



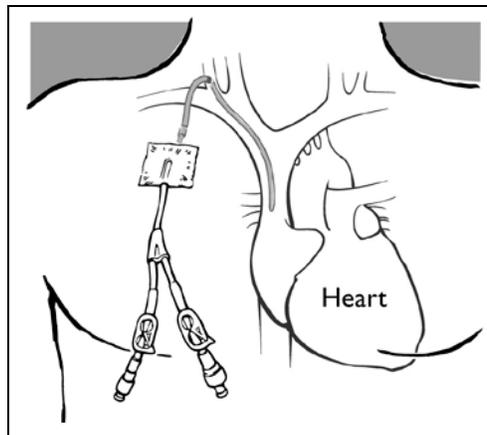
Tunneled Central Venous Catheter

Hickman, Leonard, or Groshong catheter

This handout explains what a central venous catheter is and what to expect when you have one.

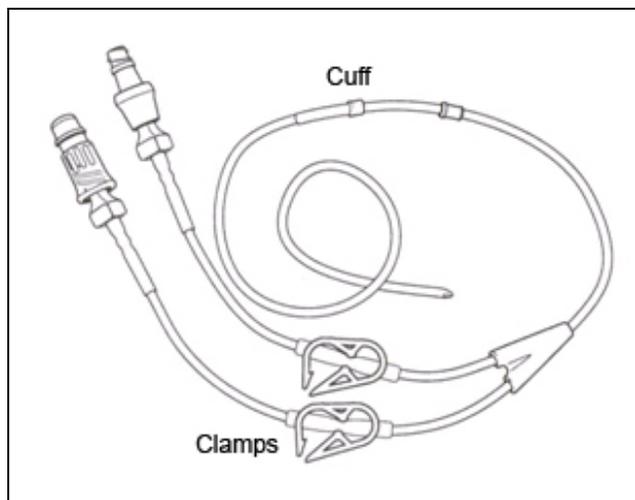
What is a central venous catheter?

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.



Your central venous catheter will enter your body through the skin of 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

Why do I need a CVC?

A *central venous catheter* (CVC) has many possible uses, including:

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

Another benefit of a CVC is that it can stay in place for weeks to months. This allows your health care providers to inject fluids or withdraw blood for lab tests without repeated needle sticks. A standard *intravenous* (IV) line 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 physician assistant with special training in doing this kind of procedure.

Are there any risks from CVCs?

As with all medical procedures, there are some risks. The most common problems after placing a CVC are:

- **Bleeding:** Any bleeding is usually minor and does not last long.
- **Infection right after the CVC is placed:** There is a small risk of infection right after the CVC is placed.
- **Infection more than 1 week after the CVC is placed:** This infection is more common. It is **not** related to the placement procedure.
- **The CVC does not work:** This may occur if the catheter moves or a clot forms on the tip.

There are also other less common risks. Your doctor or physician assistant will talk with you about these in detail before your procedure. Please make sure all of your questions and concerns are addressed.

Will I be able to do my usual activities?

For about 1 week after your CVC is placed:

- Avoid strenuous activities that put pressure on or stretch your neck and chest areas.
- Do not get the area wet (see next page).

After 1 week, you may resume all of your usual activities.

Will I feel the catheter?

You may feel the catheter under your skin in your neck or collarbone area. This usually goes away in 1 to 2 weeks.

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 the 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 right, or if it cracks.
- If you get a skin infection at the catheter entry site that does not go away with antibiotics.
- If you get a serious bloodstream infection.

Before Your Procedure

- If you are an outpatient, a nurse coordinator will call you the afternoon before your procedure. If your procedure is on a Monday, the nurse will call you the Friday before. The nurse will give you final instructions and answer any questions you have.
- If you do not understand English well enough to understand these instructions or the details of the procedure, tell us as soon as possible. We will arrange for a hospital interpreter to assist you. **A family member or friend may not interpret for you.**
- You most likely will need blood tests done within 14 days of your procedure. Sometimes, we do this when you arrive for your procedure. We will let you know if we need a blood sample before that day.
- If you have a history of allergy or bad reaction to *contrast* (X-ray dye), call our nurse coordinator at one of the phone numbers on the last page of this handout. You may need medicine for this allergy before the procedure.
- 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 the procedure. You will receive instructions about this.

- If you have diabetes and take insulin or metformin (Glucophage), you will receive instructions about holding or adjusting your dose for the day your catheter is placed.

Sedation

- When the CVC is placed, you will be given a sedative medicine (similar to Valium and morphine) through your IV. This medicine will make you sleepy, help you relax, and lessen your discomfort. You will stay awake. This is called *conscious sedation*. You will still be sleepy for a while after the procedure.
- For some people, using conscious sedation is not safe. If this is true for you, you will need *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 chronic breathing problems (you might use a CPAP or BiPAP device while sleeping)
- Use high doses of narcotic painkiller
- Have severe heart or lung disease
- Cannot lie flat 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)

Day Before Your Procedure

To prepare for sedation, follow these instructions closely:

- The day before your procedure, you may eat as usual.
- Starting **6 hours** before your procedure, you may only have *clear liquids* (liquid you can see through, such as water, Sprite, cranberry juice, or weak tea).
- Starting **2 hours** before your procedure:
 - Take **nothing** at all by mouth.
 - If you must take medicines, take them with **only** a sip of water.
 - Do not take vitamins or other supplements. They can upset an empty stomach.
- You **must** have a responsible adult drive you home and stay with you the rest of the day. **You may NOT drive yourself home or take a bus, taxi, or shuttle.**

On the Day of Your Procedure

- Take all of your other usual medicines on the day of the procedure. Do **not** skip them unless your doctor or nurse tells you to.
- Bring a list of all the medicines you take with you.
- 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 with unexpected and urgent problems. Thank you for your patience if this occurs.
- Unless you are told otherwise:
 - **If you are a patient at University of Washington Medical Center (UWMC)**, check in at Admitting on the 3rd (main) floor of the hospital. Admitting is to the right and behind the Information Desk in the lobby.
 - **If you are a patient at Harborview Medical Center (HMC)**, check in at the Ambulatory Procedure Area (APA) on the 8th floor of the Maleng Building.
- A medical assistant will give you a hospital gown to put on and a bag for your belongings. 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 health assessment. Your family or friend can be with you there.
- An IV line will be started. You will be given fluids and medicines through the IV.
- A radiology doctor or physician assistant will talk with you about the procedure and ask you to sign a consent form if that has not already been done. You will be able to ask questions at that time.

Your Procedure

- The nurse will take you to the radiology suite. This nurse will be with you for the entire procedure.
- 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 the skin below your collar bone (see the picture on page 1).

- A radiology technologist will clean your skin around your neck and chest with a special soap. Tell this person if you have any allergies. The technologist may need to shave some hair in the area the doctor will be working.
- 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.
- If needed, an interpreter will be in the room or will be able to talk with you and hear you through an intercom.
- 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.
- At one point, we will ask to you to hold your breath.
- The procedure takes about 30 minutes. When it is done, we will put a sterile dressing (bandage) on your chest where the catheter comes out (see picture on page 1).

After Your Procedure

- We will watch you closely for a short time in the Radiology department.
- Then you will go to a recovery area for about 1 to 2 hours to let the sedation wear off. You will be able to eat and drink, and your family may visit you.
- When you are fully awake and are able to eat, use the restroom, and walk, you will be able to go home.
- Problems after this procedure are rare. If they occur, we may need to keep you in the hospital overnight so that we can keep watching you or treat you.
- Before you leave the hospital, your nurse will tell you what activities you can do, how to take care of your catheter, and other important instructions.

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 sleepy or have some short-term memory loss.
- For 24 hours, do **not**:
 - Drive a car or use machinery
 - Drink alcohol
 - Make important personal decisions or sign legal documents
 - Be responsible for the care of another person
- There is usually only minor pain after CVC placement. 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.
- Resume taking your medicines as soon as you start to eat. Take **only** the medicines that your doctors prescribed or approved.
- Do **not** shower or bathe until you have had your dressing changed for the first time, usually 2 to 3 days after your procedure. If water gets on your incision, it will not heal as well. It may also become infected.
- Let the white tapes (Steri-Strips) fall off on their own. This will take a week or more.
- Do **not** scrub the glue that may cover your incision.
- If you **must** shower before your teaching session, cover your bandages 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.

When to Call

Call us **right away** if you have:

- Increased or severe bleeding
- Redness, swelling, or tenderness around the catheter or your neck that is getting worse
- Fever higher than 101°F (38.3°C) or chills
- New shortness of breath or chest pain
- Dizziness
- Vomiting

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.
- Make sure the clamps are **only** on the thick, reinforced area of the catheter.
- 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 206-598-6200.
- **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.
- If the catheter is **not** being used for dialysis:
 - Keep your bulldog clamp (extra safety clamp) with you at all times.
 - Use plastic tape and the bulldog clamp to attach the catheter close to your chest (for example, on clothing). **Never let it hang loose.**
 - Place tape between the clamp and blue Clave connector on the catheter. Do **not** put tape over the connection between the catheter and the Clave.

Questions?

Your questions are important. Call your doctor or health care provider if you have questions or concerns. UWMC clinic staff are also available to help.

Radiology/Imaging Services:
206-598-6200

Who to Call

University of Washington Medical Center (UWMC) Patients

Interventional Radiology nurse coordinator 206-598-6897

Procedure Scheduling 206-598-6209

After hours (between 5 p.m. and 7 a.m.), and on weekends and holidays

Ask for the Interventional Radiology Fellow on call..... 206-598-6190

Harborview Medical Center (HMC) Patients

Patient Care Coordinators..... 206-744-0112 or 206-744-0113

After hours (between 5 p.m. and 7 a.m.), and on weekends and holidays

Ask for the Interventional Radiology Fellow on call..... 206-744-0147

If You Have an Emergency

Go directly to the nearest Emergency Room or call 9-1-1. Do not wait to contact one of our staff.

UW Medicine

Radiology/Imaging Services
Box 357115

1959 N.E. Pacific St. Seattle, WA 98195
206-598-6200