



Central Venous Catheter Care Class

Class Objectives

1. Participants will review & demonstrate safe catheter care:
 - Flushing without a cap change
 - Dressing change
 - Cap change
 - Flushing with a cap change

What is a Central Venous Catheter?

- A hollow tube put into a major blood vessel
- Prevents needle sticks
 - Blood can be drawn from the catheter
 - IVs can be infused into the catheter
- Made of silicone or polyurethane
 - Catheters can be left in the body a long time

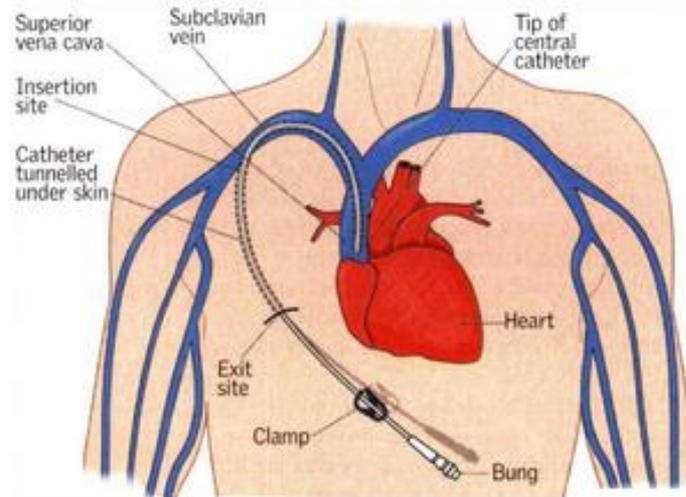
When is a central venous catheter used?

- Therapies such as chemotherapy, transfusions of blood or platelets, stem cell or bone marrow transplants.
 - When frequent blood draws are needed
 - More than 1 IV infusion needs to be given at the same time
 - When special processing of blood is needed (apheresis)

How is a catheter placed?

- If possible take a bathe/shower with an antibacterial soap or CHG the night before or morning of surgery
- Under sterile conditions
 - Interventional Radiology
 - Procedure may take 30 minutes - 1 hour
 - Skin will be cleaned with a disinfectant to prevent germs
 - A local anesthetic will numb the area on the chest where the catheter will be placed
 - Pressure may be felt during the procedure as the surgeons hands guide the catheter under the skin.

Where is the catheter placed?



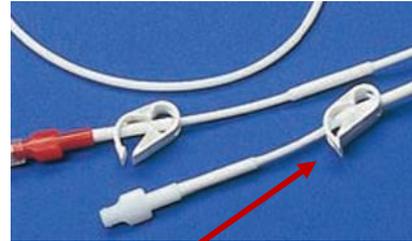
1. An incision is made on the chest
2. The catheter is **tunneled** under the skin
3. An incision is made by the collarbone
 - a. The catheter is placed in the **subclavian or jugular vein**
4. The tip of the catheter ends above the right chamber of the heart.

Tips for Care

- To prevent Infection
 - **Masks** are worn by patient and caregiver for care
 - **Clean gloves are worn** for flushing and cap changes
 - **Sterile** gloves for worn for dressing changes
- Signs of infection
 - Temperature ≥ 100.4
 - Redness
 - Swelling
 - Drainage

Call your doctor
- To prevent blood from clotting the catheter -
flush as directed

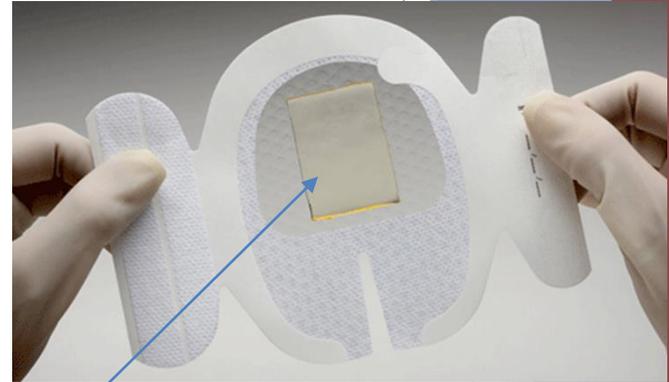
Keep Clamps Closed for Safety



- For safety keep the catheters **clamped (closed)** when the catheter is not being used.
- Keep the catheters **clamped (closed)** when changing caps to prevent air from going into the catheter.

Transparent CHG Dressing

- A transparent (clear) dressing is used about 1 week after your catheter is put in.
- Clear dressings are put on apheresis and PICC lines when the catheter is put in.
- Dressings are changed **once a week.**



Chlorhexidine (CHG)

- Antiseptic
- Placed at the insertion site of the catheter
- Decreases risk of infection

Keep the Dressing Dry

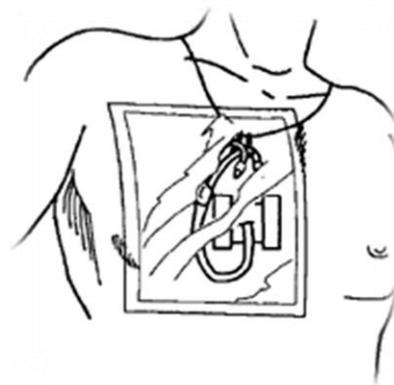
DO

- Keep the site covered with a dry dressing at all times
 - Transparent with CHG
 - Change dressing once a week

DO NOT

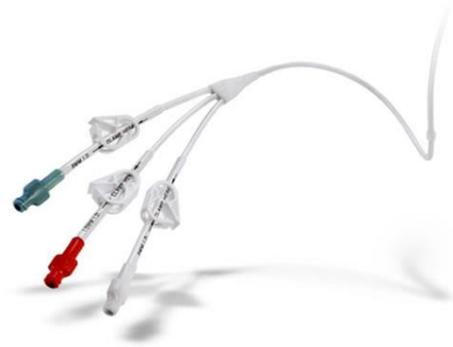
- Submerge the catheter in water:
 - DO NOT swim
 - DO NOT use hot tubs

Bathing & Showering



- To prevent the dressing from getting wet:
 - Cover the dressing with a plastic wrap larger than your dressing.
 - Tape on all four side.
 - If the site gets wet, **change the dressing**.

Triple Lumen Non-Apheresis Catheter



- Three lumens (catheters)
- A Dacron cuff adheres the catheter to the skin
- Change dressing and caps **once a week**
- Flush once a week
 - **Saline only**

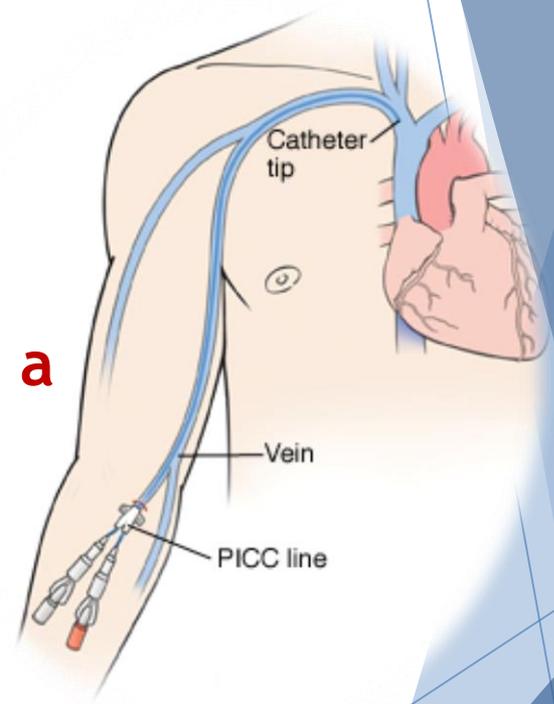
Triple Lumen Apheresis Catheter

- Three lumens
- Polyester cuff
- Change dressing and caps **once a week**
- Flush every 48 - 72 hours (example - Monday, Wednesday & Friday)
 - **Saline**
 - **Heparin**

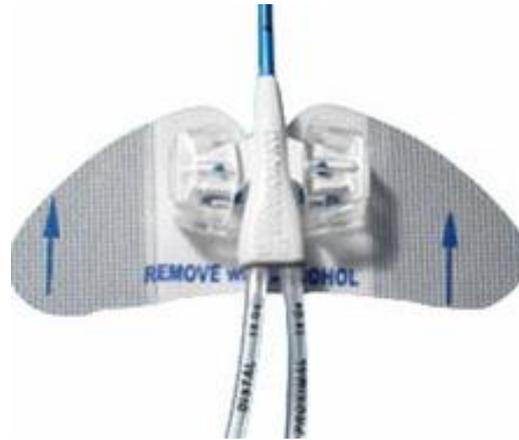


Peripherally Inserted Central Catheter (PICC)

- Two lumens
- No cuff
- Change dressing and caps **once a week**
- Flush each catheter every day
 - **Saline only**



Stat Locks



- After surgery PICC & apheresis catheters may have a **StatLock** to keep the catheter in place
- **Nurses** will change the Stat Lock once a week

Flushing the Catheter *without* Cap Change

- Flushing keeps the catheter patent
- Done before/after IVs
- Done every 48 - 72 hours for apheresis catheters
- Done daily for PICCs
- **If the catheter does not flush - STOP - Notify your doctor**

Clean a Work Surface

- Use flat surface, such as a counter or table
- Clean with disinfectant
- Allow to dry

- **Wash hands**



Wash Hands

- Use soap & water
- Use friction to make a lather
- Wash for **15** seconds
- Rinse with warm water
- Dry with a clean disposable towel



Gather Supplies

- Place supplies on disinfected flat surface
 - Masks (2)
 - Non-sterile gloves
 - Normal Saline (NS) syringe for **non-apheresis & PICC** catheters (1 for each lumen)
 - NS & Heparin syringes for **apheresis catheters** (1 for each lumen)
 - Disinfectant prep pads (2 for each lumen)

Masks, Gloves & Cleaning the Cap

- Put on masks (patient and caregiver)
- Put on the non-sterile gloves
- Open supplies
- ***If IV present, screw the IV tubing off the end of the cap***
- Holding the cap in your non-dominant hand
 - Scrub the end of the cap with 1 disinfectant prep pad for 15 seconds
 - Keep the catheter/cap in your hand

Flush the Catheter

1. Pick up the saline syringe
2. Hold the syringe upright & push the air out of the top of the syringe
3. Take off the syringe end cap & screw the syringe onto the end of the cap
4. Unclamp catheter
5. Flush with **9 mL** NS
6. Use push/pause technique to flush
7. Leave **1 mL** of the saline in the syringe
8. **Apheresis catheters flush with NS as above, then flush with 3 mL Heparin**

Flushing without a cap change continued...

9. Remove the syringe
10. Clamp the catheter
11. Clean the end of the cap with 1 disinfectant prep pad
12. Discard mask and gloves
13. Put used syringes in an appropriate disposal container
14. Wash hands

Dressing Change

Gather the Supplies

- Disinfect a flat work surface - air day
- Wash hands for **15 seconds**
- Gather Supplies
 - Mask (2)
 - Non-sterile gloves
 - Transparent CHG dressing
 - **StatLock (PICC & Apheresis catheters)**
 - Dressing Change Kit
 - Sterile gloves
 - CHG swab stick





- **Remember, both patient & care-giver must wear a mask**
- You can use the masks from the box of supplies you will be given

Or,

- **Open the Dressing Change Kit**
 - Peel back the cover of the kit
 - Remove the mask and put it on

Remove Old Dressing



- Put on **non-sterile gloves**
- Remove the old dressing and discard:
 1. **Slowly** peel the dressing away from the skin
 2. Start peeling from the bottom of the dressing first
 3. Steady the CHG gel pad with the thumb of one hand
 4. Steady the catheter with the other hand, **DO NOT** touch the insertion site
 5. If necessary, use an disinfectant prep pad, wet the CHG and continue to remove the dressing slowly
- Remove gloves
- **Wash hands**

Open the Supplies

- Open the **sterile** supplies - **DO NOT** touch the inside of the packages:
 - Dressing change kit
 - Dressing
 - **StatLock** - (PICC & Apheresis catheters)

Put on **Sterile** Gloves

1. Put the gloves on a flat surface
2. Open the package by the corners
3. Pick up the right hand glove at the bottom (**fold**) - **DO NOT** touch the fingers
 - a. Put the glove on your right hand touching only the fold
4. Place the fingers of the gloved hand **inside the fold of the left hand glove**
 - a. Put the glove on your left hand touching only the **outside** of the glove
5. Both hands are now sterile - adjust as necessary

Clean the Skin with CHG

- Pick up the catheter with one hand
 - Use the gauze in the kit to pick up the catheters
 - **DO NOT** put the catheters down until after you have cleaned the skin, the catheter and the skin is dry
- Pick up the CHG swab
- Crack the sides to allow the CHG to enter the swab
- Scrub skin for **30 seconds - *time it***
- Air dry



Clean the Catheter

- While the Chlorhexidine on the skin is drying
- Clean the catheter with the **CHG swab**
 - Start at the top, working your way down the front
 - Then, clean the underside of the catheter
- Air dry

PICC & Apheresis Catheters - Put on a StatLock

- ▶ Pick up the StatLock
- ▶ Put the catheter into the StatLock & close the clips
- ▶ Peel off the adhesive backing & lay flat onto the skin



Put on the Dressing

1. Peel the lining from the dressing
2. Center the CHG gel pad over the catheter insertion site
3. Put the sticky side of the dressing on the skin
4. Smooth the dressing on the skin
5. DO NOT stretch the dressing



Put on the Dressing Continued...

6. Remove the paper with the date/anchor on the dressing
7. Remove the anchor tape strip and attach to the bottom of the dressing
8. Put the date on the dressing & attach over the anchor tape strip
9. Remove gloves/wash hands



Changing the Cap

○ Caps

- Changed 1 time a week
- **DO NOT** over tighten the cap
- **DO NOT** use pliers to remove

○ Supplies

- Masks (2)
- Non-sterile gloves
- Disinfectant prep pads (3 per lumen)
- Caps (3)
- 10 mL syringe with normal saline (3)
- **10 mL syringe with Heparin for PICC & apheresis catheters (3)**

Remove Air from the Syringe/Cap

- Prime cap with NS
 - If touched, scrub the end of the new cap with alcohol for **15 seconds** & allow to dry
 - Connect the 10 mL NS syringe to the cap
 - Hold the syringe and cap upright
 - Push the air out of the syringe
 - Put the syringe/cap down on a clean surface



Remove the Old Cap

- Make sure the catheter lumens are **clamped**
- Scrub where the cap connects to the catheter
 - Use 1 disinfectant prep pad, scrub for **15 seconds**
- Remove the old cap & throw it away
- Clean grooves of the catheter
 - Use 1 disinfectant prep pad, scrub for **15 seconds**

Flushing the Catheter with Cap Change

- Connect the syringe/cap to the catheter
- Flush with 9mL NS
 - Use **push/pause** technique to flush
 - Leave a little of the saline in the syringe
- Apheresis catheters -
 - After NS flush
 - Flush with 3 mL Heparin Use **push/pause** technique to flush
 - Leave a little of the Heparin in the syringe
- Disconnect the syringe/place in disposal container
- Clean the cap with 1 disinfectant prep pad
- Clamp the catheter

**Remember, if the catheter does not flush - STOP -
Notify your doctor**

You are done. Good job!



Please complete the class evaluation