pain is common after the procedure. If you develop severe pain you must seek urgent medical attention.

Infection

Your skin acts as a natural barrier to infection so any cuts can breach that protection. Your doctor will take careful steps to reduce the risk of infection during the procedure and it is important that you keep the site clean and dry afterwards.

If you do develop an infection, at the insertion site, exit site, or in the bloodstream, you will need antibiotics and your haemodialysis catheter may have to be removed.

Insertion failure

Sometimes it is not possible to insert the haemodialysis catheter due to a narrowing or blockage in your vein. This may mean that your procedure will have to be delayed and performed in the x-ray department instead.

Pneumothorax (collapsed lung)

When the needle is first inserted into your neck vein, there is a small risk of puncture to the lining of the lung, causing a collapsed lung (pneumothorax). This may cause you to feel short of breath and experience pain when breathing.

An x-ray is performed after each line insertion to confirm the position of the line and identify any possible complications such as bleeding or pneumothorax.

If a pneumothorax does develop, you may need a tube inserted into your chest (chest drain), or, rarely, an operation to repair the lining of your lung.

Heart rhythm disturbance

When the flexible wire is inserted in your neck, it may irritate the entry chamber to your heart, causing extra beats. This usually resolves after the wire is repositioned, but you may experience some palpitations. Your heart rhythm will be monitored throughout the procedure and serious rhythm disturbance is rare.

Arterial puncture

The artery lies close to the vein and may be accidentally punctured during the procedure. In most cases, pressure will stop the bleeding. Very rarely, an operation or radiological procedure may be needed to repair the hole in the artery.

Injury to nerves

There are several nerves which lie close to the vein in your neck and groin. There is a small risk of the local anaesthetic temporarily blocking these nerves. In the neck this may cause a change in voice, or weakness and/or change in sensation of the shoulder or arm. In the groin you may experience weakness and/or a change in sensation over the thigh. In rare cases these changes last more than a few hours and you may need extra tests to investigate this further.

Deep venous thrombosis

If you are having a line inserted into the groin, you are at increased risk of a blood clot forming near the line (deep venous thrombosis). You may therefore be prescribed medications to thin the blood and reduce the risk of this happening.

How will I know if something is wrong?

Your nurses will check your catheter's insertion and exit site for signs of infection each time you go for dialysis.



Important!

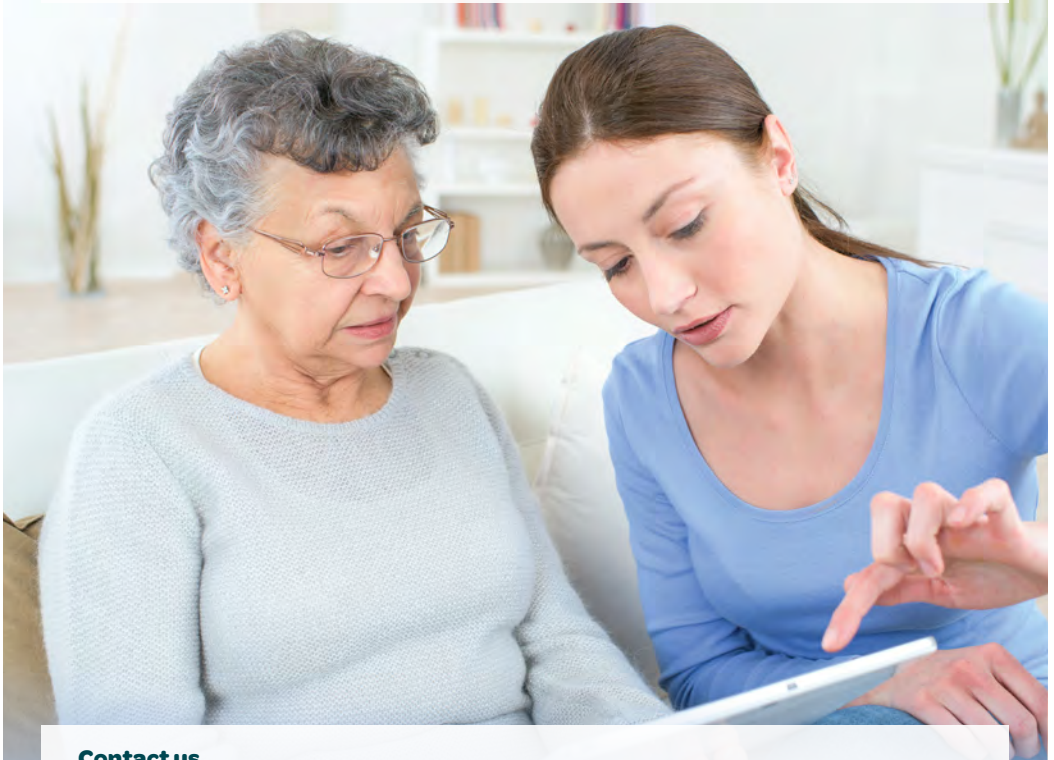
Contact your renal unit immediately if you notice any of the following:

- A higher temperature than normal, fever, chills or shivering. These may be symptoms of infection.
- Pain, itching, redness or swelling around the exit site.
- Discharge from around the line.
- Cracks or leaks in the line.

If there is severe bleeding, or your catheter falls out, press on the insertion site (not the exit site) with a clean hand towel and call 999 for help or go to your nearest Accident and Emergency Department.

Where can I find out more information?

- Kidney Care UK - Patient information: www.kidneycareuk.org
- NHS - Dialysis – How it's performed:
www.nhs.uk/conditions/dialysis/what-happens



Contact us



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