

Renal Department

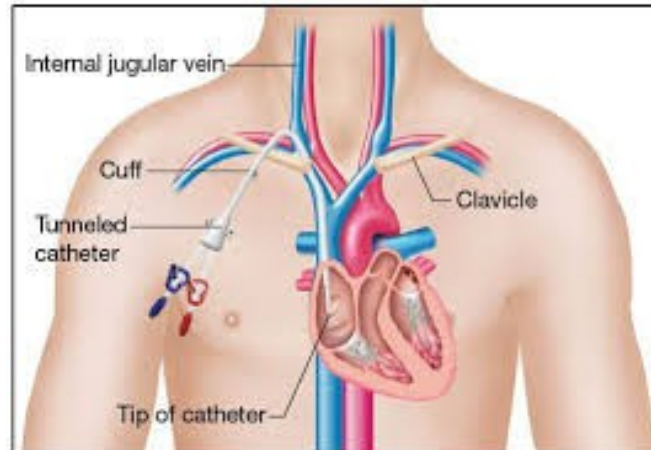
Information for haemodialysis patients – care of the long-term neckline (CVC)

This patient information leaflet aims to advise patients and their families on how to care for their dialysis line (sometimes referred to as a neckline, central line or CVC). Due to the fact that the line is inserted into one of your large veins and sits in the top of your heart, it carries a risk of infection. Therefore, it is very important that you read and follow the advice given in this leaflet.

What is a dialysis line?

A central venous catheter/CVC/ neck-line is a flexible plastic tube that is inserted via an incision on the chest, tunneled under the skin and then inserted into a large vein in the neck. There will be two wound sites – one on your chest and one at your neck on the same side. The tube exits out on the chest and splits into a Y shape. The tube can then be used for haemodialysis. It is divided into two so that blood can flow in and out at the same time during the haemodialysis treatment.

The neck incision will have a couple of sutures to initially close the wound. Eventually there will just be a small scar at this point, so it is essential that you familiarise yourself with the location of this whilst it is still fully visible to be able to stop bleeding in the event of the line being accidentally pulled out.



(Diagram from www.kidney.ca)

How is the dialysis line put in?

The doctor will inject local anaesthetic under the skin on your chest and close to your collar bone. They will then make a small incision and pass the CVC under the skin and into one of the large veins at the neck. The procedure is performed under sterile conditions to minimise the risk of infection. The CVC is held in place with two or three stitches which will be removed by the dialysis nurse after about 3 weeks. By this time the skin will have grown around the dialysis line, and this will hold it in place. The CVC stays in place for as long as

is necessary (sometimes this can be for months). We recommend that you do NOT shower/bath for at least 48 hours after a CVC insertion, please refer to the section 'Taking a bath or shower with the dialysis line in place'.

Is the dialysis line visible and if so, how much of it will be seen?

At the CVC exit site (where the dialysis line exits the skin on the chest), there is a single tube which branches into two, forming a Y appearance. On each branch of the tube, there is a clamp. These clamps prevent blood from coming out of the CVC as well as preventing bacteria from entering the CVC – **these clamps must be kept closed at all times.**

The CVC tube sits on the outside of the upper chest and is about 10 -12cm long. At the end of each branch of the Y, a cap is applied as additional protection against bacteria entering the CVC and causing an infection. **It is essential not to remove these caps yourself.**

How does the dialysis line work?

When you arrive at the Renal Unit or Acute in-patient renal ward for your dialysis, the nurse will remove the caps and clean the ends of the dialysis line. They will take a small amount of blood from each side of the CVC and discard it. The nurse will then flush each side of the dialysis line with saline. The CVC can then be connected to the dialysis machine. Blood will come out of one side of the line; it will pass through the dialyser (artificial kidney) to be cleaned and will return to you through the other side of the dialysis line. Blood is flowing continuously around a circuit but there is only ever a small amount of your blood outside of your body at any one time. When dialysis is completed, the nurse will put saline and heparin (medicine that keeps the CVC line working) into both sides of the dialysis line and sterile caps will be applied to the end of the CVC.

What are the risks associated with having a dialysis line?

The biggest risk is infection

If the cap comes off either branch of the CVC line, there is a risk that bacteria may be introduced into the dialysis line which could make you feel very unwell and could result in septicaemia (blood infection). If a cap accidentally comes off, then contact your Renal Unit or Acute in-patient renal ward immediately (please see contact numbers at the end of this document).

Infection may develop around the exit site, tunnel track or within the bloodstream. It is important that you recognise the symptoms that may occur should you develop an infection.

How will I know if I have developed an infection?

- You may feel feverish, hot, cold, clammy, and shivery.
- You may feel generally unwell.
- You may notice redness, or discharge from around the exit site.

- You may also feel some pain coming from the exit site area.

Other risks

Other risks may include bleeding from the exit site, the CVC may dislodge/get pulled out, or clots may develop in the dialysis line itself. These scenarios may require additional care or treatment by your Dialysis Access Nurse Specialist, dialysis nurse or other specialist departments such as Radiology.

Care of your dialysis line

How is the exit site cleaned?

At each dialysis treatment the dialysis nurse will clean around the exit site using a special cleaning agent containing Chlorhexidine or iodine which are both types of disinfectant. A sterile dressing is then applied over the exit site.

It is recommended that the exit site is covered with a special dressing called a Tegaderm™ CHG. This type of dressing can remain in place for 1 week before needing to be changed. It contains an antibacterial gel pad to reduce the risk of infection and is recommended by the National Institute of Clinical Excellence (NICE). It is very important that you do not remove or change your dressing yourself as this can increase the likelihood of infection.

As an additional precaution to reduce the risk of infection, your Renal Unit or Acute in-patient renal ward will issue you with a body wash called Octenisan® which reduces the presence of bacteria on the skin. Please use this before each dialysis treatment to help reduce the risk of infection between your visits to the Renal Unit or Acute in-patient renal ward. Use Octenisan® as if it were a liquid soap by applying with a damp washcloth in the bath or shower and leave on for 3 minutes before rinsing. This can also be used to wash your hair.

Taking a bath or shower with the dialysis line in place.

Taking a bath or shower is possible but you must not allow the CVC or Tegaderm™ CHG dressing from being immersed in water. By immersing the dialysis line in water, there is an increased risk of bacteria entering the exit site which may cause an infection.

It is very important that you take extra care when showering/bathing. We recommend that you do not touch or remove the existing exit site dressing. Instead, cover the area of the dressing with clean gauze and a large clear waterproof dressing which can be supplied by your Dialysis unit. After bathing/showering, remove this dressing along with the gauze, leaving the original dressing in place unless it has become wet (see below).

Will I have to change the dressing and clean the exit site at home?

The Tegaderm™ CHG dressing must always be kept dry and secure to your skin. This will help prevent infection developing and holds the dialysis line firmly in place to prevent it from pulling. It is very important that you take all necessary precautions to avoid your Tegaderm™ CHG dressing from becoming wet or loose. However, in unavoidable situations where it becomes necessary to apply a new dressing at home, please refer to the section '*How to change a CVC dressing in-between visits to the Renal Unit or Acute in-patient renal ward*'.

If you wish to take complete responsibility for your exit site care, this may be possible following training and assessment with a trained dialysis nurse. You will be required to sign an agreement that states you understand the care needed and the risks involved with undertaking self-care of your CVC line. In this situation, dialysis staff would still need to view your exit site on a weekly basis.

How to change a CVC dressing in-between visits to the Renal Unit or Acute in-patient renal ward

Always remember to wash your hands before changing your Tegaderm™ CHG dressing. Good hand washing is essential - remove any jewellery and please have bare arms below the elbow. Always use soap and clean for 30 seconds under running water, concentrating on the areas between your fingers and around your nails. Please dry using a clean towel.

Do not touch the exit site area unnecessarily. There is always a risk of infection when the exit site is exposed.

Check the Tegaderm™ CHG dressing on removal for any signs of bleeding or discharge. Please report any signs of infection or bleeding to your dialysis nurse as soon as possible.

Always discard the old Tegaderm™ CHG dressing into the bin. Wash your hands in-between the removal of the old dressing and the application of a clean dressing, as per instructions above. Apply the new Tegaderm™ CHG dressing, touching only the outer corners.

Do not use talcum powder or lotions around the exit site. These too could be potentially harmful to you by the introduction of unwanted bacteria onto your skin. If you have a cold or cough avoid dressing changes at home or ask someone else to do it for you.

Will I be able to swim with the dialysis line in place?

Regrettably, swimming is not permitted with a CVC in place. Swimming pools contain a host of germs which could enter the exit site, cause an infection and make you very unwell.

What happens if my dialysis line seems to have moved or completely fallen out?

Always treat your CVC with great care and avoid accidentally pulling on the line e.g., when getting dry after a shower/bath or turning over in bed.

Occasionally the skin does not grow sufficiently around the CVC to keep it in the right place. This may result in the dialysis line being pulled out slightly or even completely.

Full accidental removal

- Remain calm.
- Ideally, the patient should lay flat or even slightly head-down (head lower than feet). If this is not possible at least encourage them to be still.
- Initially ignore any bleeding at the chest as the bleeding point will be from the large vein at the neck on the same side in which the line has been inserted.
- Apply firm pressure for 10 minutes at the neck scar (not the chest), with two fingers, where the neck-line was inserted into the large vein as described at the beginning of this document.
- If active bleeding continues at the chest wound, it is usually due to inadequate pressure at the site or pressure at the wrong site. Therefore, adjust your fingers until the bleeding at the chest stops then continue to maintain the pressure for 10 minutes. At this point, if required, minor additional pressure can be applied at the chest exit site of the line.
- If you are still unable to stop the bleeding, then call 999 for conveyance to the Emergency Department.
- If bleeding has stopped after 10 minutes, wash hands thoroughly with soap and water and apply a clean dressing or gauze and tape over the chest exit site.
- Call the Acute Renal Service on Langley ward (24 hours) – 01603 646639 or 01603 647829 for further advice and admission for assessment.

Partial accidental removal

- Remain calm.
- If the line has been partially pulled out, do not pull it out completely.
- Use tape or dressings to secure the line to the chest to prevent any further dislodgement.

- If there is evidence of active bleeding at the chest exit site, encourage the patient to lay or sit down and then apply pressure to the neck as described above.
- Call the Acute Renal Service on Langley ward (24 hours) – 01603 646639 or 01603 647829 for further advice and admission for assessment.

Who can use your dialysis line?

It is **essential** that your CVC is **only used by dialysis trained staff**. Other departments and health care staff are **not permitted** to use your dialysis line for taking bloods or administering drugs. If other healthcare workers ask to use your line, ask them to contact the Dialysis Access Nurse Specialists, the Dialysis unit or the Acute in-patient renal ward for advice - **do not allow them to access your line**.

When to contact the Dialysis Access Nurse Specialists, Dialysis unit or Acute in-patient renal ward

- If you have symptoms of infection as above.
- If you develop severe pain or swelling in your arm on the same side as your dialysis line.
- The caps come off the CVC or the clamps break.
- A hole or tear appears in the CVC tubing.
- Bleeding occurs from the CVC exit site or tubing.
- If the CVC comes out completely or appears to have moved.

Dialysis Access Nurse Specialists

01603 288666 (Monday to Friday 08.00-18.00)

The Norfolk and Norwich Kidney Centre (Dialysis Unit)

01603 288240 (Monday to Saturday)

Cromer Dialysis Unit

01603 646155 (Monday to Saturday)

Acute in-patient renal ward (Langley)

01603 646639 or 01603 286069 (24 hours)

Useful websites for further information: <http://www.bjrm.co.uk/patient-information.aspx>

