

Flushing Your Child's Implanted Port



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What is an implanted port?

An **implanted port** is an injection port that goes under your child's skin. The skin that covers the port is called the **port site**.

Your child will get **intravenous (IV) therapy** through the port. The IV therapy may be medicine, enzyme replacement therapy, or fluids.

The port looks like a small hat. The **crown** of the hat is made from silicone rubber. It is where the needle enters. The crown reseals when the needle comes out.

The **catheter** is a thin flexible tube. One end connects to the port. The other end lies in a large blood vessel above the heart.

Your child's IV therapy will be injected into the port. The therapy goes into the catheter, and then into the large blood vessel.

Why should you flush your child's port?

Blood clots can form in your child's catheter. **Flushing the port with heparin helps to prevent clots.** Flush your child's port every 4 weeks, or 1 time each month.

Germs can enter the body through the catheter. Follow these 11 steps to prevent infection when you flush the port.

How to flush the port

1. Gather your supplies.

- Antibacterial or liquid hand soap
- Bottle 70% isopropyl alcohol
- Paper towels
- Non-porous tray, like a stainless steel cookie sheet, hard smooth plastic or

glass tray

- 1 Chlorhexidine/alcohol swabstick
- 2 x 10ml pre-filled normal saline (NS) syringes
- 1 x 5ml pre-filled heparin syringe (10 units/ml)
- Huber needle with tubing and clamp, usually a 0.75 inch 22 gauge safety infusion set (size may vary)
- Sharps container, to safely discard sharp medical supplies
- 1 Sterile gauze
- EMLA cream (optional) to numb the skin before the needle
 - Transparent dressing (like Tegaderm™), to use with EMLA cream
 - Tissue (to wipe emla off)



If you will give IV therapy at this time, you will also need:

- 1 cap
- Transparent dressing (like Tegaderm™)
- IV tubing

2. Apply EMLA cream 1 hour before flushing (optional).

Squeeze a nickel-sized amount of EMLA cream onto the port site. Cover the port site with a transparent dressing. After 1 hour, remove the dressing. Wipe away the EMLA cream with a tissue. Then, start the next step.

3. Clean the non-porous work surface (tray).

You can use a stainless steel cookie sheet, hard smooth plastic, or a glass tray. Ask your nurse if you are unsure what to use. Clean the surface with alcohol and paper towels. Let it air dry.

4. Wash your hands.

Remove all rings and your watch. Wash your hands with soap and water for 1 minute. Rinse well, and dry with a clean paper towel or towel. Use the paper towel or towel to turn off the water.

5. Prepare the normal saline (NS) and heparin syringes.

Open the heparin syringe package. Put the syringe on the tray. Discard the package.

Open the NS syringes. Keep them in their packages. Each package will act like a 'boat' for the NS syringe.

When you prepare the syringes, do not touch the end of the syringe or the inside of the cap.

For each syringe:

- Take the syringe from the package.
- Press the syringe plunger until you feel a pop. This breaks the seal inside the syringe.

- Remove the cap from the syringe.
- Hold the syringe upright. Tap it lightly. This moves any air bubbles to the top of the syringe. Slowly push the plunger until you see a droplet of fluid.
- Replace the cap.
- For the NS syringes: place the syringe back in the original 'boat-like' package.

6. Prime (prepare) the Huber needle.

- Peel open the Huber needle package like a book. Put it on the tray so it holds the needle and tubing.
- Leave the cover on the Huber needle. Remove the cap from the tubing.
- Remove the cap from the first 10 mL NS syringe. Connect it to the tubing.
- Push the syringe plunger until the NS solution moves through the tubing. The solution will start to drip out of the needle.
- Leave the syringe attached to the tubing. Set the syringe, tube, and needle down on the Huber needle package.
- Open your chlorhexidine/alcohol swabstick. Lay the spongy end on the open Huber needle package. This will keep the swabstick clean.

If you will give IV therapy after flushing the port:

- Open the transparent dressing and leave it on your tray.
- Connect the cap to the tubing. Then, connect a 10mL NS syringe to the cap. Push the saline solution through the cap, tubing, and needle.
- Your nurse will tell you how to prime the IV tubing. You might use saline solution or medicine to do this.

You have now set up your tray. Wash your hands again or use alcohol-based hand sanitizer before you touch your child's line.

7. Clean skin around the port site.

Feel for the port under the skin with your fingertips. Press your fingertip over the rubbery top of the port. This is where the needle will go.

To clean the skin:

- Rub the swabstick side to side over the port and surrounding skin for 15 seconds. Use light pressure.
- Flip the swabstick over. Rub the swabstick up and down for 15 seconds.
- If you will give IV therapy after flushing the port, clean all the skin that the dressing will cover.
- Let the skin dry for 1 minute.

If you use a green chlorhexidine-only swabstick, let the skin dry for 3 minutes.

8. Insert the Huber needle into the port.

Remove the cover from the Huber needle. To insert the needle into the port:

- Hold and steady the port with your thumb and finger on your non-dominant hand.

With your dominant hand (writing hand):

- Hold the wings of the needle with your thumb and middle finger.
- Rest your index finger (pointer finger) on the top of the needle where it bends between the wings.

Hold the needle straight above the port,

pointing down. Push the needle straight into the middle of the port.

- You will need to use medium pressure to enter the top of the port.
- Stop pushing:
 - When you hit the bottom of the port, or
 - When you feel resistance.

9. Flush the tubing with NS solution

- Pull back slightly on the syringe attached to your Huber needle tubing. You should see a little blood enter the tubing.

Pull back slowly on the syringe plunger until a *little* blood appears in the tubing.



- Slowly push 9ml of the 10mL NS solution into the port. Use the **turbulent flushing method**.

The turbulent flushing method helps to rinse the port. Give a quick push of solution. Pause. Give another quick push. Pause again. Repeat until you finish the dose.

- Clamp the tubing when there is 1mL of NS solution left in the syringe.
- Disconnect the syringe from the

tubing =. Pick up the second NS syringe and remove the cap. **Do not let the tubing touch the skin.**

- Open the clamp. Push another 9 mL of the 10mL NS solution into the port. Use the turbulent flushing method.
- Clamp the tubing when there is 1mL of NS solution left in the syringe.
- Disconnect the syringe from the tubing.

• **If you are giving IV therapy at this time:**

- Place the transparent dressing over the needle and port.
- Connect the IV tubing to the cap.
- Inject IV therapy (medicine and/or fluids) into the port.
- Remember to flush the port with NS **after** giving medicine and/or fluids, before heparin locking the port.

10. Flush the port with heparin.

- Remove the cap from the 5mL heparin syringe. Connect it to the Huber needle tubing.
- Open the clamp. Push 2.5mL of heparin into the tubing. Use the turbulent flushing method.
- Clamp the tubing while you push. There should be 2.5mL of heparin left in the syringe.

11. Remove the Huber needle from the port.

To remove the needle from the port:

- Hold the port steady with your thumb and finger on your non-dominant hand.

If there is a safety feature, hold down the clear finger tabs. This

will engage the safety feature and steady the port.

- With your dominant hand:
 - Hold the wings of the needle with your thumb and middle finger and pinch them up.
 - Gently pull the needle from the port site. You will feel a click. This is the wing's safety feature covering the needle. It stops the needle from going back in, or poking you.

Gently pull the needle from the port site.



- Discard the needle, tubing, and syringes into a sharps container.
- Press the sterile gauze over the port site to stop any bleeding. You can apply an adhesive bandage over the site if needed.

Cautions:

- Always wash your hands with soap and water for 1 minute or use alcohol-based hand sanitizer before using or flushing the port.
- If the NS solution and heparin do not

flow freely, **DO NOT FORCE THEM.**
Call the doctor on call or the nurse working with you **right away.**

- Ports should only be accessed with:
 - Huber needles, or
 - Other needles made to use with ports.
- **Do not** reuse supplies.
- **If your child has a high fever or feels unwell, there might be an infection in the port. Contact your medical team immediately.**

Sharps safety

When you finish with your Huber needle, put it into a sharps container.

Your **sharps container** can be:

- A special container for sharps,
- A coffee can with a cover, or
- A plastic detergent bottle with a lid.

You can get a sharps container from your pharmacy. When it is full:

- Seal the container
- Mark it 'Household sharps'
- Call your garbage collection company, pharmacy, or clinic to know how to safely discard the container.
Do not put it in your household garbage.

Do NOT reuse needles or syringes.

Do NOT throw needles right into the garbage.



Contact Information:

Community Nurse: _____

Telephone: _____

Doctor: _____

Telephone: _____

Nurse Clinician or other contact: _____

Telephone: _____

At Children's & Women's Health Centre of British Columbia we believe parents are partners on the health care team. We want you to be as informed as possible.

This pamphlet will answer some of your questions. Please ask about things you do not understand and share your concerns.

If you have any questions, please call one of the contacts listed above.