

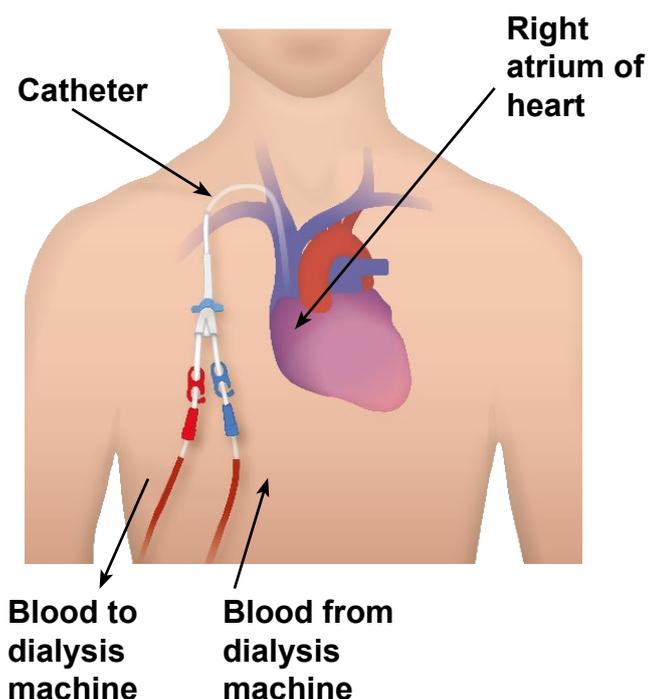
# Insertion and care of a tunnelled dialysis line

## Information for patients

To support renal patients in Kent, the Renal Department at Kent and Canterbury Hospital has produced this leaflet to answer questions related to tunnelled line insertion for patients who are starting dialysis.

### What is a tunnelled dialysis line?

- A tunnelled dialysis line is a long lasting but not permanent, flexible plastic tube that is inserted into a vein (blood vessel) in your neck.
- The line has a cuff which sits just under the skin of your chest wall, that sticks to it to prevent the line falling out.



- A dialysis line is usually inserted because blood tests have shown that your kidneys are not working properly, with a build up of toxins and excessive fluid.
- The dialysis line takes blood from your body and passes it through an artificial kidney (filter) on the dialysis machine. This machine removes the toxins in a process known as haemodialysis. The blood is then returned to your body through the same dialysis line.
- Usually the dialysis line is inserted into a vein in your neck. Occasionally other veins are used, for example at the top of your leg (groin).



## Why might I need a tunnelled line?

You may need a tunnelled line because you need a timely access until a permanent access via fistula or graft is established.

## What do I need to do to prepare for the insertion of a tunnelled dialysis line?

If you are taking any medicines that thin your blood, such as anti-platelet medicines (for example aspirin or clopidogrel) or anticoagulant medicines (for example warfarin or rivaroxaban), please tell your doctor or nurse. They will tell you when to stop these medications before your procedure (the number of days will depend upon the drug) and when it is safe to restart them again after your procedure.

## Will I have anaesthesia?

In almost all cases we will use local anaesthetic, so you will be awake during your procedure but will not feel pain.

If you have local anaesthetic you can continue to eat before your procedure. We recommend that you do not eat a large meal for six hours before your procedure, but you can still take sips of water or drink.

## What will happen before my procedure?

The doctor who is doing the procedure will ask you to sign a consent form that says you have agreed to the procedure and that you understand the benefits, risks, and other options. Please use this time to ask the doctor any questions.

Remember you can withdraw your consent for treatment at any time.

## What are the risks to this procedure?

We take precautions to reduce any risks, for example, we use an ultrasound scanning machine to help us position the line, and take specific measures to reduce the risk of infection. Further details of the possible risks/complications can be found below.

### Common complications

There can be complications with any medical procedure, but these are not usually things to be overly worried about.

- **Pain or bruising at the insertion site:** this usually settles after 48 hours with painkillers such as paracetamol.
- **Bleeding from the exit site** (the point at which the line comes out through the skin) at any time. If there is any bleeding, apply pressure to your exit site and contact your Haemodialysis Unit, the renal access nurse, or Marlowe Ward for advice (the contact details are at the end of this leaflet).

If the bleeding is heavy or does not stop, dial 999 for an ambulance to take you to hospital, or if possible get someone to take you to your nearest Emergency Department.

- **The dialysis line falls out.** In the unlikely event that your line falls out, apply firm pressure using all fingers on the side of your neck on the same side as the line and over the site, and immediately contact your Haemodialysis Unit, the renal access nurse, or Marlowe Ward for advice (the contact details are at the end of this leaflet). Please keep the line for the renal staff to see.
- **Failure of the procedure.** If the vein is blocked or very small we may need to try again with the support of a radiology consultant. This could happen on the same day, or more likely will be rescheduled for another day.
- **Infection** can affect either the exit site (exit site infection) or the blood stream (bacteraemia). Treatment may involve antibiotics, and sometimes removal of the dialysis line, or both.
- A **fast or irregular heart beat** may happen during your line insertion or after your procedure, but should resolve on its own.

### Rare complications

- **Damage to the surrounding structures** (these include the vein itself, as well as the muscle, nerves, and artery). The artery often lies next to the vein, and accidental arterial injury happens during three in every 100 procedures and may result in some bruising in your neck. If there is a lot of bleeding, your procedure may need to be cancelled. Very rarely, an operation may be needed to control the bleeding.
- **Pneumothorax or hemothorax** (escape of air or blood around the lung). This may happen if the upper dome of your right lung is accidentally punctured by the needle (pneumothorax), or when a structure (such as a large blood vessel) within the chest cavity is accidentally damaged (hemothorax). This might allow air or blood into the space between your chest wall and your lungs. This does not happen very often (one in 400 cases) and a lot of the time it gets better on its own, but sometimes another procedure may be needed to allow air or blood to escape and your lungs to re-inflate.
- An **air bubble entering the bloodstream.** Rarely, a large air bubble may travel to your heart or brain, causing symptoms like that of a heart attack or stroke. We monitor you during your procedure to make sure this does not happen. If it does we will refer you to a heart or stroke specialist for further management.
- **Narrowing of the vein that the line is in** can sometimes happen from long standing lines. It causes inflammation and narrowing of your central vein, and you may notice your face is puffy or swollen. You should tell your doctor immediately if you notice this.
- **Blockage of the line or the vein that the line is in.** If a blood clot is blocking the line, it may be necessary to give some medication down the line to unblock it. If a blood clot is blocking the vein, a deep vein thrombosis (DVT), you would need to take blood thinning medication for three to six months to help with this problem.

### Where will the procedure take place?

The procedure usually takes place in the Marlowe Ward in Kent and Canterbury Hospital and is ultrasound scan guided.

If further imaging is needed for line insertion then this will happen in the X-ray Department in Kent and Canterbury Hospital, but you will still start your procedure preparation on Marlowe Ward.

### What happens during a tunnelled dialysis line insertion?

- It usually takes 35 to 45 minutes to insert your line.
- You will need to lie down, and your heart will be monitored throughout your procedure.
- The site of insertion in your upper chest is cleaned to make it sterile, and sterile drapes are placed over you.
- Local anaesthetic is injected into your skin. Once the anaesthetic has numbed the site of insertion, a needle is placed into your vein with the help of an ultrasound machine.
- The dialysis line is then 'tunnelled' under your skin, before exiting from the skin on your upper chest wall. The line is held securely in place with two stitches.
- A sterile dressing is then placed over the exit site.



**An inserted tunnelled dialysis line**

### What happens after my procedure?

You will have a chest x-ray in the X-ray Department to check that the tunnelled dialysis line is correctly positioned and that no complications happened due to the line insertion. After that you would usually be free to return home or to attend for dialysis.

If you are taking blood thinning medication, this can usually be restarted the day after your procedure. The doctor inserting your dialysis line will confirm this with you.

## How should I care for my line and reduce the risk of infection?

- The exit site must be covered by a dressing at all times to prevent infection; this will be changed by your dialysis nurse. The less your line is able to move, the less likely it is to become infected.
- The stitches near the exit site should be removed 21 days after line insertion. The skin stitch(es) at the line entry site on your neck can be removed after seven days. This will be done by the nurses after your dialysis session, when due.
- Do not get your dressing wet, take a shower, or go swimming whilst you have a line. A shallow bath is okay but do not pour water over your line. If the dressing gets wet, bacteria may enter the exit site or line and cause an infection. Ask your dialysis nurse for further advice.
- We recommend that you do not replace the dressing if it becomes dislodged. Contact your Haemodialysis Unit, the renal access nurse, or Marlowe Ward for advice (the contact details are at the end of this leaflet).
- If you must touch your line, make sure you have washed your hands. This applies to anyone touching your line, including the doctors and nurses who should follow the complete antiseptic techniques. Always feel free to ask your doctor or nurse whether they have washed their hands before they examine you.
- Immediately report any signs of swelling, tenderness, fever, pain, or oozing from the skin exit site to either your Haemodialysis Unit or renal access nurse.
- Unless it is a medical emergency your line should only be used for dialysis by trained staff. If you have any concerns, please refer staff to Marlowe Ward or your Haemodialysis Unit.

## When can I resume my normal activities?

Should you have questions about taking part in sports, you can ask your doctor. We do not recommend that you take part in any contact sports. If you do play sport make sure that your line is taped securely to your chest and lumen clamps are closed.

## How long will the line stay in?

This will depend on your dialysis plan. If you are going to have dialysis for a longer period you will be referred to a renal access nurse to discuss a fistula, which may be the best long term access option for you.

## How is the line removed when I no longer need it?

You will be given an appointment to come to Marlowe Ward. The line will be removed by a doctor or specialist nurse using local anaesthetic. Please allow a few hours for your visit.

You will have several stitches that need to be removed seven days later by a renal nurse or your GP.

## What if I have questions or concerns?

If you need to speak to a member of staff out of hours, please contact Marlowe Ward.

Please ask your nurses or doctors if you have any questions or have not understood this information.

- **Renal Dialysis Access Nurses**, Kent and Canterbury Hospital (K&C), Canterbury  
Telephone: 01227 86 43 05
- **Thomas Becket Haemodialysis Unit**, K&C  
Telephone: 01227 78 30 47
- **Haemodialysis Unit, William Harvey Hospital (WHH), Ashford**  
Telephone: 01233 65 18 72
- **Haemodialysis Unit, Queen Elizabeth the Queen Mother Hospital (QEQM), Margate**  
Telephone: 01843 22 55 44
- **Haemodialysis Unit, Medway Maritime Hospital, Gillingham**  
Telephone: 01634 82 51 05
- **Haemodialysis Unit, Buckland Hospital, Dover**  
Telephone: 01304 22 26 95
- **Haemodialysis Unit, Maidstone Hospital, Maidstone**  
Telephone: 01622 22 59 01
- **Marlowe Ward, K&C**  
Telephone: 01227 78 31 00 or 01227 86 64 56

**This leaflet has been produced with and for patients**

If you would like this information in **another language, audio, Braille, Easy Read, or large print** please ask a member of staff. You can ask someone to contact us on your behalf.

**Any complaints, comments, concerns, or compliments** please speak to your doctor or nurse, or contact the Patient Advice and Liaison Service (PALS) on 01227 78 31 45, or email [ekh-tr.pals@nhs.net](mailto:ekh-tr.pals@nhs.net)

**Patients should not bring in large sums of money or valuables into hospital.** Please note that East Kent Hospitals accepts no responsibility for the loss or damage to personal property, unless the property had been handed in to Trust staff for safe-keeping.

**Further patient leaflets** are available via the East Kent Hospitals web site [www.ekhuft.nhs.uk/patientinformation](http://www.ekhuft.nhs.uk/patientinformation)