



1. Overview

- A single or multi lumen catheter inserted directly into a large vein that is considered part of the central circulation e.g. internal jugular, subclavian and femoral veins.

2. Goal of the Procedure

- To administer medication or fluids that are unable to be taken by mouth or would harm a smaller peripheral vein, obtain blood tests, and measure central venous pressure (CVP).

3. Reference(s)

- [Parrillo, J. E., & Dellinger, R. P. \(2013\). Critical care medicine: Principles of diagnosis and management in the adult \(Fourth ed.\). Philadelphia, PA: Elsevier/Saunders.](#)

4. Required Reading / Review

- [Chapter-4 Central Venous Catheters; Critical care medicine](#)

To access the Clinical Key webpages listed below use the [Direct Link Generator](#) and use the second box on the page (below the OR) to put in the following URLs (one at a time) then click "show URL" to generate a link to the video and information (if the page does not display click on the generated link again)

https://www.clinicalkey.com/#!/content/medical_procedure/19-s2.0-mp_EM-092

https://www.clinicalkey.com/#!/content/medical_procedure/19-s2.0-mp_EM-093

https://www.clinicalkey.com/#!/content/medical_procedure/19-s2.0-mp_EM-094

https://www.clinicalkey.com/#!/content/medical_procedure/19-s2.0-mp_AN-012

5. Required Procedure Competencies

- Assures that needed supplies are at bedside before beginning procedure.
- Demonstrates positioning mannequin properly
 - Femoral: supine with leg extended and slightly abducted at the hip.
 - IJ: supine, slight Trendelenburg, head turned to opposite side
 - SC: supine, slight Trendelenburg, head turned to opposite side
- Verbalizes need for cap, gown and gloves to be worn for procedure and adhering to surgical asepsis. (Only gloves need to be worn for purposes of simulation.)
- Properly establishes a sterile field for the central catheter kit and patient.
- Simulates sterile procedure for loading sterile water syringes
- Begins procedure; may flush all lumens with sterile saline, and may cap or clamp all lumens except most distal one.
- Simulates sterile procedure for draping patient.
- Demonstrates sterile procedure for assembling ultrasound probe
- Properly demonstrates using ultrasound probe to locate IJ. Verbalizes differentiation from carotid artery.
- Completes internal jugular or subclavian central venous catheterization satisfactorily.
- Properly sutures and secures catheter or verbalizes procedure if suturing not appropriate.
- Attaches transparent dressing (verbalizes this step for simulation).
- Disposes of all used materials appropriately, including sharps.
- Confirms patient tolerated procedure, is comfortable and has no questions.
- Orders post-procedure chest radiograph.