

Insertion of your Haemodialysis Line

Renal Medicine

The prevention of infection is a major priority in all healthcare and everyone has a part to play.

- Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available
- If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111
- Keep the environment clean and tidy
- Let's work together to keep infections out of our hospitals and care homes.

Introduction

This leaflet explains what a haemodialysis line (catheter) is and tells you what happens before and during your haemodialysis line insertion.

It explains the benefits, risks, and alternatives, and the need to obtain your consent prior to having this procedure.

What is a haemodialysis line?

A dialysis line is a thin flexible plastic tube that is inserted through the skin into one of the large veins, usually in the neck or the groin at the top of the thigh. Once the 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.

There are two types of lines used on the Renal Unit. These are:

- **Temporary lines:** these are very quick to insert and are usually only used for emergency dialysis. If long term dialysis is required, it will be changed to a tunnelled line at a later stage. These lines are generally not left in your body for longer than 72 hours. If a temporary groin line is inserted, you will either be admitted to hospital while the line is in you (if you have come from home for dialysis treatment) or it will be taken out by a nurse when the dialysis treatment is completed. You will have to stay in the hospital for two hours following the line removal
- **Tunnelled lines:** require a little more time to insert as they are tunnelled under the skin where they embed and can stay in for longer. Tunnelling helps reduce the risk of infection

Why do I need to have a dialysis line inserted?

It is usually done because blood tests have shown severe kidney failure. In this situation, dialysis treatment is required to remove the poisons and fluid normally removed by the kidneys.

Will I need to give consent?

There will be an initial discussion about the procedure with a senior renal trained nurse. You will be asked to sign a consent form if you agree to the procedure, both at the first discussion and again before the date of the procedure. Your doctor will explain the risks, benefits and alternatives where relevant before they ask for your consent. This leaflet is for you to use as a reference and you can ask any questions relating to the procedure at this time or on the day of the planned procedure.

What are the benefits of having a dialysis line inserted?

Once the dialysis line is inserted, you can be attached to a haemodialysis machine to have your treatment. This may avoid you developing serious complications from kidney failure such as breathlessness or the heartbeat stopping.

What are the risks and complications that may occur?

Dialysis line insertion carries a small risk of complications. The most common complications are:

- Risk of infection from the procedure. This is minimised by using a strict aseptic technique by the doctor or nurse and the dose of antibiotics after the line insertion
- Damage to a vein or an artery from the equipment used to insert the line
- With a neck line, there are many structures in this area which are at risk of injury. This risk is minimised by the use of an ultrasound device to aid the doctor during the procedure
- Punctured lung (as above). If this occurs you might need to have a tube inserted into your chest for a few days to re-inflate your lung (less than 1 in 100) or very occasionally (less than 1 in 1000), an operation would be needed to repair the puncture
- Excessive bleeding: if the 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

- It is important to tell the doctor doing the procedure if you suffer from any bleeding conditions or take any blood-thinning tablets such as Warfarin or Aspirin. You should also tell us about any allergies that you have
- There is a risk that the procedure may fail or the line may not work despite the doctor using the equipment or adopting a good technique. If this happens, it may be necessary to repeat the procedure again at the same or a different site

Although deaths have occurred following complications of dialysis line insertions, this is extremely rare.

What is shared decision making?

The choice about which treatment is best for you will be made together with your doctor. This will be based on the risk and benefits of the treatment and your individual circumstances.

What are the alternatives to having a dialysis line inserted?

A dialysis line is inserted in order to pump your blood around the haemodialysis machine for dialysis and without it this type of treatment may not be possible.

For long term haemodialysis, you will be assessed for a fistula or a graft, but this cannot be used immediately for urgent dialysis and you will be given more information about this in the future.

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 (bowel, guts) and draining fluid in and out of the tube. This type of treatment (called peritoneal dialysis) is not usually suitable as an emergency treatment. The alternatives to dialysis to treat severe kidney failure, such as drugs and changes to the diet, usually do not prevent the complications of kidney failure in your situation. Your doctor should be able to tell you what changes and treatment could be made for your kidney failure, should you decide not to have dialysis.

Before Insertion

What preparation will I need?

Dialysis lines and their insertion carry a risk of infection. In an attempt to reduce the occurrence of infection:

- You will have swabs taken from your nose, armpits and groin and any wounds in order to screen for the presence of infection, including MRSA
- If your swabs show that you have an infection, antibiotic cream for your nose and an antiseptic solution for you to wash in will be provided by the hospital. After a course of treatment, you will be re-swabbed. Your line insertion will take place once the swabs indicate that you are free from infection
- You will be asked to have a bath or shower using the antiseptic solution provided by the hospital before the procedure is done
- If your line insertion is urgent or an emergency, swabs will still be taken and you will have treatment with antibiotic cream for your nose until the results of the swabs are known. If there is no infection, the antibiotic treatment can be stopped
- You will also be required to have a wash using the antiseptic solution until the swab results are known
- You do not need to fast prior to this procedure as it is performed under local anaesthetic. You will remain awake during the procedure accompanied by a nurse from the Renal Unit
- You will need a blood test to measure your blood clotting and full blood count regardless of whether you take any blood-thinning medications
- It is important to tell your doctor or nurse if you are taking any blood-thinning medications such as Warfarin, Clopidogrel or Aspirin. You should also advise the doctor or nurse if you are allergic to any medications or skin-cleansing agents such as Chlorhexidine or Iodine

Where will the line insertion take place?

Usually in the Renal Unit, but sometimes, it may be necessary to have it inserted in the X-ray department. In an emergency, it may be inserted on the ward.

How long will it take?

It usually takes less than an hour to insert your line.

How is it done?

- You will need to lie down, quite flat on a trolley and expose the area that the doctors have chosen for your line to be placed. The trolley might need to be tilted so that your head is slightly lower than your feet. Your privacy and dignity is maintained at all times during the procedure
- The doctor will locate and assess your vein using an ultrasound machine
- Your skin will be cleaned by the doctor with an antiseptic solution. Sterile drapes are used to maintain a sterile environment and you will be asked not to touch these by trying to remain as still and relaxed as you can during the procedure. A nurse will be with you whilst an experienced doctor inserts the line. You may ask any questions during the procedure
- Local anaesthetic is injected into the skin around the vein; this stings a little but becomes numb after a few minutes. Following this, you should not feel any pain just a little pressure as the tube is inserted into your vein. If you do experience pain, let the doctor or nurse know and you will be given more anaesthetic
- Once the line is in place, it is secured to the skin by stitches and a dressing is applied. This dressing is a special type designed to stay in place for seven days to reduce infection risks. The stitches will be removed by nurses and they will advise you when these are to be removed
- Occasionally, it will not be possible to successfully insert the dialysis line. If this happens, the doctor will explain why and what will happen next

What happens after I have had my line inserted?

- If your line is in your neck, you will have a chest X-ray to check the line is in the correct place
- You will be given antibiotics in a drip to reduce the risk of infection from the line insertion
- You may need to have your first haemodialysis session immediately following your line insertion
- If you are well and have no complications following your line insertion, you will go home
- You will be given an information booklet on how to care for your haemodialysis line at home

During Haemodialysis

- **IMPORTANT: Do NOT** tamper with your lines and connections. Any line disconnection could result in serious blood loss and a potentially life-threatening situation
- Your dialysis access site and connections must be visible at all times and these will be checked regularly throughout your dialysis
- If you are using a blanket, your face and access site must remain visible. Obviously, your personal dignity will be maintained
- If there are any problems with your line whilst on dialysis, you must call a staff member to attend to you and NEVER attempt to resolve the problem yourself

What if I have any more questions?

If you have any questions, please contact the nurses that usually look after you on the renal unit or the renal unit specialist access nurse.

Contact Numbers

The Haemodialysis Unit	- 01902 695010
Home Therapies Department	- 01902 695011
The Chronic Kidney Disease Team	- 01902 695466
Consultant Nurse	- 01902 307999 ext 86136
Ward C24	- 01902 695015
Vascular Access Nurse	- 01902 307999 ext 82829

Other Information Sources

www.kidneypatientguide.org.uk

www.renalpatients.co.uk

www.kidney.org

www.kidneyresearchuk.org

References

Department of Health (2005) – Saving Lives: a delivery programme to reduce Healthcare Associated Infection including MRSA.

UK Kidney Association.

English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。