

HEPARINIZING A CENTRAL VENOUS ACCESS DEVICE (CVAD)

Why do I need to heparinize a CVAD?

Heparin will maintain patency by preventing blood from clotting and blocking the line.

How often do I need to heparinize?

- Upon completion of an infusion or medication administration
- Frequency and amount is dependent on type and size (gauge) of the CVAD that the child has in situ.
- Please refer to Appendix A at the end of the document.

What you need

- (1) 10ml syringe
- (1) Blunt needle
- (1) Pre-filled Heparin syringe 100u/mL for each lumen
- (1) Prefilled 0.9% Sodium Chloride syringe for each lumen
- (1) 4 x 4 sterile gauze for each lumen
- (1) Alcohol swab for each lumen
- Sharps Container
- Non-sterile gloves

Steps

1. Gather equipment and perform hand hygiene.
2. Check the expiry date and the concentration dose on the Pre-filled Heparin Syringe.
3. Prepare Heparin pre-filled syringe: Hold syringe, loosen protective cap. Pull back on plunger, remove any air bubbles and discard heparin until appropriate amount remains in syringe. Tighten the cap until ready to use. Place on a clean work surface.
 - Do not let end of syringe or cap become contaminated by touching any non-sterile surfaces.
 - Verify the order for heparin, including the concentration and volume needed, and perform an independent double-check (if needed).
4. Loosen the pre-filled 0.9% Sodium Chloride syringe from the package. Remove the white cap and remove any air bubbles from syringe. Tighten the syringe.

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5. If the CVAD is attached to an IV infusion, turn off the infusion pump and close the clamp on the IV tubing.
6. Perform hand hygiene and apply non-sterile gloves.
7. Open the package of sterile gauze and place an alcohol swab on the sterile gauze.
8. Remove the IV tubing from the CVAD and discard the tubing.
9. Grasp IV needleless connector cap with 4 x 4 Sterile Gauze and Scrub the Hub with alcohol for 15 seconds. Allow to air dry for 15 seconds.
 - If CURO is being used, simply remove. No need to Scrub the Hub unless the end gets touched or contaminated.
10. Remove the white cap from the prefilled 0.9% Sodium Chloride syringe. Attach syringe to the needleless connector cap. Flush the CVAD using a turbulent flush method ("push-stop") flushing 5ml into the central line. Using light pressure, pull back on the plunger to check for blood return. Then flush the remaining 5ml using the "push-stop" method.
 - Watch for any resistance, pain, discomfort or leakage of fluid around the CVAD.
 - Turbulent flush will help to clear the CVAD of any fibrin or debris which may be sticking to the wall of the catheter.
 - If there is no blood return, contact your organization or health care team. Continue with the next 3 steps.
11. Remove the cap and attach the Heparin syringe to the needleless connector cap. Slowly flush the required amount of Heparin solution into the CVAD.
12. Remove syringe. Dispose of equipment in appropriate receptacles.
13. Repeat steps #7 - #12 if double lumen.

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Appendix A.

<p><u>Peripheral Intravenous Lines/Extended Dwell Catheter:</u> 0.8 mL every 24 hours or after each use.</p>
<p><u>Non - Tunneled CVAD:</u> 1 mL per lumen every 24 hours or after each use (MAX: 2 times/day)</p>
<p><u>Peripherally Inserted Central Catheter (PICC):</u> 1.9 Fr. Single Lumen: 1 mL every 24 hours or after each use. (MAX: 2 times/day) 2.6 Fr. Double Lumen: 1 mL every 24 hours or after each use. (MAX: 2 times/day) 3-5 Fr. Double Lumen: 2 mL every 24 hours or after each use. (MAX: 2 times/day)</p>
<p><u>Tunneled CVAD:</u> - (2.7 - 4.2 Fr) less than 20 kg: 1.5 mL per lumen every 7 days or after each use. (MAX: 2 times/day)</p>
<p><u>Tunneled CVAD:</u> - (6.6 - 9.6 Fr) greater than 20 kg: 2 mL per lumen every 7 days or after each use. (MAX: 2 times/day)</p>
<p><u>Totally Implanted Devices:</u> 3 mL per lumen every 30 days or after each use. (MAX: 2 times/day)</p>



CHEO uses needleless connector caps which are designed to help reduce the risk of occlusions and infections.

Caution! Curos, caps from syringes, and packaging are choking hazards for children. Please ensure you remove these items from your work area immediately upon completion.