



Insertion of a tunnelled line

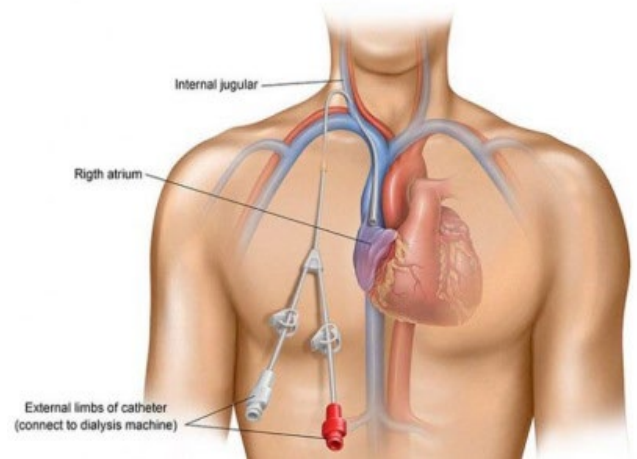
This leaflet explains how a tunnelled line for haemodialysis is inserted under the skin on your chest. It outlines what to expect, lists possible complications and gives aftercare advice following the procedure.

Why do I need a tunnelled line?

Your doctor will have discussed with you that it is necessary to begin haemodialysis. Haemodialysis requires regular vascular access (access to the blood stream). You may need to have a tunnelled dialysis line (either a Tesio or Hemosplit) as a useful 'bridging' device to give time for an AV (arterio-venous) fistula to be created and develop (see AV fistula leaflet).

What is a tunnelled line?

A tunnelled line is a pair of soft plastic tubes that may be either separate or joined together depending upon which doctor is carrying out the procedure. The tubes are inserted into a large central vein in your neck for the purpose of taking and returning blood for dialysis. The procedure is done under local anaesthetic – i.e. you are awake but will have injections to make the area feel numb. You will be aware of some slight pressure and pushing as the line goes in.



The two lines are 'tunnelled' under your skin and come out part way down the front of the chest wall so that the lines are not visible in the neck and cannot be seen when wearing your ordinary clothes.

The tunnel helps to prevent any infection developing.

A few days before the procedure, we will ask you to have the following:

- A blood test – to check the clotting of your blood and kidney function.
- If you are on a tablet by the name of Warfarin or Clopidogrel you will be asked to stop taking this five days prior to the procedure.
- We will take swabs from your nose and throat to detect *Staphylococcus aureus*, which is a naturally occurring bacterium (germ) that lives on the skin. It is present in approximately 60% of the population. Preventative measures against possible infection from this will be taken until we get the results back from the swabs.

On the day of the procedure

On the morning of admission, you should not eat from midnight and only drink water until 6.00am. We will ask you to attend the hospital for 8.30-9.00am.

When you arrive in hospital, we will ask you to shower using *Octenisan liquid* soap and apply *Naseptin* cream to your nasal area. We will give you a gown to wear.

Inserting the tunnelled line

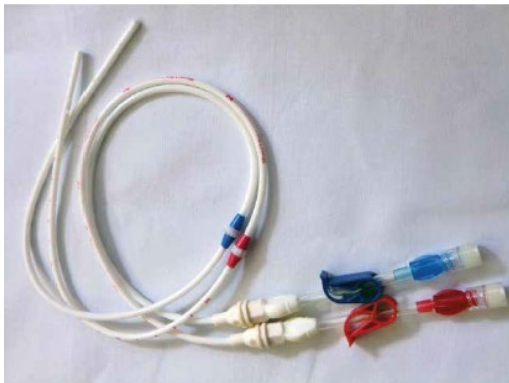
If you have previously had a tunnelled line and you are coming to have that line changed then you may be given an antibiotic infusion (drip) prior to the line insertion procedure.

The procedure is done in the X-ray Department (Radiology) under “sterile conditions” with you lying down and awake. You can request sedation to help you feel more relaxed if you wish. Having sedation will mean you will have to stay at the hospital longer until this wears off. The doctor will wear a gown and your chest and face will be covered with large sterile paper sheets. The sheet will be adjusted and raised up so that you can see out.

If you are having the line inserted on the right side, we will ask you to look to your left.

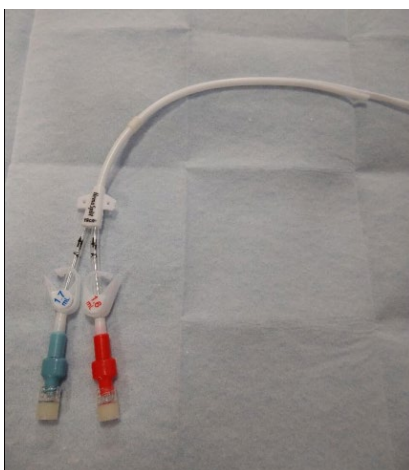
If the tube is on the left, you will be asked to look to your right. You will need to stay in this position for the procedure. Please let us know if you may find this difficult.

Local anaesthetic is used to freeze the skin of the lower neck and the chest wall. It may sting initially but will then feel numb. Using ultrasound and X-ray pictures for guidance, a needle is passed into a vein in the lower part of the neck and a series of tubes is then used to introduce the soft dialysis catheter into the vein that runs from the neck to the heart.



The ends of the tubes are then tunnelled under the skin to the front of the chest. The whole procedure usually takes an hour and once finished, you will return to the ward. You will need to stay in hospital for a minimum of 2-4 hours, but an overnight stay is not usually necessary. You may be in a little discomfort after the procedure, but taking simple painkillers such as Paracetamol should help this.

Left: Two separate tubes for tunnelled line access.



Left: One tubed tunnelled line access.

The ends of your line are held in place with something called a stat-lock. This is a device which is stuck to the skin on your chest. The ends of your line are clipped into this to prevent them from moving. It is really important that you wear this stat-lock for the first couple of months after your line insertion.

Complications

As with all surgery, there can be complications although they do not happen often.

Possible complications include: bleeding, which may require a blood transfusion; infection, complications of anaesthetics, sedatives and other drugs and excessive swelling and bruising around the operation site. Most of these complications will resolve without much intervention but some do require specific treatment.

A much rarer complication is a puncture of the lung that may cause the lung to collapse. This would be recognised and treated immediately, possibly with a chest drain. All these potential complications will be discussed with you prior to obtaining your consent for the procedure.

How is a tunnelled line used?

After insertion, your tunnelled line could be used straight away if really necessary, although usually it is left for 24 hours before being used. The exit site (where the tunnelled line goes into the skin of the chest wall) will be covered with a small dressing. This will be changed when you attend for your dialysis session. The line is initially held in place with a few stitches which will be removed after 10-14 days later. This can be done at the dialysis unit.

At each dialysis session, one of the tubes (with a red clamp) is used to take the blood to the dialyser to be 'cleaned' and then the cleaned blood is returned to you via the other tube (with a blue clamp). At the end of each dialysis session a very small volume of a drug called *Heparin*, is put into each tube and then small plastic caps are placed on the ends to keep them closed off till the next dialysis. Heparin is used to stop the tubes from becoming clotted with blood. The ends are then wrapped in gauze until the next dialysis session.

How do I care for my tunnelled line?

Your access for haemodialysis is very important and the nurses, doctors and patients must always treat the tunnelled line with great care.

The following are the main points to be aware of when you have a tunnelled line:

- The exit sites must be kept covered with a dry sterile dressing at all times. The nurses in the Dialysis Unit will do the dressing. Please do not do the dressing yourself or attempt to clean the site. If the dressing becomes loose simply cover with a further dressing and it will be done by the dialysis nurses on your next visit.
- Phone the contact number below immediately if one of the caps comes off.
- You must keep the whole area dry. Showers are not advised. It is recommended that you bathe rather than shower to keep it dry, and you cannot go swimming.
- Your tunnelled line is only for haemodialysis access. Blood samples should be taken from elsewhere and no intravenous drugs should be given through the line.
- You must be careful not to bump or knock the line as this can damage it. Do not use any sharp objects i.e. scissors, around the tunnelled line. Do not pinch, poke, bend or pull the tunnelled line.
- If either of the lines should ever fall out, apply pressure at the site with a sterile dressing or gauze, and contact the number listed below.
- If there is excessive bleeding through the dressing and around the exit site of the tunnelled line, pressure should be applied on top of the existing dressing and you should contact the number listed below.

- If the tunnelled line becomes sore, painful or discharges, you must let the Haemodialysis Unit know (day or night), especially if you feel unwell and have a temperature. These may be symptoms of a serious infection in your blood stream, which must be treated promptly with antibiotics. The tunnelled line may need to be removed.
- **Phone your Dialysis Unit immediately if one of the lines falls out or one of the caps comes off the end.**
 - **Reading Benyon Haemodialysis Unit:** 0118 322 8360 (6am–11pm, Mon-Sat).
 - **Reading Huntley & Palmer Haemodialysis Unit:** 0118 322 8520 (6am–1pm, Mon-Sat)
 - **Windsor Dialysis Unit:** 01753 866008 (7am–11pm Mon-Sat, closed evenings Tues, Thurs and Sat)
 - **Bracknell Dialysis Unit:** 01344 662961 (Open 7.30am–7pm Mon-Sat).
 - **Enborne Dialysis Unit:** 01635 273640 (Open 7.30am–7pm Mon-Sat)
 - **Out of these hours, please telephone Victoria Ward 0118 322 7476 and they will advise you.**

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

RBFT Department of Renal Medicine, January 2025

Next review due: January 2027