



PATIENT & CAREGIVER EDUCATION

About Your Tunneled Catheter

This information explains what a tunneled catheter is and how it's placed. It also has general guidelines for caring for your tunneled catheter at home. A tunneled catheter is a type of central venous catheter (CVC).

About Tunneled Catheters

A tunneled catheter is a flexible catheter (thin tube) that's put into a vein in your chest. There are many different types of tunneled catheters. Your doctor will decide which type is best for you.

All tunneled catheters are tunneled under your skin and into a large vein near your heart. Outside of your body, the catheter divides into 1, 2, or 3 smaller tubes called lumens. Each lumen has a clamp, a needleless connector (also called a clave), and a disinfection cap on the end (see Figure 1).

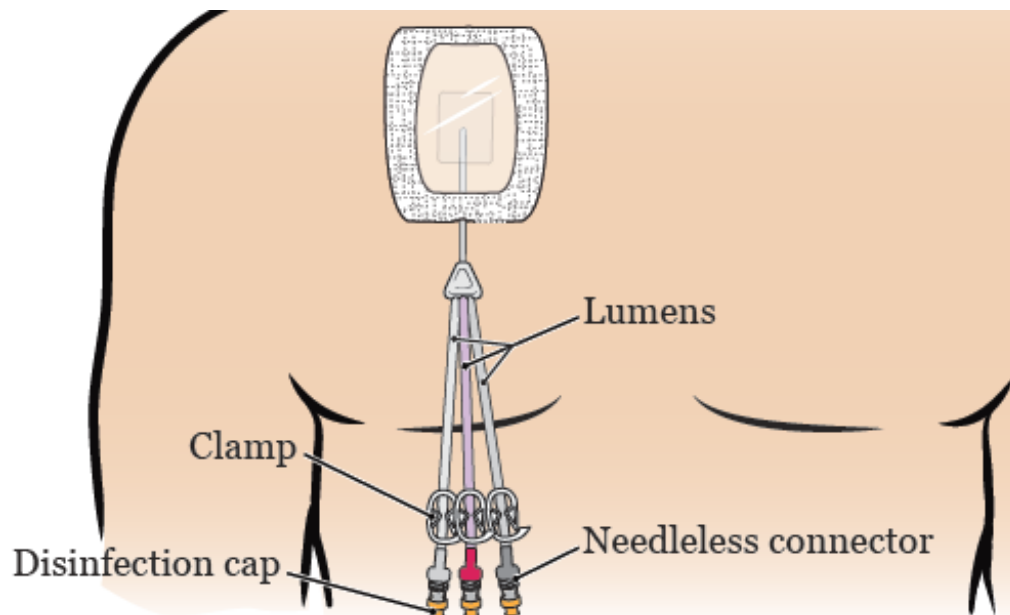


Figure 1. Tunneled catheter

A tunneled catheter can be used to:

- Take blood samples
- Give fluids
- Give chemotherapy and other medications
- Give blood transfusions
- Give intravenous (IV) nutrition

Having a tunneled catheter can help you need fewer needle sticks. A tunneled catheter can stay in your body for as long as a few years. Your doctor will remove it when you don't need it anymore.

Having a tunneled catheter shouldn't keep you from doing your normal activities, such as work, school, sexual activity, showering, and mild exercise. Avoid

contact sports, such as football and soccer, while your catheter is in place. Ask your doctor or nurse about any activities before you start them.

You will have a procedure to place your tunneled catheter. Your nurse will tell you how to get ready for your procedure. They will also teach you how to care for your tunneled catheter after your procedure. You can have a caregiver, family member, or friend learn with you.

Before Your Procedure

Ask About Your Medications

You may need to stop taking some of your medications before your procedure. Talk with your healthcare provider about which medications are safe for you to stop taking. We've included some common examples below.

Blood Thinners

Blood thinners are medications that affect the way your blood clots. If you take blood thinners, ask the healthcare provider performing your procedure what to do. They may recommend you stop taking the medication. This will depend on the type of procedure you're having and the reason you're taking blood thinners.

Examples of common blood thinners are listed below. There are others, so be sure your care team knows all the medications you take. **Do not stop taking your blood thinner without talking with a member of your care team.**

- Apixaban (Eliquis[®])
- Aspirin
- Celecoxib (Celebrex[®])
- Cilostazol (Pletal[®])
- Clopidogrel (Plavix[®])
- Dabigatran (Pradaxa[®])
- Dalteparin (Fragmin[®])
- Dipyridamole (Persantine[®])
- Edoxaban (Savaysa[®])
- Enoxaparin (Lovenox[®])
- Fondaparinux (Arixtra[®])
- Heparin (shot under your skin)
- Meloxicam (Mobic[®])
- Nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen (Advil[®], Motrin[®]) and naproxen (Aleve[®])
- Pentoxifylline (Trental[®])
- Prasugrel (Effient[®])
- Rivaroxaban (Xarelto[®])
- Sulfasalazine (Azulfidine[®], Sulfazine[®])
- Ticagrelor (Brilinta[®])
- Tinzaparin (Innohep[®])
- Warfarin (Jantoven[®], Coumadin[®])

Read *Common Medications Containing Aspirin, Other*

Nonsteroidal Anti-inflammatory Drugs (NSAIDs), or Vitamin E (www.mskcc.org/pe/common_meds). It has information about medications you'll need to avoid before your procedure. It also tells you what medications you can take instead.

Medications for Diabetes

Before your procedure, talk with the healthcare provider who prescribes your insulin or other medications for diabetes. They may need to change the dose of medications you take for diabetes. Ask them what you should do the morning of your procedure.

Your care team will check your blood sugar levels during your procedure.

Diuretics (water pills)

A diuretic is a medication that makes you urinate (pee) more often. Hydrochlorothiazide (Microzide[®]) and furosemide (Lasix[®]) are common diuretics.

If you take any diuretics, ask the healthcare provider doing your procedure what to do. You may need to stop taking them the day of your procedure.

Take devices off your skin

You may wear certain devices on your skin. Before your scan or procedure, device makers recommend you take

off your:

- Continuous glucose monitor (CGM)
- Insulin pump

Talk with your healthcare provider about scheduling your appointment closer to the date you need to change your device. Make sure you have an extra device with you to put on after your scan or procedure.

You may not be sure how to manage your glucose while your device is off. If so, before your appointment, talk with the healthcare provider who manages your diabetes care.

Arrange for someone to take you home

You must have a responsible care partner take you home after your procedure. A responsible care partner is someone who can help you get home safely. They should be able to contact your care team if they have any concerns. Make sure to plan this before the day of your procedure.

If you don't have a responsible care partner to take you home, call one of the agencies below. They'll send someone to go home with you. There's a charge for this service, and you'll need to provide transportation. It's OK to use a taxi or car service, but you still need a

responsible care partner with you.

Agencies in New York

VNS Health: 888-735-8913

Caring People: 877-227-4649

Agencies in New Jersey

Caring People: 877-227-4649

Tell us if you're sick

If you get sick (including having a fever, cold, sore throat, or flu) before your procedure, call your IR doctor. You can reach them Monday through Friday from 9 a.m. to 5 p.m.

After 5 p.m., during the weekend, and on holidays, call 212-639-2000. Ask for the Interventional Radiology fellow on call.

Note the time of your appointment

A staff member from Interventional Radiology will call you 2 business days before your procedure. If your procedure is scheduled for a Monday, they'll call you on the Thursday before. They'll tell you what time to arrive at the hospital for your procedure and remind you where to go.

Use this area to write down the date, time, and location of your procedure:

If you don't get a call by noon (12 p.m.) on the business day before your procedure, call 646-677-7001. If you need to cancel your procedure for any reason, call the healthcare provider who scheduled it for you.

The Day Before Your Procedure

Instructions for eating before your procedure



Do not eat anything after midnight the night before your procedure. This includes hard candy and gum.

The Day of Your Procedure

Instructions for drinking before your procedure



You can drink a total of 12 ounces of water between midnight and 2 hours before your scheduled arrival time. **Do not drink anything else.**

Do not drink anything starting 2 hours before your scheduled arrival time. This includes water.

Things to remember

- Take only the medications your doctor told you to take the morning of your procedure. Take them with a few sips of water.
- Don't apply cream (thick moisturizers) or petroleum jelly (Vaseline®) anywhere on your chest.
- Don't wear eye makeup.
- Remove any jewelry, including body piercings.
- Leave all valuables (such as credit cards and jewelry) at home.
- If you wear contact lenses, wear your glasses instead, if you can. If you don't have glasses, please bring a case for your contacts.

What to bring with you

- A list of the medications you take at home.
- Medications for breathing problems (such as inhalers), if you take any.
- Medications for chest pain, if you take any.
- A case for your glasses or contacts.
- Your Health Care Proxy form and other advance

directives, if you have completed them.

- If you use a CPAP or BiPAP machine to sleep at night, bring your machine with you, if you can. If you can't bring your machine with you, we will give you one to use while you're in the hospital.

What to expect

Once you arrive at the hospital, doctors, nurses, and other staff members will ask you to say and spell your name and date of birth many times. This is for your safety. People with the same or a similar name might be having a procedure on the same day.

During Your Procedure

First, you will get a numbing injection (shot) at the base of your neck and on your chest under your collarbone. Once the areas are numb, your doctor will make small incisions (surgical cuts). They will place the catheter through the incision on your chest and tunnel it under your skin to the incision at the base of your neck. Then, they will thread the catheter into your vein (see Figure 2). They will use an imaging scan to help them see the catheter while they do this.

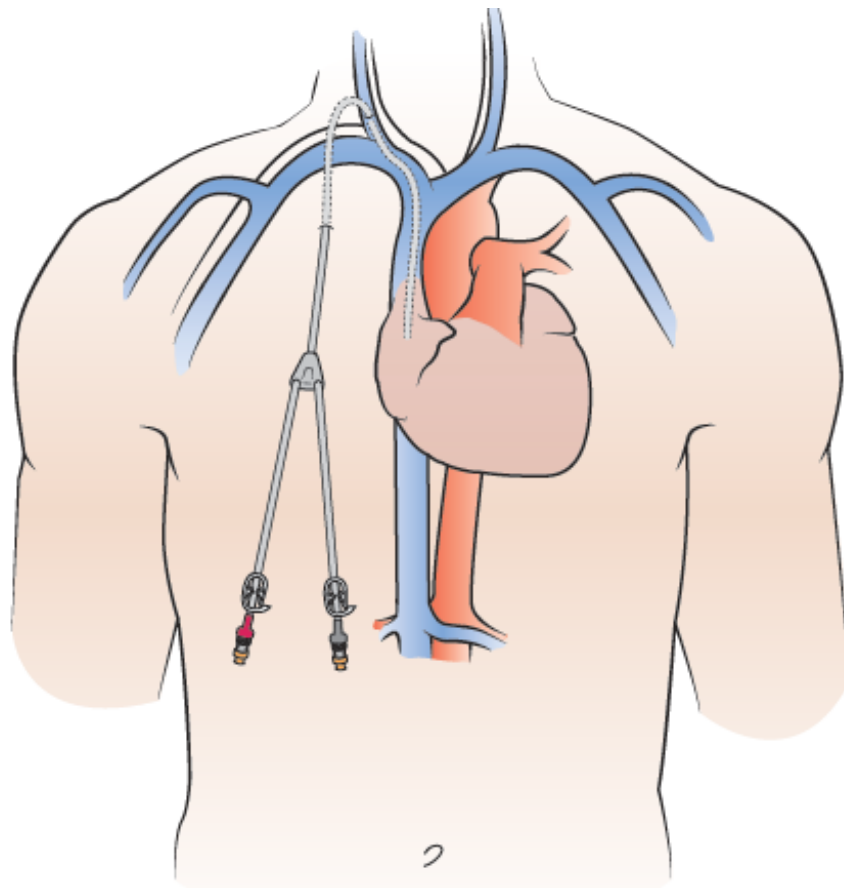


Figure 2. Catheter tunneled under your skin, into a vein

Once the catheter is in your vein, your doctor will use Steri-Strips™ (surgical tape) to close the incision at the base of your neck. They will stitch your catheter to your skin at the place where it leaves your body (the exit site). This will keep the catheter in place.

At the end of your procedure, your doctor will put a gauze dressing (bandage) over the incision on your neck and a Tegaderm™ dressing over your catheter exit site.

After Your Procedure

After your procedure, you will be brought to the recovery room. You will stay in the recovery room until you're ready to move to your hospital room or be discharged from (leave) the hospital.

You might have some bleeding and mild discomfort at your catheter exit side. This can last for about 1 to 3 days after your catheter is placed. If you have any bleeding from your exit site, apply pressure and a cold compress to the area. Call your doctor or nurse if the bleeding and discomfort gets worse at any time.

Don't shower for 24 hours after your procedure.

Your emergency kit

Your nurse will give you an emergency kit before your procedure or before you're discharged from the hospital.

The emergency kit has:

- 1 toothless clamp
- 1 dressing change kit. The kit includes:
 - 2 face masks
 - Alcohol-based (Purell®) hand wipe
 - Disposable drape
 - 2 pairs of nitrile gloves (sterile gloves)

- Chloroprep® applicator
- Alcohol pads
- No Sting swab stick
- 3 needleless connectors
- Tegaderm CHG dressing
- Disinfection caps
- Your doctor's office and emergency telephone numbers.

Keep your emergency kit with you at all times. You will need it if your catheter is leaking, your Tegaderm dressing is damaged or comes off, or your needleless connector or disinfection cap falls off.

Your catheter exit site

You might need to have your Tegaderm dressing changed within 48 hours (2 days) of your procedure. Your doctor or nurse will tell you if you do.

You should always have a Tegaderm dressing over your exit site while your tunneled catheter is in place. The Tegaderm dressing helps prevent infection.

Your neck incision

Two days after your procedure, you can remove the gauze bandage over the small incision on your neck. You don't need to put a new bandage over the incision.

Leave the Steri-Strips in place until they start to peel off. This should happen about 3 to 5 days after your procedure.

Caring for Your Tunneled Catheter at Home

- Clamp the lumens when your catheter isn't in use.
- Keep your catheter secure at all times to keep from pulling it. Ask your nurse about the best way to secure your catheter. You can tape the lumens to your skin, tuck them into your bra, or wrap them in medical tape and pin the tape to your clothing. Don't put tape over the connection site (where the needleless connector connects to the lumens).
- Check your exit site every day for:
 - Redness
 - Tenderness
 - Leakage
 - Swelling

- Bleeding

If you have any of these signs or symptoms, call your doctor. You might have an infection.

- Your Tegaderm dressing, needleless connectors, and disinfection caps will need to be changed and your catheter will need to be flushed at least once a week. It's best if you can come to a Memorial Sloan Kettering (MSK) location so a nurse can do these things. If you can't come to an MSK site, your nurse will help you make other arrangements. Always contact your doctor or nurse if you have any questions.

What to do if your catheter is leaking

1. Clamp your catheter above the leak.
 - Move the white clamp on the catheter so it's above the leak, if you can.
 - If you can't use the white clamp, use the clamp in your emergency kit.
2. Wipe the area that's leaking with an alcohol pad.
3. Call your doctor's office right away.

What to do if your Tegaderm dressing is damaged, loose, or dirty

1. Don't take off the damaged, loose, or dirty dressing. Put a new Tegaderm dressing over it.
2. Call your doctor's office right away.

What to do if your Tegaderm dressing is wet

1. Don't take off the wet Tegaderm dressing. Don't put another dressing over it.
2. Call your doctor's office right away.

What to do if your disinfection cap falls off

Throw the disinfection cap that fell off in the trash. Don't put it back on the lumen.

To put on a new disinfection cap:

1. Clean your hands with soap and water or an alcohol-based hand sanitizer.
2. Get a new disinfection cap from your emergency kit. Remove the cap from the strip.
3. Hold the needleless connector in one hand. With your other hand, gently push and twist the new disinfection cap onto the end of the needleless connector.

What to do if your needleless connector falls off

Throw the needleless connector that fell off in the trash. Don't put it back on the lumen.

To put on a new needleless connector:

1. Gather your supplies. You will need:
 - 1 pair of nonsterile gloves
 - 2 alcohol pads
 - 1 new needleless connector
 - 1 new disinfection cap
2. Clean your hands with soap and water or an alcohol-based hand sanitizer. Put the gloves on.
3. Get your supplies ready.
 - Open 1 of the alcohol pad packets, but leave the alcohol pad inside.
 - Open the needleless connector packet, but leave the needleless connector inside.
 - Pull the tab to take the cover off the disinfection cap, but leave the disinfection cap inside its plastic holder.
4. Open the other alcohol pad packet. Using the alcohol pad inside, pick up the lumen with your nondominant hand (the hand you don't write with). Hold it close to

the end (see Figure 3).

5. Pick up the other, open alcohol pad with your dominant hand (the hand you write with). Scrub the open end of the lumen with the alcohol pad for 15 seconds, then throw the alcohol pad in the trash. Let the lumen dry for 15 seconds. Keep holding it with the alcohol pad in your nondominant hand.
6. Pick up the new needleless connector with your free hand. If it has a cover, take the cover off. You can do this using the knuckles of your other hand. Then, twist the new needleless connector onto the end of the lumen (see Figure 3). Keep holding the lumen with the alcohol pad in your nondominant hand.

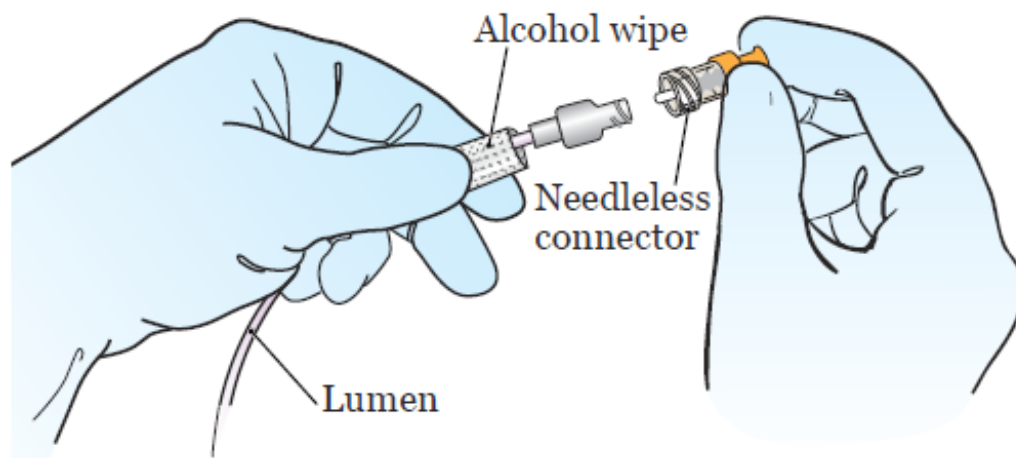


Figure 3. Twisting on the new needleless connector

7. Pick up the plastic holder with the disinfection cap with your free hand. Gently push and twist the disinfection cap onto the end of the needleless connector. Once it's attached, pull off the plastic

holder and throw it away.

8. Take your gloves off. Clean your hands.

Call your doctor or nurse after you change the needleless connector.

Guidelines for Showering

Follow the instructions in this section when you shower. Don't submerge your catheter in water (such as in a bathtub or swimming pool).

For more information about showering with a tunneled catheter, watch *Showering While You Have a Central Venous Catheter (CVC)* (www.mskcc.org/pe/shower_cvc).

Use a waterproof cover

You can shower with your catheter in place using a one-time-use waterproof cover that goes over your dressing (such as Aquaguard®). You can buy waterproof covers online.

Each time you shower, cover your Tegaderm dressing completely with a new waterproof cover to keep it from getting wet. To put on the waterproof cover:

1. Peel off the top and side strips.
2. Place the top edge above your dressing. Don't let the

tape on the waterproof cover touch your Tegaderm dressing. It can lift your dressing when you remove the waterproof cover after showering. Smooth the cover down over your dressing.

3. Peel off the bottom strip. Make sure the bottom edge of the waterproof cover is below your dressing and the lumens of your catheter are tucked into the waterproof cover and completely covered. Smooth the bottom edge down.

Don't shower for longer than 15 minutes. Use warm water, not hot water. This will help keep the waterproof cover from coming off.

After your shower, dry the waterproof cover before you take it off.

Use Hibiclens® skin cleanser

While your tunneled catheter is in place, it's very important to keep your skin clean to lower your risk of infection. Wash with Hibiclens every day while your tunneled catheter is in place.

Hibiclens is a skin cleanser that kills germs for up to 24 hours after you use it. It has a strong antiseptic (liquid used to kill germs and bacteria) called chlorhexidine gluconate (CHG). Showering with Hibiclens will help

lower your risk of infection.

You can buy Hibiclens from any local pharmacy or online. You will be sent home with a small bottle when you're discharged from the hospital.

Instructions for using Hibiclens

1. Use your normal shampoo to wash your hair. Rinse your head well.
2. Use your normal soap to wash your face and genital area. Rinse your body well with warm water.
3. Open the Hibiclens bottle. Pour some solution into your hand or a clean washcloth.
4. Move away from the shower stream to avoid rinsing off the Hibiclens too soon.
5. Rub the Hibiclens gently over your body from your neck to your feet. Don't put the Hibiclens on your face or genital area.
6. Move back into the shower stream to rinse off the Hibiclens with warm water.
7. Dry yourself off with a clean towel after your shower.
8. Don't put on any lotion, cream, deodorant, makeup, powder, or perfume after your shower.

Important points to remember when using Hibiclens

- Don't use regular soap, lotion, cream, powder, or deodorant without talking with your nurse first. If you're in the hospital, your nurse might give you a lotion that you can use after using Hibiclens.
- Don't use Hibiclens on your head, face, ears, eyes, mouth, genital area, or on deep wounds. If you have a wound and aren't sure if you should use Hibiclens on it, ask your doctor or nurse.
- Don't use Hibiclens if you're allergic to chlorhexidine.
- If your skin gets irritated or you have an allergic reaction when using Hibiclens, stop using it and call your doctor.

When to Call Your Healthcare Provider

Call your healthcare provider right away if you have:

- Your dressing is damaged, dirty, or peeling off.
- Your dressing gets wet.
- You have redness, swelling, or drainage around your catheter exit site.
- Your needleless connector falls off.
- You have a fever of 100.4 °F (38 °C) or higher or

chills.

- You have a break or leak in your catheter.

If you have any questions, contact a member of your care team directly. If you're a patient at MSK and you need to reach a provider after 5 p.m., during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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