

HOW TO LOCK A CENTRAL VENOUS CATHETER

HOME HEMODIALYSIS INFORMATION GUIDE

For users and their families

This pamphlet describes the steps involved in the aseptic (non-sterile) technique for locking a central venous catheter (CVC) with a TEGO cap during home hemodialysis. Be sure to handle the CVC very carefully. Each of your movements is important in ensuring your safety. This pamphlet will provide you with a list of the materials required, the steps involved in preparing for using the CVC and connecting the tubes, as well as important things to watch out for.

Materials required

- ✓ Hand sanitizer
- ✓ 2 syringes containing non-sterile 4% sodium citrate
- ✓ 4 – 10 mL syringes prefilled with non-sterile saline solution (0.9% NS)
- ✓ 2 large swabs formulated with 2% chlorhexidine and 70% alcohol
- ✓ Antiseptic wipes
- ✓ 1 procedure mask



Step 1 - Preparation

1. Wash your hands with soap and water.
2. Put on the procedure mask.
3. Disinfect the table with a disinfectant wipe and allow it to dry.
4. Wash your hands with soap and water.
5. Remove the following items from their packaging and place them on the table with the packaging:
 - 2 syringes containing non-sterile 4% sodium citrate
 - 4 – 10 mL syringes prefilled with non-sterile 0.9% normal saline
 - 2 large swabs formulated with 2% chlorhexidine and 70% alcohol (but don't open them).
6. Remove any air from the 4 syringes prefilled with non-sterile 0.9% normal saline by gently pressing the piston. Keep the syringes capped.
7. Wash your hands with hand sanitizer.

Step 2 - Disconnecting the arterial line (red colour)

1. Gather up the TEGO cap seal for the arterial line (red).
 - Open the swab.
 - Disinfect the TEGO cap seal **for 30 seconds** with a large swab formulated with 2% chlorhexidine and 70% alcohol .
2. Gather up the syringe prefilled with non-sterile 0.9% normal saline and remove the cap.
3. Twist the syringe into the TEGO cap at the catheter hub, arterial line (red).
4. Unclamp the arterial line (red).
5. Infuse the saline solution using a pulsing pressure (1 mL at a time, taking a one-second break between each millimetre).
6. Detach the syringe and keep the TEGO cap in position.
7. Gather up the second syringe prefilled with non-sterile 0.9% normal saline and remove the cap.
8. Twist the syringe into the TEGO cap and unclamp the catheter.
9. Irrigate the catheter using a second syringe prefilled with non-sterile 0.9% normal saline (1 mL at a time) and clamp the catheter line again.
10. Gather up a syringe of non-sterile 4% sodium citrate containing the required amount based on the length of the catheter.
11. Twist the syringe into the TEGO cap and unclamp the catheter.
12. Infuse the required amount of non-sterile 4% sodium citrate and clamp the catheter again.
13. Detach the syringe, being careful to keep the TEGO cap in position.

Step 3 - Disconnecting the venous line (blue colour)

1. Gather up the TEGO cap seal for the arterial line (blue).
 - Open the swab.
 - Disinfect the TEGO cap seal for 30 second with a large swab formulated with 2% chlorhexidine and 70% alcohol.
2. Gather up the syringe prefilled with non-sterile 0.9% normal saline and remove the cap.
3. Twist the syringe into the TEGO cap at the catheter hub of the arterial line (blue).
4. Unclamp the arterial line (blue).
5. Infuse the saline solution using a pulsing pressure (1 mL at a time, taking a one-second break between each millimetre).
6. Detach the syringe and keep the TEGO cap in position.
7. Gather up the second syringe prefilled with non-sterile 0.9% normal saline and remove the cap.
8. Twist the syringe into the TEGO cap and unclamp the catheter.
9. Irrigate the catheter using the second syringe containing non-sterile 0.9% normal saline (1 mL at a time) and clamp the catheter again.
10. Gather up a syringe of non-sterile 4% sodium citrate with the required amount based on the length of the catheter.
11. Twist the syringe into the TEGO cap and unclamp the catheter.
12. Infuse the required amount of non-sterile 4% sodium citrate and clamp the catheter again.
13. Detach the syringe, being careful to keep the TEGO cap in position.

Step 4 - End of the procedure

1. Remove your gloves and carry out the hand hygiene procedure with the disinfectant solution.
2. Remove the procedural mask and carry out the hand hygiene procedure with the disinfectant solution.
3. Remove the materials from the table and place them in the location provided, then carry out the hand hygiene procedure with the disinfectant solution.

Important things you should watch out for

Check the following at the catheter entrance site:

- The catheter is properly positioned
- No redness
- No discharge
- No swelling
- The skin is not warm
- No other signs or symptoms
- Contact your pivot nurse if any problems arise or if you have any questions.

Important Points to Remember

- Always hold on to the CVC lines while disinfecting.
- Never touch the seal (interior) of the TEGO cap. Do not put the lines down after disinfection.
- Make sure you leave 1 mL of blood in the syringe whenever you are handling the TEGO cap.
- Keep the 2% chlorhexidine and 70% alcohol swab open (don't fold it).
- Proper disinfection requires some friction and 30 seconds of contact time.
- Connect the tubes one at a time. To avoid damaging the TEGO cap seal, make just a ¼ twist when connecting the syringes.
- The amount of 4% sodium citrate required is equal to the length of the catheter. Make sure you add an additional 0.2 mL to the syringe.
- Cleanliness is key!

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