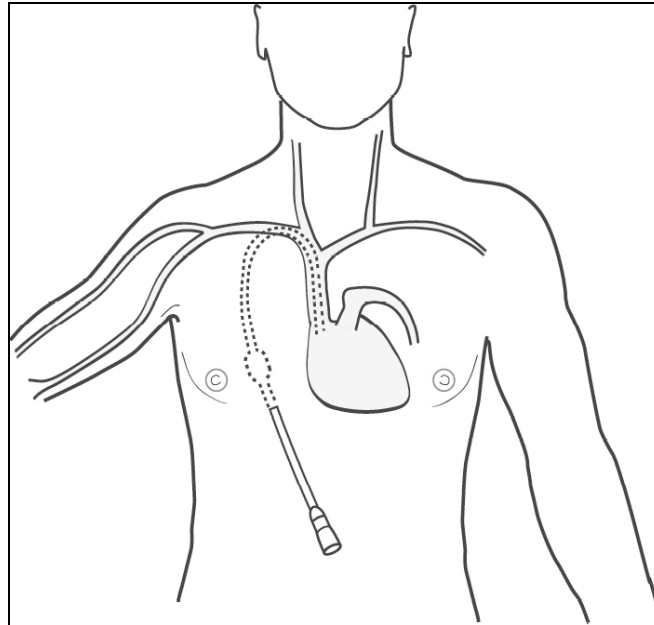


Renal Services

Dialysis line insertion (central venous access)



This leaflet 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. The renal doctor will decide on the day of your admission the point of entry of the tube on your neck (right or left) through an ultrasound machine. 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 deal with.

Where is it done?

The dialysis line insertion will usually be carried out in the Vascular Access Unit in Level 4; a special procedure room; the operating theatre; or the X-ray department.

It will usually take more 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 which involves movements of your neck for approximately 7 to 10 days until wound healing will take place. The exit site must be kept dry and you should not have showers until the wound heals and the stitches from the exit site are completely removed. If you develop pain or bleeding around the dialysis line you should contact the dialysis centre straight away. If the bleeding is persisting, press over the area with a clean hand towel or handkerchief and seek help straight away from your GP or the nearest Accident and Emergency Department in your local area.

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, guide wire or dialysis line can damage the vein or other parts of the body nearby such as an artery or the lung. Your doctor/nurse has recommended a dialysis line should be inserted because it is felt that you need dialysis treatment. It is important that you agree about this.

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 bleeding such as **warfarin**.

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.

Once the dialysis line has been inserted there is a risk that infection can spread from the dialysis line 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 your heart stopping beating. This dialysis line is not a long term access for dialysis. You need to be referred to the surgical team for a permanent access formation on your arm called an arterio venous fistula. If you are not suitable for permanent access formation due to your co-morbidities like vascular disease, diabetes and poor vascular contractility of your veins, the dialysis line will remain as your access for haemodialysis.

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. Without it, this type of treatment may not be possible. There is another form of dialysis, which can be carried out by inserting a tube through the skin in the tummy into the space which holds the intestine (bowels, guts). This type of treatment is called a peritoneal dialysis. For more information about this, please contact one of our dialysis staff. The Peritoneal Dialysis Unit telephone number can be found at the end of this leaflet.

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 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.

How to take care of your dialysis line (central venous access)

Make sure that your line is covered with a dressing and secured in place at all times. The less your line is able to move, the less likely it is to become infected.

If you must touch your line make sure you have washed your hands. This applies to anyone touching your line – including doctors and nurses.

Immediately report any signs of swelling, tenderness, fever, pain or oozing from the exit site to the nursing staff on your dialysis unit. Contact numbers are provided on this leaflet.

What happens if I start bleeding around my dialysis line?

Immediately report any bleeding from the exit site. If there is only a small amount of bleeding, apply pressure to the exit site and contact your dialysis unit or Addenbrookes Dialysis Centre, which operates only from Monday to Saturday from 07:00 to 23:59 hours, telephone 01223 217832

You can contact Renal Services on out of hours through switchboard 01223 245151 and ask to speak to a renal doctor or alternatively contact ward C5 on extension 3195.

If the bleeding is heavy or does not stop, dial 999 for an ambulance to take you to the nearest hospital with an Accident and Emergency Department.

The exit site must be kept dry. Do not take a shower and do not swim whilst you have a dialysis line in place. If the dressing gets wet, bacteria may enter the exit site or line and cause an infection.

We do not recommend that you replace the dressing if it becomes dislodged; please contact your dialysis unit for advice. Contact numbers are provided on this leaflet.

We do not recommend that you take part in contact sports. If you do play sports however, ensure that your catheter is securely taped to your chest and the line clamps are closed. Ask your nurse for advice.

Unless it is a medical emergency, the line should not be used for any other purpose than dialysis. All persons using the line must have received training in its use.

Contacts:

Addenbrookes HD Unit: 01223 217832
Kings Lynn HD Unit: 01553 613544
West Suffolk HD Unit: 01284 712921
Hinchingsbrooke HD Unit: 001480 421850
Peritoneal Dialysis Unit: 012123 217839

References:

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Dougherty L (2006) Central Venous Access Device: Blackwell Publishing

O'Grady NP, Alexander M, Patchen Dellinger E, Gerberding JL et al. (2002) Guidelines for the prevention of intravascular catheter-related infections. *Infection Control and Hospital Epidemiology*. December; 23(12): 759-80

Renal Association Standard (2010) Care of central venous access device. [online] [Accessed 04 January 2011] Available at:
<http://www.renal.org/clinical/GuidelinesSection/Guidelines.aspx/>



We are currently working towards a smoke free site. Smoking is only permitted in the designated smoking areas.

For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169

Help with this leaflet:



If you would like this information in another language, large print or audio format, please ask the department to contact Patient Information: 01223 216032 or

patient.information@addenbrookes.nhs.uk



Document history

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