

Buttonhole cannulation technique

This leaflet is intended to provide you with information about the buttonhole cannulation technique.

What is the buttonhole cannulation technique?

Buttonhole is a way of cannulating (putting needles in) your arteriovenous fistula (AVF). The needles are inserted in exactly the same site at every dialysis session. This technique can only be used for fistulas and not for grafts.

Is it harmful for my fistula to have the needle in the same place all the time?

It is not recommended to go in the same area using different holes, as this weakens the vein wall, causing an aneurysm (bulging). With the buttonhole, the exact same hole is used for every dialysis session and, over time, a tract or tunnel forms. This reduces the formation of an aneurysm thereby maintaining optimum blood flow through the AVF. Other benefits of buttonhole are reduced pain when needles go in and improved cosmetic appearance.

What is the procedure for using the buttonhole cannulation technique?

- Fistula site is washed with soap and water and dried following arrival at the dialysis unit.
- Cannulation sites are carefully selected.
- Hand hygiene and cleaning the cannulation site is very important before and after scab removal to reduce the risk of infection.
- Scabs are carefully removed using a small blunt sterile needle. Do not pick your scabs as this may cause infection.
- The tract is first developed using sharp needles. This takes approximately 8-10 cannulations, however, each patient is different.
- The tract is a tunnel created by the formation of scar tissue, exactly like the hole created for earrings in a pierced ear. This tract goes from the surface of the skin to the vein. Once the tract is well healed there are no nerves or tissues in the path of the needle to cause you any pain when the needles go in.
- It is important that during tract development, sharp needle insertion is performed by the same individual/s (the tracker), at most, three trackers.
- Blunt needles are then used to avoid trauma to the wall of the tract.
- Antimicrobial cream is applied to the buttonhole site following needle removal.

What are blunt needles?

Blunt needles are rounded on the top and do not have a sharp, cutting edge like traditional dialysis needles. Once the buttonhole tract has developed you should not use sharp needles to enter the vein. Blunt needles prevent damaging the formed tract and reduce pain on needle insertion.

What are the advantages of using the buttonhole technique?

- Less pain when inserting the needles.
- Fewer missed attempts during placement, which means less pain. It also helps to reduce the fear of needling.
- Cannulation can be quicker once the tract is formed.
- Decreases anxiety related to needle placement.
- Improves the appearance of the fistula with less bulges and possibly reduces long-term problems.
- Cannulation technique of choice for self-cannulation, reliable and easy to perform.

What are the disadvantages of using the buttonhole technique?

- In the early stages of tract development, scab removal and needling may take longer.
- There is a risk of introducing infection if the scab is not totally removed and the area not cleaned thoroughly.
- There is a possibility that false tracts are created. This makes needling challenging.
- On rare occasions buttonhole tracts may take longer to form with some people than others.

What happens if I dialyse at a unit that does not use this technique?

- If you self-cannulate, request to continue inserting your own needles.
- If you do not self-cannulate, request the staff to needle another part of your fistula using the normal sharp needles.
- We will inform the staff on the other unit at the earliest opportunity that we use the buttonhole technique with you, and we will advise them about needling your fistula.
- We will resume the buttonhole technique when you come back to us.

Further information

NHS Website www.nhs.uk

Kidney Care UK www.kidneycareuk.org

National Kidney Foundation www.kidney.org

Kidney Patient Guide www.kidneypatientguide.org.uk

Vascular Access Society of Britain and Ireland www.vasbi.org.uk

Useful contact details

East and North Hertfordshire Teaching NHS Trust:

- Website www.enherts-tr.nhs.uk
- Telephone 01438 314333

Renal Access CNS and Practitioner:

- Telephone 01438 284624 or 07385 228263

Lister Haemodialysis Unit:

- Telephone 01438 284152

Strathmore Renal Unit (Lister):

- Telephone 01438 285657

St Albans Haemodialysis Unit:

- Telephone 01727 897588

Chiltern Kidney Centre:

- Telephone 01438 288850

Bedford Renal Unit:

- Telephone 01438 286750

Harlow Renal Unit:

- Telephone 01279 278205

Leaflet information

You can request this information in a different format or another language; please speak to your doctor or nurse.

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