

# Tunneled Central Venous Catheter (CVC)

## What to expect

This handout describes a tunneled central venous catheter and tells what to expect when you have one. It also explains how to prepare for the procedure to place the catheter.

## What is a central venous catheter?

Your doctor has asked us to insert a *catheter* (long, hollow plastic tube) into your veins. The catheter will enter your body through the skin on your chest. The tip of the catheter will be placed in a large vein inside your chest. The catheter has a fabric cuff that sits under your skin. This cuff helps keep the catheter in place. It also prevents any skin infection from entering your bloodstream.

A *central venous catheter* (CVC) can stay in place for weeks to months. This allows your healthcare providers to inject fluids or withdraw blood for lab tests without repeated needle sticks. A standard *intravenous line* (IV) in your arm needs to be removed after a short time.

The procedure to place your CVC will be done by an *interventional radiologist*, a doctor or advanced practice provider with special training in doing this kind of procedure.

## Why do I need a CVC?

A *central venous catheter* (CVC) may be used for:

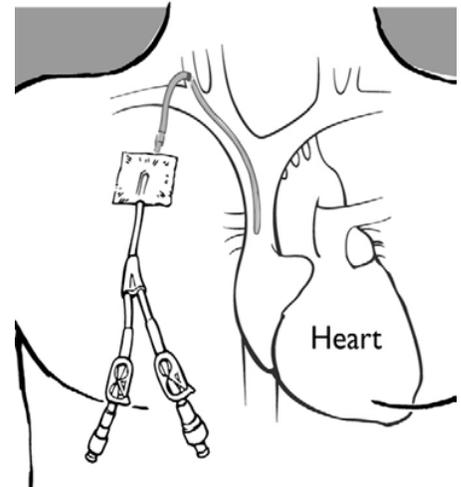
- Giving antibiotics, chemotherapy, or other drugs, or blood products such as plasma
- Filtering blood (*dialysis*)
- Exchanging or removing blood elements (*pheresis*)

## Are there any risks from CVC's?

As with all medical procedures, there are some risks. The benefits usually far outweigh the risks. But unexpected events can occur. The most common problems are:

- **Bleeding.** Any bleeding is usually minor and does not last long.
- **Infection.** There is a small risk of infection right after the CVC is placed. Infection more than 1 week after the CVC is placed is more common and is not related to the procedure.

Your doctor will talk with you about your risks. Please be sure to ask any questions you have.



**A central venous catheter enters your body through your chest.**



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digital copy of  
this handout.

## Will I feel the catheter?

You may feel the catheter under your skin in your neck or collarbone area.

## How do I care for the catheter?

- Keep your skin where the catheter enters your chest clean and dry.
- Keep the catheter well covered with a bandage so that it does not catch on clothing or objects that might move it. It is most likely to move in the first few weeks after it is placed.

## Can the catheter be removed?

Yes. We will remove your catheter:

- When you no longer need it. You will only need a *local anesthetic* (numbing medicine) for this procedure.
- If the catheter does not work correctly.
- If you get a skin infection at the catheter entry site that does not go away when treated with antibiotics.
- If you get a serious bloodstream infection.

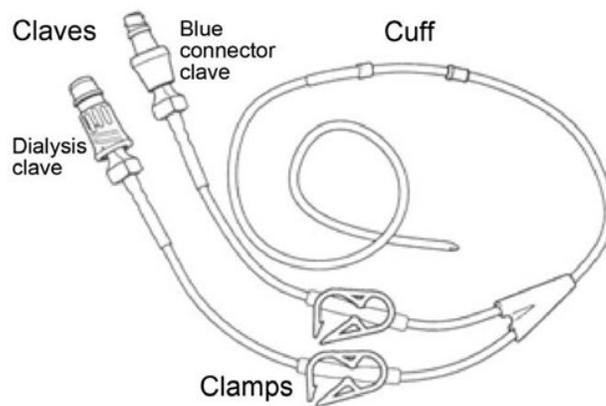
## Before Your Procedure

A nurse will call you within 5 days of your procedure. The nurse will give you important instructions and answer any questions you have.

- If you do not understand English well enough to understand the instructions from the nurse or the details of the procedure, tell us **right away**. We will arrange for a hospital interpreter to help you. A family member or friend cannot interpret for you.
- Most patients need blood tests done before this procedure. We may be able to do your blood tests when you arrive for your procedure. We will tell you if we need a blood sample before that day.
- If you take any blood-thinning medicines (such as Coumadin, Lovenox, Fragmin, or Plavix), you may need to stop taking the medicine for 3 to 9 days before your procedure. Do NOT stop these medicines unless your doctor or nurse has told you to do so. We will give you instructions as needed.
- You must arrange for a responsible adult to drive you home after your procedure and stay with you the rest of the day. You cannot drive yourself home or take a bus, taxi, or shuttle alone.

## Sedation

Before your procedure, you will be given a *sedative* (medicine to make you relax) through an *intravenous line* (IV) in one of your arm veins. You will stay awake but feel sleepy. This is called *moderate sedation*. You will still feel sleepy for a while after the procedure.



**A central venous catheter**

For some people, using moderate sedation is not safe. If this is true for you, you will need *general anesthesia* (medicine to make you sleep during the procedure).

Let us know **right away** if you:

- Have needed anesthesia for basic procedures in the past
- Have *sleep apnea* or other breathing problems (you might use a CPAP or BiPAP device while sleeping)
- Use high doses of prescription painkiller
- Have severe heart, lung, or kidney disease
- Cannot lie flat on your back for about 1 hour because of back or breathing problems
- Have a hard time lying still during medical procedures
- Weigh more than 300 pounds (136 kilograms)

If you have any of these health issues, we may need to give you different medicines. Instead of a sedative, you might receive:

- Only a *local anesthetic* (numbing medicine), such as lidocaine.
- *Minimal sedation* (a local anesthetic and a pain or anxiety medicine)
- *General anesthesia* (medicine to make you sleep). This medicine is given by an anesthesia care provider.

## The Day of Your Procedure

To prepare for sedation, follow these instructions exactly. Starting at midnight, the night before your procedure:

- Do not eat or drink anything.
- Do not take any of the medicines that you were told to stop before this procedure.
- If you must take medicines, take them with only a sip of water. Do not skip them unless your doctor or nurse tells you to.
- Do not take vitamins or other supplements. They can upset an empty stomach.

Bring with you a list of all the medicines you take.

Please plan to spend most of the day in the hospital. If there is a delay in getting your procedure started, it is usually because we need to treat other people who have unexpected and urgent health issues.

Thank you for your patience if this occurs.

## At the Hospital

A staff member will give you a hospital gown to put on and a bag to put your belongings in. You may use the restroom at that time.

A staff member will take you to a pre-procedure area. There, a nurse will do a pre-procedure assessment. A family member or friend can be with you in the pre-procedure area.

An IV line will be started. You will be given fluids and medicines through the IV.

An interventional radiology specialist will talk with you about the procedure, answer any questions you have, and ask you to sign a consent form, if you have not already done this.

## Your procedure

- Your nurse will take you to the radiology suite. This nurse will be with you for the entire procedure.
- If needed, an interpreter will be in the room or will be able to talk with you and hear you through an intercom.
- You will lie on a flat table that allows the doctor to see into your body with X-rays.
- Wires will be placed on your body to help us monitor your heart rate.
- You will have a cuff around your arm. It will inflate from time to time to check your blood pressure.
- Most times, the catheter is inserted into a vein at the base of your neck (usually on your right side). It comes out of the skin below your collar bone.
- A radiology technologist will clean your skin around your neck and chest with a special soap. The technologist may need to shave some hair in the area where the doctor will be working. Tell this person if you have any allergies.
- We will place a blue drape next to your head to keep the area sterile. We will make you as comfortable as possible.
- The entire medical team will ask you to confirm your name and will tell you what we plan to do. This is for your safety.
- Then, your nurse will give you medicine to make you feel drowsy and relaxed before we begin.
- A local anesthetic (numbing medicine) will be applied in 2 spots. You will feel a sting for about 5 seconds. Then the area will be numb, and you should not feel sharp pain.
- Your doctor will guide the catheter into your vein using ultrasound and X-ray.
- The procedure takes about 30 minutes. When it is done, we will put a sterile dressing (bandage) on your chest where the catheter is located.

## What happens after the procedure?

You will be watched for a short time in the Radiology department or recovery room if you have had general anesthesia. You will then be moved to a room on a short-stay unit in the hospital. Once you are settled into your room:

- Your family member or friend will be able to be with you.
- For 30 minutes to 2 hours, you will need to rest on a stretcher with your head elevated 30° to 45°.
- You will be able to eat and drink.
- Before you get up to walk, we will assess you to make sure you can walk safely. A staff member will help you get out of bed. Most times, we will place a gait belt around your waist for extra safety.

You will be able to go home when:

- You are fully awake
- You can eat, drink, and use the restroom
- Your nausea and pain are under control
- Your vital signs are stable
- You can walk normally
- You have a responsible driver to take you home. You cannot drive yourself home or take a bus, taxi, or shuttle alone.
- You have a responsible person to stay with you at home overnight

## When You Get Home

Relax at home for the rest of the day. Make sure you have a family member, friend, or caregiver to help you.

You may feel drowsy or have some short-term memory loss. **For 24 hours, do not:**

- Drive a car
- Use machinery
- Drink alcohol
- Make important decisions or sign legal documents
- Be responsible for the care of another person
- Shower or take a bath

After 24 hours, you may shower but keep the CVC covered and dry. Cover your dressing with plastic wrap and tape the edges of the plastic to keep your bandages dry. Try to keep the water from hitting your bandages. Gently pat-dry. **Do NOT take a bath.**

## Medicines

Resume taking your usual medicines as soon as you start to eat. Take only the medicines that your doctors prescribed or approved.

Most people have only minor pain after this procedure. If your doctor says it is OK for you to take acetaminophen (Tylenol), this should ease any discomfort you have.

If your doctor expects you to have more severe pain, you will receive a prescription for a stronger pain medicine. Call us if your pain is not controlled with your prescribed medicines. (See phone numbers on the last page of this handout.)

## Caring for your catheter

Over time, the main problems that occur with a CVC are that it stops working or it becomes infected. If the catheter stops working, we have ways to fix it. Rarely, it needs to be taken out and a new one placed. But infection can be serious. **The best way to avoid infection is through careful catheter care.**

Within 1 to 3 days, a specially trained nurse will teach you how to change your dressing. If this visit is not set up, call your primary doctor to have it scheduled.

### When caring for your catheter:

- Make sure the clamps on the catheter are closed when it is not being used.
- Do not use safety pins or scissors near the catheter. It could get cut.

### If your dressing falls off or becomes very wet:

- Put on a new dry dressing with gauze and tape.
- Call us at the number on the last page.

### **If your catheter leaks, gets cut, or breaks:**

- Clamp the catheter close to where it enters your skin.
- Call your primary care doctor right away.
- Never take the blue Claves (caps) off your catheter.

### **If a cap falls off:**

- Make sure the catheter is clamped.
- Scrub the tip with an alcohol wipe.
- Place a new cap.
- Keep your dressing supplies clean and dry. Do not store them near the bathroom or kitchen sink.

## **When to Call**

Call us right away if you have:

- Increased or severe bleeding.
- Dressing that is filled with blood
- Signs of infection at the puncture site: redness, warmth, tenderness, and/or discharge that smells bad
- Fever higher than 100.4°F (38.0°C)
- Chills
- New shortness of breath
- New chest pain
- Dizziness
- Vomiting

### **Call 911 and go to the nearest emergency room if:**

- You have chest pain
- You have trouble breathing
- You have slurred speech
- You have balance problems or trouble using your arms or legs

## **Who to Call**

### **University of Washington Medical Center and Northwest Hospital**

Weekdays from 8 a.m. to 4:30 p.m., call the Interventional Radiology Department:

- Montlake: 206.598.6209, option 2
- Northwest: 206.598.6209, option 3

### **Harborview Medical Center**

Weekdays from 8 a.m. to 4:30 p.m., call the Interventional Radiology Department at 206.744.2857.

### **Questions?**

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

**UWMC – Montlake:**  
206.598.6209, option 2

**UWMC – Northwest:**  
206.598.6209, option 3

**Harborview Medical Center:**  
206.744.2857

**After hours and on weekends and holidays:**  
Call 206.598.6190 and ask to page the Interventional Radiology resident on call.