

# Central Venous Line: What you need to know

## A Central Venous Line (CVL) has several parts.

**Catheter:** A thin flexible tube. The tube may have one or two channels, called **lumens**.

**Tip of the catheter:** The tip of the catheter stays in a blood vessel near the right side of the heart.

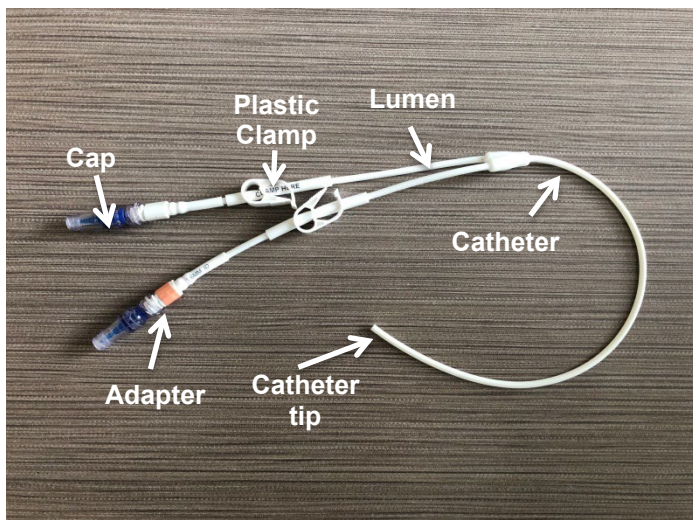
**Dacron cuff:** A bulge in the tube. It rests just under the skin, where the tube leaves the body. Body tissue grows around the cuff. This helps hold the catheter in place.

**Plastic clamp:** Used to clamp the lumen when it is not being used for fluids, medicine, or bloodwork.

**Adapter:** End piece of the catheter. The adapter connects to intravenous lines, syringes, or caps.

**Cap:** A cap closes off the adapter of each lumen when they are not in use.

All materials in the CVL are safe to have in the body.

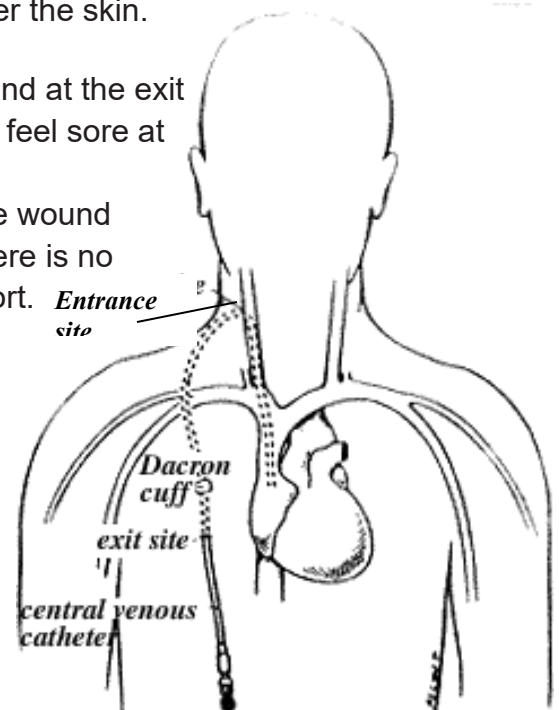


## When in place, the CVL looks like this:

A CVL is a safe way to give medicine or fluid into a major blood vessel. Most of the catheter lies just under the chest skin. The exit site is where the CVL leaves the body. You may feel a small bulge at the exit site. This bulge is the Dacron cuff under the skin.

The wound at the exit site may feel sore at first.

Once the wound heals there is no discomfort.



## Your doctor suggested a CVL because your child needs:

- Many injections directly into the blood stream
- Frequent blood samples from blood vessels
- Many transfusions of blood products, e.g. red blood cells, platelets or bone marrow
- Nutritional support over a long period of time

The CVL lets your child have these treatments, most of the time, without using a needle. There is less pain and less damage to the blood vessels and tissues.

## How is a CVL different from regular needles?

### Giving medicine

A regular needle reaches small veins close to the skin. These veins have delicate walls. Chemicals in some medicines can irritate these veins and the tissue around them. Using a CVL makes these treatments less difficult and less painful.

When your child has a CVL, medicine goes right into a large, strong vein. This is helpful because:

- The larger blood volume dilutes the chemicals in medicine. The chemicals that irritate the tissues are less strong. This means they do less damage.
- The blood moves more quickly through large veins. Chemicals are not in one area long enough to cause damage.

### Taking blood samples

The health care worker uses special equipment to take blood through the cap of your child's CVL

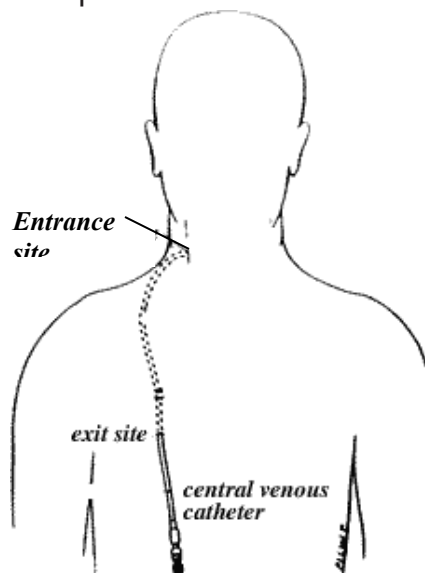
Note: Some blood samples may need to come directly from a vein depending on the type of blood test ordered

## How will my child get a CVL put in?

Your child will have a simple surgery to get their CVL put in. The surgery will be in an operating room, or in the Interventional Radiology department.

1. The surgeon makes a small cut on the neck. We call this an **entrance site**. This is where the surgeon will bring the tip of the catheter into the large vein.
2. The surgeon makes a small 'tunnel' under the skin. The catheter will go through this tunnel.

3. The surgeon makes a small cut on the chest. This is called the **exit site**. It is at the end of the tunnel.
4. The surgeon threads the catheter through the tunnel, starting with the exit site. At the entrance site, the surgeon will thread the tip of the catheter into the large vein. The lumens are visible emerging from the exit site.
5. The surgeon uses x-ray pictures to check that the tip of the catheter is in the right place.
6. The surgeon stitches the cuts closed. The stitches on the exit site keep the catheter in place.



The surgeon will use dissolvable stitches that may stay in place. If there are steri-strips on the entrance site, wait for them to fall off on their own.

Your child will not feel pain. They will have general anesthetic. The surgery usually takes about 30-60 minutes.

A CVL can stay in for months to years with proper care. Your nurse will teach you how to take care of it.

## A nurse will show you how to:

- care for the exit site
- change the cap
- flush the catheter to prevent blockages
- find and take care of problems

With good care, you can reduce the risk of infection or blood clots in the CVL.

### Suggestions:

Tell your doctor if your child has an appointment for dental work. The doctor may suggest an antibiotic to help prevent an infection.

***If your child shows any sign that all is not well, call the nurse or doctor.***



## Contacts:

Community nurse: \_\_\_\_\_

Telephone: \_\_\_\_\_

Doctor: \_\_\_\_\_

Telephone: \_\_\_\_\_

Nurse Clinician or other contact: \_\_\_\_\_

Telephone: \_\_\_\_\_

At BC Children's Hospital 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 contact one of the contacts listed above.