

**Fact sheet**

# Access for Dialysis



Your kidneys are the unsung heroes of your body. They are responsible for a number of important roles such as:

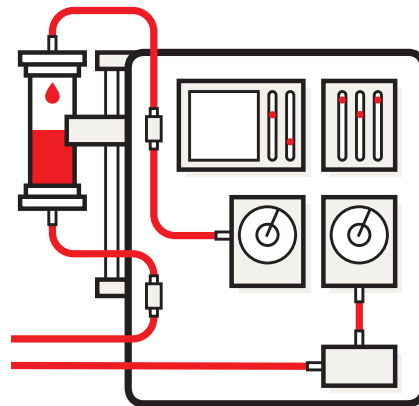
- Removing excess fluid to make urine (wee)
- Controlling your blood pressure
- Filtering waste products from your blood

If your kidneys stop doing this properly, dialysis may be needed. There are two types of dialysis - haemodialysis and peritoneal dialysis.

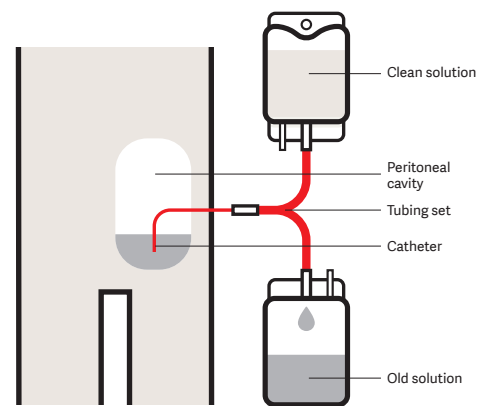
See *Peritoneal Dialysis*, *Home Haemodialysis* and *Haemodialysis* fact sheets for more information.

**Dialysis will clean your blood when your kidneys are unable to.**

During haemodialysis, a machine acting as an artificial kidney cleans your blood.



Peritoneal dialysis allows your blood to be cleaned inside your body.



**What does 'access for dialysis' mean?**

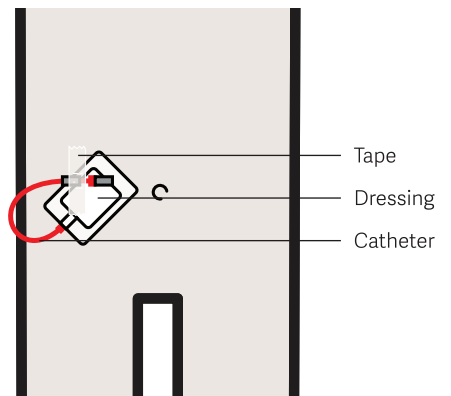
Both haemodialysis and peritoneal dialysis need an entry point, called 'access', to your blood stream so your blood can be cleaned of the excess water and waste products. The type of access is different for the two types of dialysis.

**Access for peritoneal dialysis (PD)**

Access for peritoneal dialysis is by a catheter. A peritoneal dialysis catheter is a soft plastic tube about 0.5 cm wide. It is inserted into your body during a small operation in hospital. Dialysis fluid (dialysate) is moved in and out of your body to clean your blood through the catheter.

The catheter stays in your body for as long as PD is needed. The catheter may seem strange at first but most people become used to it quickly. Some of the catheter is on the outside of your abdomen (stomach). It can be easily hidden under clothing.

The catheter is usually put below and to one side of your navel (belly button). This is called the 'exit site'. You and your health care team will decide on the best location for your exit site



## How do I look after my peritoneal dialysis catheter?

Once the catheter exit site has healed, you will learn how to care for the catheter as part of your daily routine. This is important because having a catheter increases your risk of infection.

Some hints include:

- Before touching your exit site, thoroughly wash your hands and fingernails
- Check your exit site every day to check for redness and swelling. Tell your health care team immediately if you notice any changes or the exit site feels sore

- Check your catheter tubing for cracks or holes
- Attach your catheter to your skin using tape so that it does not move around

You will also receive advice from your health care team about caring for your catheter when showering, having a bath, or swimming.



## Access for haemodialysis

There are three types of vascular access for haemodialysis: a fistula, a graft, and a central venous catheter.

### Access with a fistula

A fistula is the name for joining an artery to a vein. This is usually created by a small operation at the wrist area of your non-dominant forearm (the arm you don't write with). With a fistula, blood flows quickly from the artery and makes the vein wider. This provides the good blood flow in your arm, which is needed for dialysis to work.

The fistula is where you put in the needles for the dialysis. Two needles are required, one to remove the blood and the other to return it.

Most people using dialysis have a fistula as it provides the best long-term vascular access, and usually has the lowest risk of complications.

You will notice a 'buzzing' feel as your blood moves from your artery into your vein. This feels like a cat purring and is called the 'thrill'. The buzzing means your fistula is working well. If the buzzing stops or slows, contact your renal unit or doctor immediately as your fistula may be blocked.

A fistula has fewer complications than the other types of access, but care must be taken to prevent infections. A fistula may take a few months to fully develop so that it can be used for dialysis. It can then last for many years.

### Access with a graft

If your veins are too small or delicate for a fistula to work then vascular access with a graft may be needed. This is an artificial tube which is placed in your arm or leg. One end is attached to an artery and the other end is attached to a vein. The needles for dialysis are put into the graft.

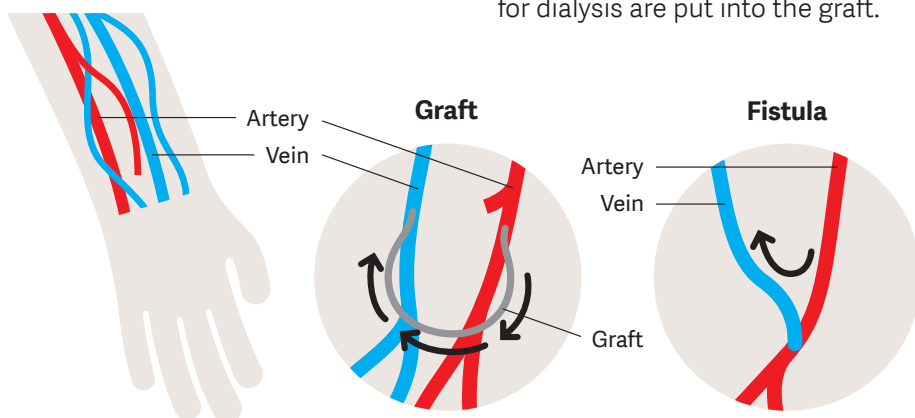


### Access with a central venous catheter

Sometimes it is not possible to create a fistula or a graft. In these cases vascular access is with a central venous catheter. This is also known as a dialysis catheter. A central venous catheter is a soft plastic tube that is placed into a large vein in the chest. The catheter then splits in half - one half removes the blood from the body into the dialysis circuit; the other half returns the cleaned blood to the body.

Unlike a fistula, a central venous catheter can be used straight away. Some people may have a temporary central venous catheter while they are waiting for their fistula to be ready.

Central venous catheters can work well, but they do have an increased risk of infection if not managed carefully. They also have a higher incidence of getting blocked, and are usually not suitable for long term use.



## Common vascular access problems and what to do

Problem	Common causes/signs	Treatment
<p><b>Blood Clots</b></p> <p>A blood clot reduces or stops the blood flow through the access</p>	<ul style="list-style-type: none"> <li>• Low blood pressure</li> <li>• Injury to the access</li> <li>• A problem with the join between the artery and vein</li> <li>• Damage to the access by the repeated needling for dialysis</li> </ul>	<ul style="list-style-type: none"> <li>• Report any changes to the thrill or buzz of your fistula immediately</li> <li>• Blood clots can sometimes be dissolved using medication but surgery may be required</li> </ul>
<p><b>Infections</b></p> <p>Infections can get into your access through the needle sites, or from your own blood</p>	<ul style="list-style-type: none"> <li>• Unusual pain in your access site, hot, swollen or red skin</li> <li>• Pus or discoloured fluid</li> <li>• Weeping from old needle sites/holes or surgical cuts</li> <li>• Fever</li> </ul>	<ul style="list-style-type: none"> <li>• Antibiotics are used to treat infection</li> <li>• Occasionally, if this treatment is not successful, surgery may be needed</li> <li>• Good hygiene is the best prevention</li> </ul>
<p><b>Aneurysms</b></p> <p>An aneurysm is when a weak spot develops in your access</p>	<ul style="list-style-type: none"> <li>• A bulge in the blood vessel wall</li> </ul>	<ul style="list-style-type: none"> <li>• Large aneurysms need attention because if they rupture (burst), serious bleeding can result</li> <li>• Aneurysms may need surgery to repair</li> </ul>
<p><b>Bleeding fistula or graft</b></p> <p>Your fistula or graft may bleed excessively after dialysis. This is rare but can be fatal.</p>	<p>You have a higher risk of excess bleeding if your fistula or graft:</p> <ul style="list-style-type: none"> <li>• Is infected</li> <li>• Is bulging and noticeably increasing in size</li> <li>• Feels firmer than usual</li> <li>• Has very thin or shiny skin</li> </ul> <p>or if you have:</p> <ul style="list-style-type: none"> <li>• High blood pressure on dialysis</li> <li>• Longer blood clotting time</li> </ul> <p>As soon as you notice any of these warning signs, you need to notify your dialysis unit staff.</p>	<p>If you are dialysing in a renal unit contact staff immediately.</p> <p>If you are dialysing at home hold the spot for at least 10 minutes. If the bleeding stops, apply fresh gauze and tape or a clean pressure pad.</p> <p>If it is still bleeding, use your fingers to again apply pressure to the bleeding spot, and ring 000 for an ambulance.</p> <p>For a handy brochure that summarises this information go to <a href="http://aci.health.nsw.gov.au/networks/renal/resources#173513">aci.health.nsw.gov.au/networks/renal/resources#173513</a> or call 1800 454 363 and request a copy.</p>



### IMPORTANT

- It is important to immediately report any changes in your access to your health professional team. Even if you are very careful, sometimes problems such as blood clots or infections can occur.
- Always seek advise from your doctor or dialysis staff, as the problem will not go away by itself.



#### THINGS TO REMEMBER

- Dialysis needs an entry point, called 'access', to your blood stream so your blood can be cleaned of the excess water and waste products. Peritoneal dialysis uses a catheter for access. Haemodialysis uses a fistula, graft or catheter for access.
- Taking an active part in the care of your vascular access will reduce your risk of complications.
- It is important to immediately report any changes in your access to your health professional team.

## What does that word mean?

**Catheter** - A plastic tube that is used to take fluid in or out of your body.

**Central venous catheter** - A special tube which is surgically inserted into your neck, collarbone or top of your leg to allow access for haemodialysis.

**Dialysis** - A treatment for kidney failure that removes waste products and excess fluid from your blood by filtering your blood through a special membrane.

**Fistula** - Produced when a vein and an artery in the arm or leg are joined together in an operation to make it easier to move blood in and out of your body during haemodialysis.

**Graft** - Another type of access for haemodialysis that is used if the blood vessels cannot be used for a fistula. During surgery, an artery and a vein are joined together by soft tubing.

**Haemodialysis** - A treatment for kidney failure. Your blood is pumped through special tubing to a haemodialysis machine. The machine acts like a kidney, filtering waste products from the blood before returning it to your body.

**Peritoneal dialysis** - Treatment for kidney failure during which dialysis fluid is moved in and out of your peritoneal cavity to remove wastes and fluid from the blood.

For more information about kidney or urinary health, please contact our Kidney Helpline on 1800 454 363 or email [kidney.helpline@kidney.org.au](mailto:kidney.helpline@kidney.org.au).

Or visit our website [kidney.org.au](http://kidney.org.au) to access free health literature.

This is intended as a general introduction to this topic and is not meant to substitute for your doctor's or Health Professional's advice. All care is taken to ensure that the information is relevant to the reader and applicable to each state in Australia. It should be noted that Kidney Health Australia recognises that each person's experience is individual and that variations do occur in treatment and management due to personal circumstances, the health professional and the state one lives in. Should you require further information always consult your doctor or health professional.



If you have a **hearing or speech impairment**, contact the National Relay Service on **1800 555 677** or **relayservice.com.au**

For all types of services ask for 1800 454 363