

## Buttonhole Cannulation Protocol for Creation and Maintenance of Tract with Intravenous Needle and Cannula

### (Arteriovenous Fistula Only)

The intravenous (IV) cannula with blunt tip can be used for the maintenance of buttonhole (BH) tracts.

### Procedure

1. Wash hands and the arteriovenous fistula (AVF) with soap and warm running water for at least 20 seconds.
2. Dry hands and the AVF with clean towel.
3. Clean the buttonholes (BHs) with a cleansing agent. Note: Some patients find it easier to remove the scab if the BH sites are soaked with cleansing agent or saline saturated gauze. If this is the case, soak for 2 to 5 minutes.
4. Completely remove scab on arterial BH site with 18-gauge blunt needle.
5. Discard 18-gauge blunt needle. **Do not reuse needle.**
6. Completely remove scab on venous BH site with 18-gauge needle.
7. Discard 18-gauge blunt needle. **Do not reuse needle.**
8. Clean AVF with cleaning agent again.
9. Apply tourniquet above the AVF.
10. Remove the IV needle with cannula needle from protector.
11. Align IV needle with cannula at the same angle as previous cannulations, with bevel facing up over the BH site.
12. Insert IV needle with cannula into arterial BH.
13. Blood will backflow into needle hub.
14. Lower the angle of the needle.
15. Continue to advance IV needle with cannula into the AVF approximately 1 cm into blood vessel.

### Supplies

- 1 Clean towel
- 2 IV needle with cannula (eg, Supercath needles, 17-gauge)
- 3 18-gauge needles
- 1 Package 4 × 4 gauze
- 2 Cleansing swabsticks
- 1 Dressing to secure needles
- 2 Forceps
- 2 10-mL syringes prepared with 6 mL normal saline (0.9%)
- 1 Tourniquet
- 1 Alcohol wipe

## Buttonhole Cannulation Protocol for Creation and Maintenance of Tract with Intravenous Needle and Cannula (cont'd)

16. With free hand hold the rubber adapter with thumb and forefinger, extend the thumb and pull the inner needle out of the outer needle while the palm of the same hand anchors the inner needle.
17. Continue to advance the outer needle while continuing to withdraw the inner needle until the outer needle is treaded within the vessel completely and the outer needle is completely withdrawn.
18. Release the tourniquet.
19. Secure the needle with dressing.
20. Clamp catheter with forceps.
21. Remove rubber adapter (cap).
22. Luer connect 10 mL syringe prepared with 6 mL normal saline to needle.
23. Remove forceps then aspirate and flush the catheter. Assess flow.
24. Clamp catheter with forceps.
25. Repeat steps 9 through 24. Cannulate venous needle.
26. Continue with dialysis initiation protocol.

Protocol adapted with permission from University Health Network, Toronto, Ontario, Canada, cannulation protocol.