

Central Lines

Central Venous Access Device (CVAD)

Guideline I: Flushing and Administering IV Medication

Guideline II: Site care and Dressing Changes

1. Review or obtain practitioner's order.
2. Gather and prepare necessary equipment and supplies.
3. Wash hands thoroughly prior to and after contact with the patient.
4. Confirm the patient's identity.
5. Provide privacy.
6. Explain procedure to patient and/or caregiver.
7. Raise the bed to waist level before providing care, have patient turn head away from central line and wear mask if able.
8. Put on gloves and, as needed, other protective equipment.

Guideline I: Flushing and IV Medication Administration

Supplies:	Gloves	Mask (for patient and self)	Alcohol prep pads	Medication (if administering)
Sterile injection caps (if needed)		10 ml PF normal saline syringe		10 ml Heparin solution (locking solution)

1. Cleanse needleless connector of all lumens (single, double, or triple) with alcohol pad and allow to dry completely.
2. Attach a prefilled syringe containing preservative-free (PF) normal saline solution to the needleless connector.
3. Unclamp the catheter and, if not contraindicated, aspirate slowly for a blood return. Notify provider if unable to aspirate easily.
4. If you obtain a blood return, inject PF normal saline solution slowly, using push-pause method into the catheter. Do not forcibly flush the device, further evaluate the device if you meet resistance. Notify the provider.
5. Remove and discard the syringe(s).
- 6. If administering IV push medication**
 - a. Attach the syringe with the IV push medication and administer it at the rate recommended.
 - b. Connect second syringe filled with PF normal saline, flush using the push-pause method.
- 7. If indicated, proceed with locking (heparinizing) the central line.**
 - a. Cleanse needleless connector with alcohol pad and allow to dry completely
 - b. Attach a prefilled syringe containing the locking solution (per provider order) to the needleless connector. **See "Quick Reference Guide to CVAD Maintenance"**.
 - c. Inject the locking solution slowly into the catheter.
8. Reclamp the catheter(s).

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9. Place a sterile end cap on the needleless connector(s).
10. Discard used supplies in appropriate receptacles.
11. Remove and discard your gloves and other personal protective equipment worn.
12. Perform hand hygiene.
13. Document the procedure patient's tolerance to procedure and patient/caregiver instructions in the medical record.

Guideline II: Site Care and Dressing Changes

Supplies:	Gloves	Central Line dressing kit	Measuring tape
<ol style="list-style-type: none"> 1. Remove old dressing and discard appropriately, caution not to pull directly on catheter itself 2. Assess the catheter for cracks, leaks, and kinking. 3. Measure external portion of catheter, compare to previous length to check for migration 4. Remove gloves and perform hand hygiene 5. Open Central line dressing kit, set up sterile field and apply sterile gloves and mask and any other personal protective equipment. 6. Clean skin around the insertion site using antiseptic agent, start at insertion site and move outward in circular motions 7. Allow antiseptic to dry for 2 minutes, do not fan, blow or wipe the antiseptic while drying 8. Apply sterile transparent dressing over the catheter insertion site, gently smoothing from center to edge. Alternatively, a sterile 4"x4" gauze dressing and tape can be used if transparent dressing unavailable or site draining. 9. Secure catheter where it extends below the transparent dressing. 10. Discard used supplies in appropriate receptacles. 11. Remove and discard your gloves and other personal protective equipment worn. 12. Perform hand hygiene 13. Label dressing with date, time, initials 14. Document procedure, date, time, any findings, how patient tolerated 			

Attachments: Quick Reference Guide to Central Venous Access Device Maintenance

References:

- Association for Vascular Access. "Association for Vascular Access." *Avainfo.org*, 2020, www.avainfo.org. Accessed 30 July 2021.
- Gorski, Lisa, et al. *Infusion Therapy : Standards of Practice*. 8th ed., Norwood, Ma, Journal Of Infusion Nursing, 2021.
- Perry, A.G., PotterP.A., & Ostendorf, W.R. (2018). *Clinical nursing skills & techniques* (9th ed.). St. Louis: Elsevier



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Historical Reviews & Revisions:

Review	Reviewer's Name(s)	Changes Made?
5/12/2025	Dr. Anderson, Amy Lowe Clinical Dir, Shannon Johnson, Clinical Compliance	New, approved

Quick Reference Guide to Central Venous Access Device Maintenance (Adult)		Flushing (line maintenance)			Flushing after Intermittent Medication / Blood Admin or Blood Draws		Dressing Changes Transparent Semi-permeable Membrane (TSM)	
		0.9% PF Saline	Heparin	Freq. if not being used	0.9% PF Saline	Heparin	TSM w/o gauze	TSM w/ gauze
Types of Central Venous Access Devices (CVAD) include: Peripherally Inserted Central Catheter (PICC), Non-tunneled Central Catheter, Tunneled Central Catheter, & Port	Central Catheters (Jugular-IJ-, subclavian, tunneled, non-tunneled, valved, groshong)	10 mL	Clamps: 10 units/mL (5 mL) No Clamps: NONE	Non-tunneled: Q 24 hrs Tunneled at least 1x a week	10mL after meds; always flush w/ 20 mL after blood draw or administering blood, and PRN	Clamps: 10 units/mL (5 mL) No Clamps: NONE	Q 7 days & PRN	Q 24 hrs & PRN
	Ports If unable to determine type of port, closed end/valved or open end/non-valved, heparization of the port will not affect port functionality	10 mL	PER MD ORDER: 100units/ml (5ml)	Accessed nonvalved / valved: at least 1x week All Deaccessed ports: Monthly or Q 4-6 weeks	10 mL after meds; always flush w/ 20 mL after blood draw or administering blood and PRN	PER MD ORDER: 100 units/ml (5ml)	Q 7 days & PRN	Q 7days & PRN
	PICC/midlines (midlines are NOT central lines, but follow the same flushing guidelines as PICCS)	10ml	Clamps / No clamps: NONE	at least 1x week when not in use	10ml after meds; always flush with 20 ml after blood draw or administering blood and PRN	NONE	Q 7 Days & PRN	Q 24 hours & PRN