

# Caring for a central venous catheter without a valve (irrigation with heparin solution)



To support various treatments, a small tube called a catheter has been placed in one of your veins. Here's how to take care of this catheter to maintain it in good condition.

## What should I do to maintain my catheter?

You will need to regularly inject into your catheter a 0.9% NaCl solution, or “normal saline flush”, and a solution of heparin (a product that prevents blood clots from forming). This process is called **catheter irrigation**.

## When should I irrigate my catheter?

- > When the catheter is not used for some time, it should be irrigated once a week.
- > It should also be irrigated before AND after it is used for a treatment.

## Why do I need to irrigate my catheter?

The aim is to keep your catheter in good condition so that:

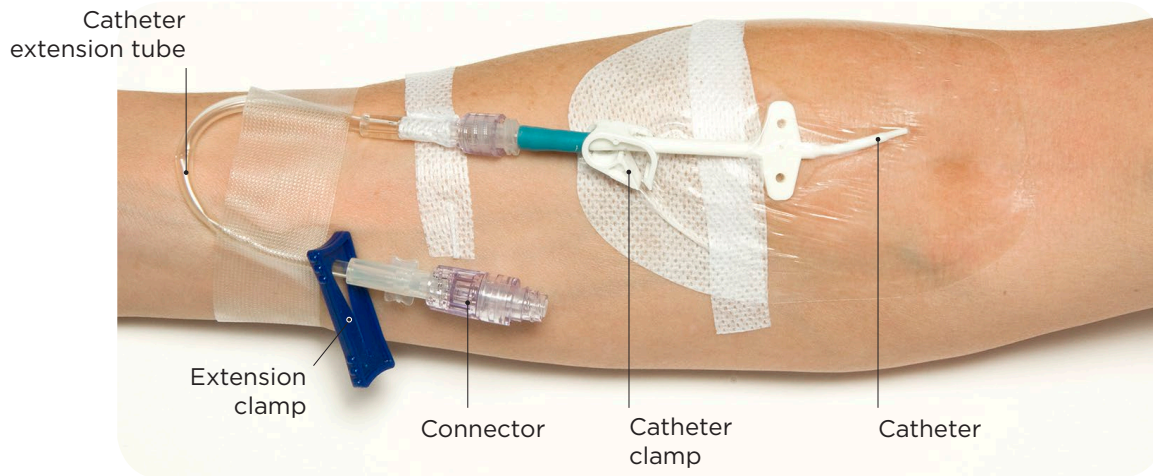
- liquids can pass through without any problem
- blood will be prevented from flowing back into the catheter

## What should I do BEFORE irrigating my catheter?

- > Wash your hands thoroughly with soap and water.
- > Clean the work surface with soap and water.
- > Take out the supplies: a 0.9% sodium chloride (NaCl) syringe, a syringe of heparin solution, and a few alcohol swabs. Place them on the clean surface.



## Central venous catheter without valve



## What are the steps to follow to irrigate my catheter?

1

### WASH AND DISINFECT



- 1- Wash your hands thoroughly with soap and water.

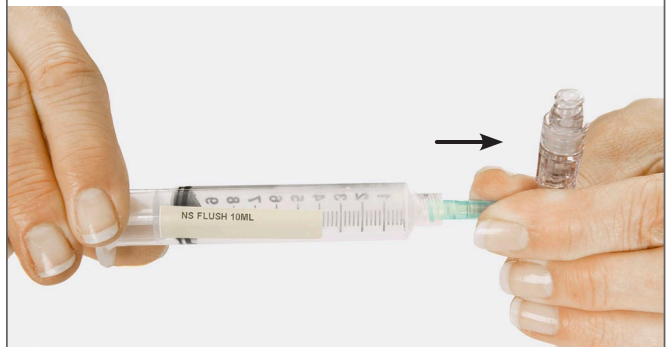


- 2- Clean the connector with an alcohol swab for 15 seconds and let it dry for 30 seconds while holding it by the base.

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

2

### POSITION THE SYRINGE



- 1- 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.



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

### 3

## IRRIGATION



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



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



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



- 4- 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.

### 4

## HEPARIN INJECTION

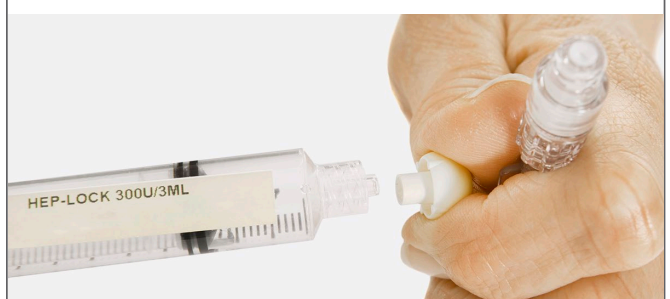
Heparin prevents blood clots from forming in the tip of the catheter.



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



- 2- Holding the base of the connector between your fingers, open the catheter extension clamp.



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



**4****HEPARIN INJECTION (CONT.)**

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



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



- 6-** Remove the syringe by unscrewing it.

## What should I do if the NaCl or heparin solution doesn't go through?

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 by pushing lightly on the piston of the syringe.
- > If the solution still doesn't pass, close the extension clamp and unscrew the syringe. Contact the CLSC nurse as soon as possible.

## What should I do if liquid is leaking around the entry of the catheter during irrigation?

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

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

If you have any of the following symptoms during irrigation:

- 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 the NaCl and heparin syringes?

Store them in a safe place, at room temperature. First wash the place where you will put the syringes.



## Who can I contact for help or to ask questions?

First, call the nurse at your CLSC. 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, call Info-Santé at **8-1-1**.



### 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](https://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 web site [chumontreal.qc.ca/fiches-sante](https://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.*

To find out more about the Centre hospitalier de l'Université de Montréal  
[chumontreal.qc.ca](https://chumontreal.qc.ca)





