

Renal Department - Haemodialysis Access.

Information for patients choosing to dialyse with a neckline (CVC), rather than a fistula/graft.

For effective dialysis treatment, good access to your blood stream is required. Dialysis treatment can be given using different types of access. The recommendations of The Renal Association are as below -

- First choice - A fistula (also known as arteriovenous fistula or AVF)
- Second choice – A graft (also known as arteriovenous graft or AVG)
- Third choice - A catheter placed into a central vein (sometimes referred to as a line, neckline, central line, or CVC)

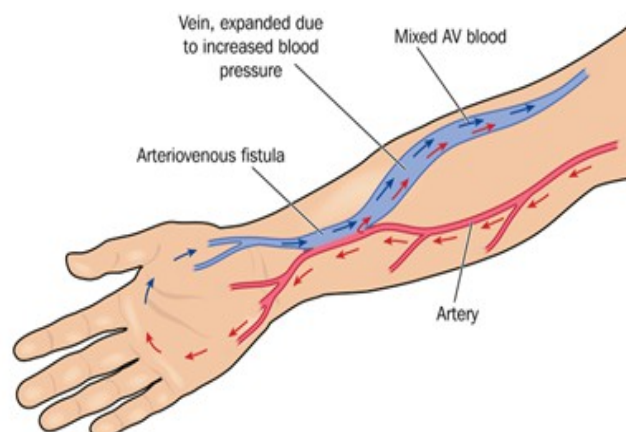
Some patients however are unable to have a fistula or graft or would prefer to dialyse via a CVC line.

It is important that you understand the reasons that a fistula or graft are recommended for dialysis in preference to having a CVC line.

What is a fistula:

A fistula is a surgical connection between an artery and a vein in your arm under the skin. After the surgery has been done, the vein becomes bigger and stronger over time to become the fistula or 'super vein'. The fistula operation is usually done under local anaesthetic, and you can usually go home the same day. Once the fistula is strong enough, this allows needles to be inserted for dialysis.

(Diagram from www.kidneydisease.com)



Benefits of a fistula or graft:

- Less risk of infections of the blood (septicaemia) compared to lines.
- Better blood flow, therefore more effective dialysis.
- Fistulas/grafts last longer than a line – some fistulas last up to 20 years! Lines often have to be replaced due to infection or blockage.
- Fewer hospital stays.
- Better survival (lower risk of dying compared to patients dialysing through lines).

Disadvantages of a fistula or graft:

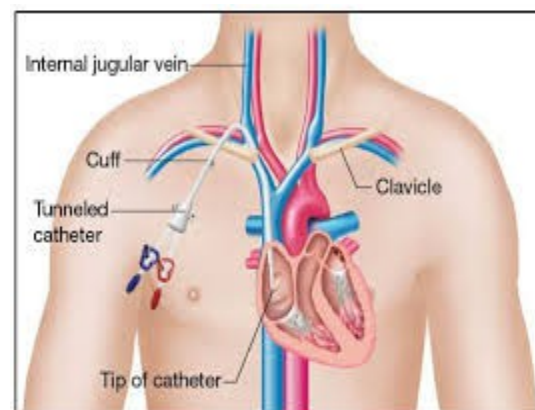
- Sometimes the vein does not stretch enough to be used.

- A fistula takes at least 6-8 weeks to develop after surgery (although a graft can be used straight away).
- Over time fistulas can become large (aneurysmal) or stop working. However, correct needling techniques by the dialysis nurses can reduce the occurrence of aneurysms.
- Some patients experience slightly altered sensations/coldness in their fingers after fistula formation. Usually, this does not cause major concerns for patients.

Dialysis Line:

A line (CVC) is a plastic tube inserted into a vein in the neck that can be buried under the skin of the chest. It is usually a temporary way of gaining access to your blood for dialysis. However, some patients need to (or choose to) dialyse long-term using a line. The procedure to insert a line is performed by doctors either on the ward or in the radiology department under local anaesthesia and you can usually go home the same day.

(Diagram from www.kidney.ca).



Advantages of a CVC/line:

- Can be used immediately for dialysis.
- No needles are required to start each dialysis session.

Disadvantages of a CVC/line:

- Higher risk of infection of the bloodstream (septicaemia) – this can lead to complications such as infection of the heart valves or spine.
- The line can become blocked and cause frequent alarms on the dialysis machine. Lines rarely last longer than a year without complications and may require replacing at times.
- Lines tend to allow for a lower blood flow than a fistula, therefore dialysis may take longer and be less effective.
- The line must be kept dry; therefore, swimming and bathing are not allowed. The line must be covered in order to shower, and the dressing must be kept in place at all times.
- Lines can cause 'scarring' in the vein (called stenosis). This may lead to problems with blood flow such as swelling in the face or arm. It also makes future access for dialysis extremely difficult.

Your dialysis nurses and Dialysis Access Nurse Specialists are very happy to discuss this with you further if you require more information, now or in the future. Although a fistula or graft are the recommended access types, if you opt for a line for dialysis, it is your choice, and this will be respected. You are always able to change your mind if you would like to consider having a fistula at any point. If you would like to speak with the Dialysis Access Nurse Specialists, then your dialysis nurses can arrange this for you.

