

Taking medication with a portable infusion pump

Central venous catheter without valve (locking with heparin)



You need to take a medication using a portable infusion pump. This fact sheet explains how to do this. It also describes how to take care of the catheter, the small tube through which the drug is injected.

What is a portable infusion pump?

It is a sealed vial containing a liquid drug. The product is in a small balloon in the centre of the bottle.

The portable infusion pump is used by patients who take their medication through a catheter, a small tube that enters a vein. This allows the medication to be taken at home without the help of a health professional.

What should I do **BEFORE** injecting the medication?

- > Remove your jewelry (rings and bracelets).
- > Wash your hands thoroughly with soap and water.
- > Clean the work surface with soap and water.
- > Take out the supplies: an infusion pump (if it was in the refrigerator, take it out 1 hour before so it can come to room temperature), a 0.9% sodium chloride (NaCl) syringe, a syringe of heparin solution, and a few alcohol swabs. Put them on the clean surface.

What should I check **BEFORE** using the infusion pump?

Verify the following:

The white cap is properly positioned

The small balloon is intact and no liquid is leaking out

The tube is in good condition

The clamp is securely closed

The winged cap is in place

The bottle is in good condition

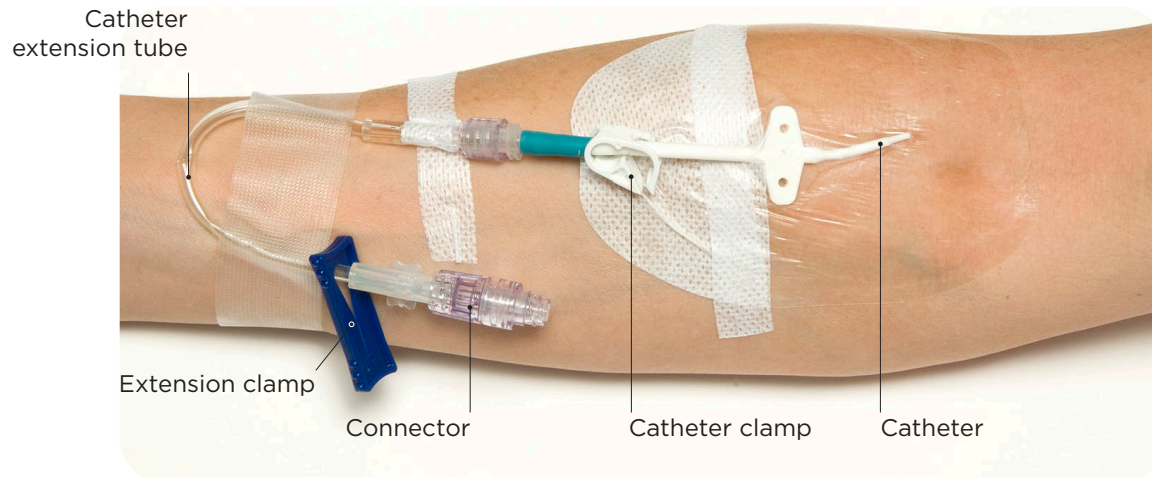


On the label:

- the date is not expired
- the name of the medication and the dose are the same as those written on your prescription (ex.: Vancomycin 700 mg)
- your name is clearly marked on it

If one of these elements is abnormal, **DON'T TAKE THE MEDICATION.** Order a new infusion pump from your pharmacy.

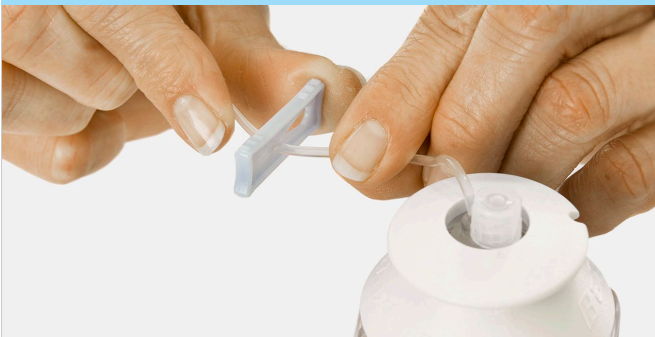
Central venous catheter without a valve



What steps should I follow to inject the medication?

1

VERIFY THE MEDICATION



- 1- After removing your jewelry, wash your hands thoroughly with soap and water. Open the infusion pump clamp.



- 2- Unscrew the winged cap by holding it with your fingertips. **To avoid contamination, once the cap is removed, never touch the ends of the tube and cap and never put them on the table.**

If it is contaminated, use another infusion pump. Let it get to room temperature before taking the medicine. You will need to order a new infusion pump from the pharmacy.



- 3- Check that a drop appears at the end of the tube.



- 4- Replace the winged cap and close the infusion pump clamp.

2

FIRST CATHETER IRRIGATION

Before taking the medication, you need to irrigate your catheter, that is, pass an NaCl solution through it. This helps to clean it and ensures that the medication is able to pass through.



- 1- Clean the connector with an alcohol swab for 15 seconds and let it dry for 30 seconds while holding it by the base.

Careful! Don't blow on the connector to dry it. Also, don't touch its tip. Otherwise, it will be contaminated. If this happens, clean it again with a new alcohol swab.



- 2- Still holding the base of the connector, remove the cap from the NaCl syringe, making sure nothing touches the tip of the syringe, to prevent contamination. If the syringe is contaminated, discard it and take another one.



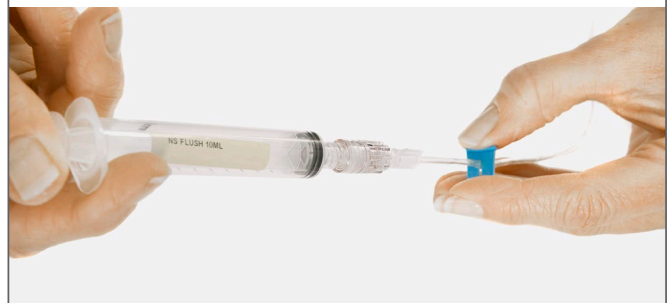
- 3- Insert the syringe into the connector of the catheter and screw it in place.



- 4- Open the clamp of your catheter's extension tube.



- 5- Inject the NaCl solution 1 millilitre at a time, using a repetitive stop-start motion.



- 6- Close the extension clamp **at the same time** as you inject the last millilitre.

2**FIRST IRRIGATION (CONTINUED)**

7- Remove the syringe by unscrewing it.

Careful! When unscrewing the syringe, make sure the connector doesn't unscrew from the catheter. To ensure this, hold the connector at the grooves when unscrewing.

This completes the irrigation.

3**INJECT THE MEDICATION**

1- Clean the catheter connector with a new alcohol swab for 15 seconds and let it dry for 30 seconds while holding it by the base.



2- Still holding the base of the connector, unscrew the winged cap at the end of the infusion pump tube. Again, to avoid contamination, don't touch the end of the tube.



3- Insert the end of the infusion pump tube into the catheter connector and gently screw them together.



4- Open the infusion pump clamp.



5- Open the catheter extension clamp. The medication will enter your catheter very slowly; the time it takes will vary depending on the medication.

Expected time required for the injection:

The infusion pump can be placed in the pocket of a garment while taking the medication so that you can move around.

4**MEDICATION: END OF INJECTION**

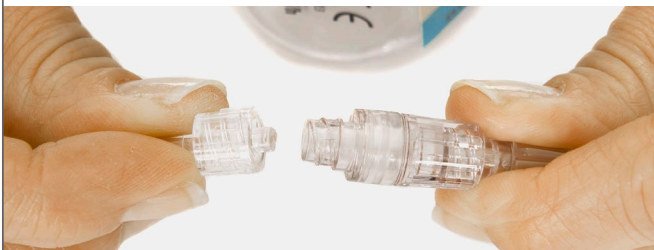
- 1- The injection is completed once the small balloon is empty.



- 2- After removing your jewelry, wash your hands thoroughly with soap and water.



- 3- Close the clamps of the injection pump and of the catheter extension.



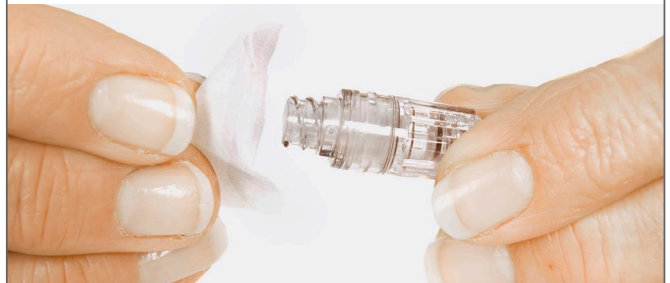
- 4- Disconnect the portable infusion pump from the catheter by unscrewing the tube.
Be careful not to pull out the connector.

5**SECOND CATHETER IRRIGATION**

Follow the same procedure as in step 2 to clean your catheter again.

6**INJECT THE HEPARIN**

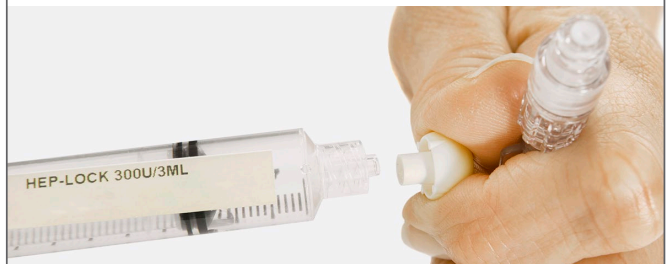
To complete the 2nd irrigation, you will need to inject a heparin solution (3 millilitres). This product prevents clots from forming at the end of the catheter.



- 1- Clean the connector with a new alcohol swab for 15 seconds and let it dry for 30 seconds while holding it by the base. Don't blow on the connector to dry it.



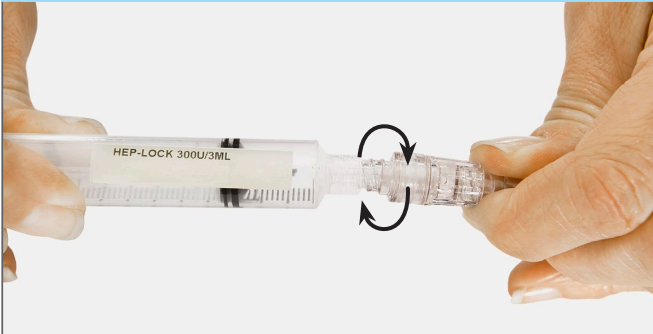
- 2- While holding the base of the connector between your fingers, open the clamp of your catheter's extension.



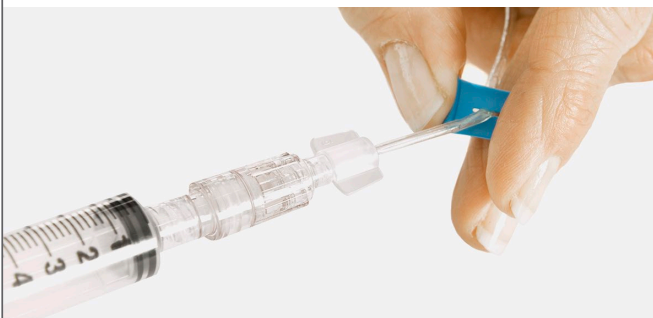
- 3- Still holding the base of the connector, remove the cap from the heparin syringe.

6

INJECT THE HEPARIN (CONTINUED)



- 4- Insert the syringe into the connector of the catheter and screw it in.



- 5- Gently inject the 3 millilitres of heparin solution. Close the extension clamp while you are injecting the last drops.



- 6- Hold the connector by the grooves and remove the syringe by unscrewing it.

This completes the irrigation.

What should I do if I have any of the the following problems?

The small balloon is not emptying

- > Make sure you have kept the infusion pump in place long enough, because the volume of the balloon decreases very slowly.

- > Check that the infusion pump is at room temperature.
- > Check to make sure the clamps are open and no tube is bent.
- > After you have checked these things, if the balloon volume still isn't decreasing:
 - close both the infusion pump clamp and the catheter clamp
 - disconnect the infusion pump from the catheter
 - irrigate your catheter (steps 2 and 6) and call the CLSC nurse right away

The infusion pump leaks or the balloon breaks

- > Immediately close both the infusion pump clamp and the catheter clamp.
- > Disconnect the infusion pump from the catheter and put the winged cap back in place.
- > Irrigate your catheter (steps 2 and 6) and call the CLSC nurse right away.

If the medication touches your skin, rinse your skin with lukewarm soapy water.

The NaCl or heparin solution isn't going through during the irrigation

If you can't easily inject the liquid (blockage, resistance, backflow):



- > **Don't push on the piston of the syringe.**
- > Check that the extension clamp is fully open.
- > Try to resume the irrigation.
- > Check that the connector is properly screwed in.
- > If the solution still doesn't pass, close the extension clamp and remove the syringe by unscrewing it.
- > Contact the CLSC nurse as soon as possible.

Liquid is leaking around the entry of the catheter during the irrigation

Don't use your catheter anymore. Close the clamp, unscrew the NaCl syringe, and call your CLSC nurse or Info-Santé immediately at **8-1-1**.

What symptoms should I watch for when injecting a liquid into my catheter?

If you have any of the following symptoms during the irrigation or when taking your medication:

- a gurgling sensation near the ear
- pain or discomfort in your arm, shoulder, chest, or back
- swelling of the neck or arm
- difficulty breathing
- headache



stop using your catheter at once and immediately call your CLSC nurse or Info-Santé at **8-1-1**.

What else should I watch for?

- Your dressing becomes unstuck, wet, or soiled.
- You have the following signs of infection: fever, or else redness, heat, swelling, or discharge at the catheter insertion site.

If any of this happens, tell your CLSC nurse right away.

What precautions should I take with my catheter?

- Avoid lifting heavy weights with your arm on the side of your catheter.
- Avoid repetitive movements with this arm.
- Avoid wetting the dressing.

Where should I store my infusion pumps and the NaCl and heparin solutions?

Follow your pharmacist's advice. If you need to store your infusion pumps in the refrigerator:

- > First wash the place where you will put them. It's best to keep them separate from food, in a drawer or a basket.
- > Leave a bit of space between them to allow air to circulate.

Who can I contact for help or to ask questions?

First call the CLSC nurse. If at the CLSC they can't help you, contact the department of the hospital where you were prescribed the medication. Outside of business hours, for any question related to your health, you can call a nurse at the Health Patient CHUM Hotline (ligne Santé Patient).

> **514 890-8086**

This service is available 24 hours/day, 7 days/week. When calling, be sure to have your health insurance card on hand.



USEFUL RESOURCES

To find out all about hand washing, consult the Ministry of Health and Social Services document:

Hand washing - Simple and effective!

> publications.msss.gouv.qc.ca/msss/en
Type "Hand washing" in the search field.

Other health sheets published by the CHUM are available. Ask for those that might fit your situation.



You can also find them on our website

chumontreal.qc.ca/fiches-sante

The content of this document in no way replaces the recommendations and diagnoses made, or the treatment suggested by your health professional.

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