

Renal Unit

Using the buttonhole technique for your AV fistula

What is the buttonhole technique?

Buttonhole technique is another way of putting needles in your fistula. It involves inserting blunt needles (instead of sharp needles) in the exact same spot at the same angle and depth every time your needles are inserted.

Is the buttonhole technique a new procedure?

No – the buttonhole technique has been used on AV fistulas for more than 25 years. Because there is little or no pain associated with buttonhole needling, patients are more willing to learn to needle their own fistulas using this technique.

What do you mean by ‘blunt needles’?

Blunt needles are rounded on the top and do not have a sharp, cutting edge like traditional dialysis needles do. Since your access is entered through a specially formed track, there is no need for sharp needles.

What is the track?

The track is a tunnel that is created by the formation of scar tissue – exactly like the hole created in an earlobe for a pierced earring. This track goes from the surface of your skin to the blood vessel wall to allow the blunt fistula needle to position itself correctly for dialysis. Once the track is healed there are no nerves or tissue in the path of the needle to cause you pain.



Why would I want the buttonhole technique used on my fistula?

Research has shown that there are:

- Less risk of a 'blown' needle (swelling from the needle going through the fistula wall)
- Fewer missed attempts to place fistula needles
- Reduced risk of aneurysms (ballooning of the vessel wall).
- Less pain when inserting fistula needles
- Shorter bleeding times after needle removal
- Improved patient comfort because the track is already formed and the needles are blunt.
- This technique is especially useful if your fistula is short and therefore the needling sites are limited.

Is the buttonhole Technique suitable for everyone?

- No, this technique is **only** for use with AV fistulas, **not AV grafts**.
- There is some evidence to suggest that there is a higher rate of infection in patient's using buttonhole technique. Patients who are at high risk of infection or have a chronic skin condition will therefore not be selected.
- You can talk to your dialysis nurse about whether you could benefit from this technique.

What procedures are involved in using the buttonhole technique?

- Cannulation sites are carefully selected.
- Hand hygiene and cleaning the cannulation site is extremely important before and after scab removal to reduce the risk of infection. You must ensure you wash the whole of your fistula arm with soap and water prior to carrying out the procedure, and prior to inserting the needles clean the needle sites with the wipes provided before removing the scab (allowing skin to dry before attempting scab removal) and again post scab removal prior to inserting the needles.
- Scabs are carefully removed using appropriate scab remover. **Do not** pick your scabs as this may cause infection.
- The track is first developed using sharp needles. This takes approximately 8-10 cannulations but each patient is different, it may take longer.

Patient Information

- It is important that during track development, sharp needle insertion is performed by the same nurse or at the most two trackers.
- The track is a tunnel that is created by the formation of scar tissue, exactly like the hole created in an earlobe for a pierced earring. This track goes from the surface of your skin to the outside wall of your fistula.
- Once the track is well healed, there are no nerves or tissue in the path of the needle to cause you pain.
- Blunt needles are used to avoid trauma to the wall of the track.

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