

DIALYSIS LINE INSERTION

Central venous catheter insertion for Haemodialysis

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Introduction

This information tells you about having a dialysis line (central venous catheter) inserted for haemodialysis treatment. Please read it as well as talking to your doctor/nurse.

What is a dialysis line (central venous catheter) insertion?

Dialysis line insertion means having a soft plastic tube (twice the length and half the width of a pen) placed through the skin into one of the large veins in the neck or the groin at the top of the thigh. Once the dialysis line has been inserted and made secure it can be connected to the tubes on the haemodialysis machine to allow blood to be pumped from your body to the machine and back for dialysis

Why would you need to have a dialysis line insertion?

A dialysis line insertion is usually done because blood tests have shown severe kidney failure. In this situation dialysis treatment removes the poisons and fluid that the kidneys cannot get rid of.

Where is it done?

The dialysis line insertion will usually be carried out in the ward, a special procedure room, the operating theatre or the X-ray department. It will usually take less than thirty minutes and be done under local anaesthetic so you will remain awake. You can eat and drink normally before and after the dialysis line is put into the vein.

How is it done?

You will be asked to lie on your back; the bed or couch you are lying on may be tilted so that your head is slightly below your feet. The skin over the veins in the neck or the groin will be cleaned with antiseptic. Some local anaesthetic is injected into the skin, which stings a little at first. Once the skin is numb more local anaesthetic is injected around the vein. Usually the doctor/nurse will find the exact position of the vein using an ultrasound scan and will put a special needle through the numb skin into the vein. The doctor/nurse will then pass a thin wire through the needle into the vein and the needle will be removed. The dialysis line is then placed through the skin and into the vein by passing it over the wire. Once the dialysis line has been put in, the wire is removed and the line is held in place by a stitch in the skin. Occasionally it will not be possible to insert the dialysis line because the vein cannot be found or is damaged.

What happens afterwards?

You should usually not be aware of any pain from the needle, the wire or the dialysis line but you may feel a little pressure as they are pushed through the skin and into the vein. If the dialysis line has been placed into a vein in the neck you will usually then have a chest X-ray to make sure it is in the right place and that no damage to the lung has occurred. After the local anaesthetic has worn off you may feel a little discomfort around the dialysis line due to slight bruising.

After the dialysis line insertion you should avoid exercise, you can wash by taking showers or baths but a waterproof dressing may need to be applied where the dialysis line enters the skin if necessary (discuss this with your Doctor or Nurse). If you develop severe pain or bleeding around the dialysis line you should contact the kidney unit straight away and if the bleeding is persisting you should press over the area with a clean hand towel or handkerchief and seek help straight away.

What are the risks of a dialysis line insertion?

Dialysis line insertion has a small risk of complications. The main risk is that the needle or guide wire or dialysis line can damage the vein or other parts of the body nearby such as an artery or the lung.

The most serious risks from the dialysis line insertion are bleeding from an artery and puncture of a lung. It is important that you tell your doctor if you have a problem with easy bleeding or bruising or if you are taking tablets that can affect bleedings such as WARFARIN, ASPIRIN, CLOPIDOGREL or new blood thinning medicines such as APIXABAN. You should also tell your doctor if you are allergic to antiseptic such as IODINE.

If the dialysis line insertion causes a lot of bleeding you might need a blood transfusion (the chance of this is less than 1 in 100) or very occasionally an operation to stop the bleeding (less than 1 in 1000). If the dialysis line insertion causes the lung to be punctured you might need to have a tube inserted into your chest for a few days to allow the lung to expand (less than 1 in 100) or very occasionally (less than 1 in 1000) an operation would be needed to repair the puncture. Although deaths have occurred following complications of dialysis line insertion this is extremely rare.

Once the dialysis line has been inserted there is a risk that infection can spread from the catheter into the bloodstream causing a blood infection (septicaemia). This is very unlikely to happen at the time of the dialysis line insertion and can be prevented by keeping the area around the line as clean as possible.

What are the benefits of having a dialysis line inserted?

Once the dialysis line has been inserted you can be attached to the haemodialysis machine to have your kidney failure treated by dialysis. This may avoid you developing serious complications from kidney failure such as breathlessness or the heart stopping beating.

What are the alternatives to a dialysis line insertion?

A dialysis line is inserted in order to be able to pump your blood around the haemodialysis machine for dialysis and without the line this type of treatment may not be possible. These lines are often a temporary measure to enable you to start haemodialysis but, in the near future, if not already, your Doctor may discuss a more permanent arterio-venous fistula being made which, briefly, joins an artery to a vein.

There is another form of dialysis which can be carried out by inserting a tube through the skin in the tummy into the space (called the peritoneum) which holds the intestine (bowels, guts). This type of treatment (called peritoneal dialysis) is usually less effective than haemodialysis as an emergency treatment. (For leaflets about Peritoneal Dialysis contact the NKF Helpline on 0800 169 0936)

The alternatives to dialysis to treat severe kidney failure, such as drugs and changes to diet, usually do not prevent the complications of kidney failure. Your doctor/nurse should be able to tell you what changes and treatment could be made for your kidney failure should you decide not to have dialysis.

If, after you have discussed this with your Doctor, and you agree to have a dialysis line inserted you will be asked to sign the hospital's consent form which will also state that you have received information about the procedure and have discussed it with your doctor/nurse.

The National Kidney Federation cannot accept responsibility for information provided. The above is for guidance only. Patients are advised to seek further information from their own doctor.

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A federation of more than fifty patient charities, supporting kidney patients & carers

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