



PATIENT & CAREGIVER EDUCATION

About Your Sutured Drainage Catheter

This information will help you prepare to have your sutured drainage catheter placed at Memorial Sloan Kettering (MSK) and teach you how to care for it when you are at home.

About Your Sutured Drainage Catheter

The purpose of a drainage catheter is to drain a collection of fluid in your body. When this fluid is infected, it is called an abscess. An abscess may cause fever, pain, or abnormal blood tests. If the fluid is not infected, you may or may not have symptoms.

A drainage catheter is inserted through the skin and into the area where fluid has collected. The catheter will be secured to your body with a suture (stitch). Fluid will drain from the catheter into a small bag. Your catheter will be removed when the fluid and infection are gone.

Having Your Drainage Catheter Inserted

Your drainage catheter will be inserted by an interventional radiologist. An interventional radiologist is a doctor who specializes in image-guided procedures.

The procedure usually takes less than 1 hour. Your interventional radiologist will explain the procedure to you and give you time to ask any questions before you sign a consent form.

After the procedure, your catheter will be attached to a bag to collect the drainage. Your doctor will give you an idea of how much drainage you should expect.

Often, drainage catheters are placed urgently when you are sick. In some cases though, you will be scheduled to come into the hospital for the procedure. If this is the case, follow the guidelines below.

Before Your Procedure

Ask about your medicines

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

Blood thinners

Blood thinners are medicines 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 medicine. 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 medicine 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®)
- Meloxicam (Mobic®)
- Nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen (Advil®, Motrin®) and naproxen (Aleve®)
- Pentoxifylline (Trental®)
- Prasugrel (Effient®)
- Rivaroxaban (Xarelto®)
- Sulfasalazine

- Enoxaparin (Lovenox®) (Azulfidine®, Sulfazine®)
- Fondaparinux (Arixtra®) • Ticagrelor (Brilinta®)
- Heparin (shot under your skin) • Tinzaparin (Innohep®)
- Warfarin (Jantoven®, Coumadin®)

Read *How To Check if a Medicine or Supplement Has Aspirin, Other NSAIDs, Vitamin E, or Fish Oil* (www.mskcc.org/pe/check-med-supplement). It has information about medicines you must avoid before your procedure.

Medicines for diabetes

Before your procedure, talk with the healthcare provider who prescribes your insulin or other medicine for diabetes. They may need to change the dose of the medicine 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 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 get to the hospital for your procedure. They will also 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 and drinking: 8 hours before your arrival time



- **Stop eating 8 hours before your arrival time, if you have not already.**
 - Your healthcare provider may tell you to stop eating earlier. If they do, follow their instructions.

- 8 hours before your arrival time, do not eat or drink anything except these clear liquids:
 - Water.
 - Soda.
 - Clear juices, such as lemonade, apple, and cranberry juices. Do not drink orange juice or juices with pulp.
 - Black coffee or tea (without any type of milk or creamer).
 - Sports drinks, such as Gatorade®.
 - Gelatin, such as Jell-O®.

You can keep having these until 2 hours before your arrival time.

The Day of Your Procedure

Instructions for drinking: 2 hours before your arrival time



Stop drinking 2 hours before your arrival time. This includes water.

Things to remember

- Take your medications the morning of your procedure as instructed by your doctor. Take them with a few sips of water.
- Do not apply cream or petroleum jelly (Vaseline®). You can use deodorant and light moisturizers. Do not 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 possible. 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), medications for chest pain, or both
- A case for your glasses or contacts
- Your Health Care Proxy form, if you have completed one
- If you use a CPap or BiPAP machine to sleep at night,

please bring your machine with you, if possible. If you can't bring your machine with you, we will give you one to use while you are in the hospital.

What to expect

Once you arrive, doctors, nurses, and other staff members will ask you to state and spell your name and date of birth many times. This is for your safety. People with the same or similar names may be having procedures on the same day.

You will be brought into the procedure room. If you don't have an intravenous (IV) line, your nurse will put one in. You will receive medication through your IV to make you feel drowsy.

The area where the catheter is inserted will be numbed with an injection of anesthetic. Your doctor will use fluoroscopy (real time x-rays), a computed tomography (CT) scan, or ultrasound to help place the catheter.

After your drainage catheter is inserted, it will be sutured (stitched) to your skin at the point where it exits your body. You will be able to see the thread around your catheter.

After Your Procedure

After your procedure, you will be brought to the recovery room. You will need to stay in bed until the sedation has worn off. You will then return to your hospital room or go home with your caregiver.

About your catheter

You will have a black mark on the catheter above the suture (see Figure 1). Your nurse will show it to you. This mark should always be the same distance from your skin. If it changes, this means that the catheter has moved. You must call Interventional Radiology so someone there can check it.

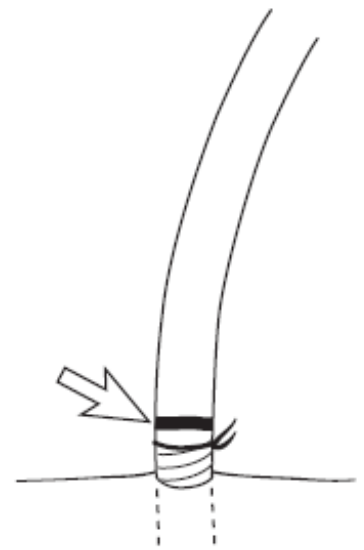


Figure 1. Black mark on your catheter

The external end of the catheter will be attached to a 3-way stopcock (see Figure 2). It is called a 3-way stopcock because it has 3 points of attachment and a tap that can be turned to control the flow. The drainage bag will be connected to the attachment point opposite to the catheter. The third attachment point has a protective cover on it, through which you can inject fluids. The cover is called a needleless connector. You will have a dressing over your catheter.

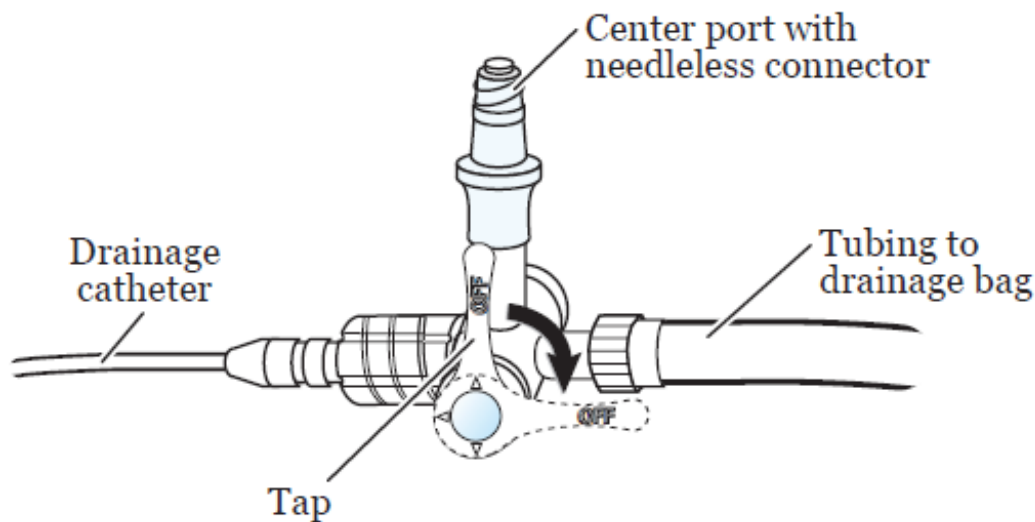


Figure 2. Your 3-way stopcock

The drainage bag can be attached to your clothes with a safety pin or secured to your leg with Velcro® straps. The bottom of the bag has a twist cap, which you will use to drain the bag.

CathGrip® is a device that helps to make sure your catheter does not come out of your body, in case you accidentally pull on it.

Showering

You may take showers but you will need to keep your dressing dry. A hand-held shower can help direct the water away from the dressing. You will also need to cover your dressing. If the dressing gets wet, you will need to change it. Wet dressings are a common cause of skin problems.

Before you shower, remove the belt and empty the

drainage bag. Tape the drainage bag to your body near the catheter or use a strap to attach it to your waist. Tape plastic wrap or a gallon sized bag over the dressing to keep it dry.

You can also use AquaGuard, which is a one-time use waterproof cover to protect your dressing. When you shower, make sure that that your catheter is covered to prevent it from getting wet.

Applying the AquaGuard

1. The edges of the AquaGuard have peelable tape. Fold over a corner of each side of the tape (see Figure 3).

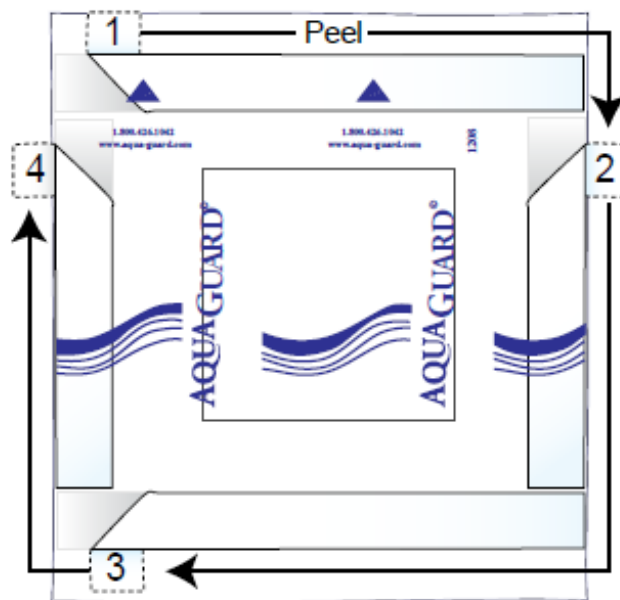


Figure 3. Folding and peeling the AquaGuard edges

2. Hold the AquaGuard with the arrows pointing towards your head. Peel off the top strip and place the top

edge of the AquaGuard above the dressing. Smooth it down.

3. Then grab a folded corner and peel down one side, smoothing as you go.
4. Do the bottom and remaining side the same way.

Don't let the tape on the AquaGuard touch the dressing. It can lift your dressing when you remove the AquaGuard after showering.

Caring for Your Sutured Drainage Catheter

Your nurse will teach you how to care for the catheter. Use this resource at home to remind you of what you learned. At first, a visiting nurse will come to your home to help you care for the catheter. It won't be long before you feel confident doing it yourself.

Every day you will:

- Inspect your catheter.
- Flush your catheter with normal saline.
- Record the amount of drainage in the bag.
- Empty drainage from the bag.

Your dressing and drainage bag will need to be changed

once a week. You will also need to change the dressing if it becomes loose, wet, or soiled. If a wet dressing is left against your skin, it may cause your skin to become irritated and sore.

You may need someone to help you change the dressing and drainage equipment. You will be able to inspect the catheter and flush it with the normal saline yourself.

Inspecting your catheter

You must inspect your catheter every day. You can use a hand-held mirror to do this.

1. Find the black mark to make sure it is in the correct position.
2. Check the dressing to make sure it is secure. If the dressing is wet, soiled, has come loose, or started to lift from your skin, it needs to be changed.
3. Examine your skin around the catheter when you are changing the dressing to see that it is in good condition. There should be no redness, areas of broken skin, or rash. Fluid should not leak around the catheter.
4. Look at the fluid in the bag. It should be flowing freely into the bag. There should be no change in the way it looks.

5. Inspect the catheter and the drainage bag for kinks in the tubing.

If you see a problem, finish your catheter care. Then call the nurse or fellow. The contact information is at the end of this resource.

Flushing your sutured drainage catheter

You will need to flush your catheter with normal saline twice a day. Your doctor will tell you whether to use 3 mL, 5 mL, or 10 mL of normal saline.

Below is a video that shows how to flush a biliary catheter. Follow the same directions to flush your sutured drainage catheter.



Please visit www.mskcc.org/pe/flush_biliary to watch this video.

Steps

1. Gather your supplies. You will need:
 - 1 (10 mL) prefilled normal saline syringe
 - 2 alcohol wipes
2. Wash your hands with warm water and soap for at least 20 seconds or use an alcohol based hand sanitizer.

3. Take the syringe out of the wrapper. Remove the cap from the syringe using a twisting motion. With the cap off, remove the air from the syringe by holding the syringe open-side up and pushing the plunger slowly until the normal saline is at the top. If your doctor instructed you to flush with less than 10 mL, squirt the extra saline out before you connect the syringe. Lay the syringe on the table. Do not allow the tip of the syringe to touch anything.
4. Sit or lie comfortably. Turn the stopcock toward the drainage bag (see Figure 3).
5. Clean the needleless connector on the stopcock with an alcohol wipe for 15 to 30 seconds, rubbing vigorously.
6. Place the syringe onto the needleless connector. Hold the connector while you push and turn the syringe clockwise (to the right) to lock it into position.
7. Push the plunger of the syringe to push 1/3 of the normal saline into the catheter, and then pause. Push in another 1/3 of the normal saline, and pause again. Push in the rest of the normal saline into the catheter. Never pull back on the plunger. Always push forward
 - **If you have any of the following while flushing, do not try to put in any more saline. Stop and**

call your doctor's office if you:

- **Feel pain**
- **Feel resistance**
- **See leaking around the catheter**

8. When the syringe is empty, turn it counterclockwise (to the left) to remove it. You can throw it away in your regular trash. Turn the stopcock back to the direction of the needleless connector. You will probably see fluid drain into the bag.

Emptying the collected drainage from the bag

You will need to measure and empty the drainage twice a day or more often if necessary.

1. Gather your supplies. You will need:
 - The measuring container you received in the hospital
 - Non-sterile gloves
 - 2 alcohol wipes
2. Wash your hands with warm water and soap for at least 20 seconds or use an alcohol based hand sanitizer.
3. Put on the non-sterile gloves.
4. Clean the cap at the bottom of the drainage bag with

an alcohol wipe.

5. Twist the cap open while holding it over the measuring container.
6. Allow the fluid to drain into the container. Do not let the bottom of the bag touch the sides of the drainage container.
7. When all fluid has drained out of the bag, twist the cap closed.
8. Clean the cap with an alcohol wipe.
9. Measure the amount of fluid in the container, then flush the fluid down the toilet.
0. Wash the measuring container with soap and water. Allow it to air dry.
1. Throw out your gloves and clean your hands with soap and water or an alcohol-based hand sanitizer.
2. Record the amount of drainage on the form at the end of this resource. Be sure to subtract the amount of your saline flush (3 mL, 5mL, or 10 mL) from the daily totals.

Changing the dressing

The dressing, stopcock, and drainage system will need to be changed once a week. If the dressing gets wet, soiled, loose, or pulls away from your skin, change it. Although

you may need the assistance of your helper to do the dressing and equipment changes, you can assemble the equipment yourself.

Sit or lie comfortably.

1. Gather your supplies:

- 2 Primapore dressings
- 3M™ No Sting Barrier Film
- Adhesive remover wipe
- Alcohol wipes
- Gauze
- Mild soap and a cup of water
- Non-sterile gloves
- CathGrip kit, if changing the CathGrip
- Waste basket

2. Wash your hands with warm water and soap for at least 20 seconds or use an alcohol based hand sanitizer.

3. Sit or lie comfortably. At this point, you will need someone to help you. The person doing the dressing change should follow the instructions below.

4. Wash their hands and put on non-sterile gloves.

5. Hold the catheter in place to prevent tension or pulling on it. Gently remove the old dressing and throw it away. If your skin is sensitive, ask your caregiver to rub adhesive remover along the dressing edge. It may minimize the discomfort.
6. Release the catheter from the straps on the CathGrip. Make sure the drainage bag is somewhere that it can't fall. If you will be changing the CathGrip, use adhesive remover to release it from your skin and throw it away.
7. Throw out the old dressing.
8. Use a gauze pad moistened with soap and water to clean the skin around the catheter.
9. Rinse and dry the skin with fresh gauze and water.
0. Check the drainage catheter. The black ink mark should be just above the suture (see Figure 1).
1. Inspect the insertion site. Call your nurse or fellow if you see any:
 - Redness
 - Swelling
 - Leakage of fluid around the catheter
2. Apply the 3M No Sting Barrier Film to the skin. This protects your skin and helps the adhesive stick better.

3. Place the Primapore dressings. One dressing should be centered over the insertion site. The second dressing should be shifted down one-half inch below the insertion site to allow the adhesive on the dressing to secure the catheter.
4. Remove your gloves and throw them out. Wash your hands.
5. If you will not be changing your drainage bag at this time, proceed to step 11 below.

Changing the stopcock and drainage equipment

Below is a video that shows how to change the equipment on a biliary catheter. Follow the same directions to change the equipment on your sutured drainage catheter.

 Please visit www.mskcc.org/pe/change_biliary to watch this video.

1. Gather your equipment:
 - Non-sterile gloves
 - 1 needleless connector
 - 1 sterile 3-way stopcock
 - 1 drainage bag
 - Safety pin or strap

- Gauze
 - 1-inch Micropore® paper tape
 - Waste basket
2. Wash your hands with warm water and soap for at least 20 seconds or use an alcohol based hand sanitizer.
 3. Open the packages containing the needleless connector, 3-way stopcock, and drainage bag. Put the package from the drainage bag to one side.
 4. Remove the protective cover from the base of the needleless connector and throw it away. Attach the needleless connector to the center port of the stopcock (see Figure 1). Put the stopcock down.
 5. Remove the drainage bag from the package. Connect the tubing from the drainage bag to the stopcock with a twisting motion. Close the drainage port on the bottom of the bag by turning it clockwise. Closing the port prevents leaking.
 6. Place the assembled drainage bag back in its package. This will keep it clean until you are ready to connect it to the catheter.
 7. Wash your hands again, then put on non-sterile gloves.

8. If the bag is attached with a safety pin, remove the safety pin. Make sure the new drainage bag is within your reach.
9. While holding gauze under the connector, twist off the old stopcock and drainage system from the catheter and throw it away. Quickly attach the new stopcock and drainage system.
0. Make sure the off tap of the stopcock is turned in the direction of the needleless connector.
1. If you're changing the CathGrip, follow the instructions in the sections below. If you're not changing CathGrip right now, reattach the catheter to the CathGrip.
 - To do this, place your catheter on the device straps.
 - There are 2 straps, one with holes and one with jagged edges. The strap with the holes has 2 openings. Insert the strap with the jagged edges end into the lower opening of the other strap.
 - Pull to secure (see Figure 4).

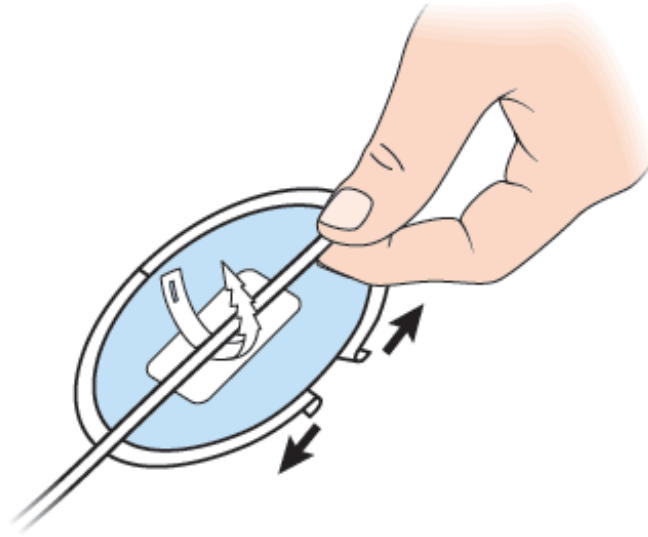


Figure 4. Placing the catheter and removing the paper back of the CathGrip

2. Secure the drainage bag with the strap or with a safety pin. You can attach the bag to the waistband of your clothing with the safety pin or to your leg with the attached Velcro straps. The bag should be below the level of the catheter. That allows the catheter to drain by gravity.
3. Check to see that the fluid is draining into the new tubing.
4. When you have finished, remove your gloves and wash your hands.

Changing your CathGrip

The CathGrip will prevent pulling, tension, or kinking of the drainage catheter and tubing. You will need your CathGrip kit for this part.

1. Select a position for the CathGrip. The CathGrip and drainage bag tubing should be lower than the catheter insertion site in order for it to drain. Make sure it's lower both when you are standing and laying down. When the catheter is attached there should be no pull or tension on the catheter. There should be a gentle bowing of the catheter.
2. Rest the tubing on the side of your abdomen on the selected site.
3. Inspect the site where the CathGrip will be placed. Make sure you select an area that's not red or irritated. Trim any long hairs at the site with scissors or hair trimmer. Avoid using a razor.
4. Open CathGrip package.
5. Clean the site with the alcohol wipe from the kit. This will remove oils and products, such as lotion or soap, from your skin. Allow alcohol to dry completely.
6. Wipe the site with the BioPlus+ Skin Prep, which is included in the kit.
7. Allow area to dry to touch. This takes about 15

seconds.

8. Remove the paper on the back of the CathGrip one side at a time (see Figure 4). Apply to skin in the desired location. Repeat with the other side.
9. Gently press the CathGrip to the skin for 5 seconds to seal it to the skin.
0. Place your catheter on the device straps. There are 2 straps, one with holes and one with jagged edges. The strap with the holes has 2 openings. Insert the strap with the jagged edges end into the lower opening of the other strap. Pull to secure (see Figure 5).

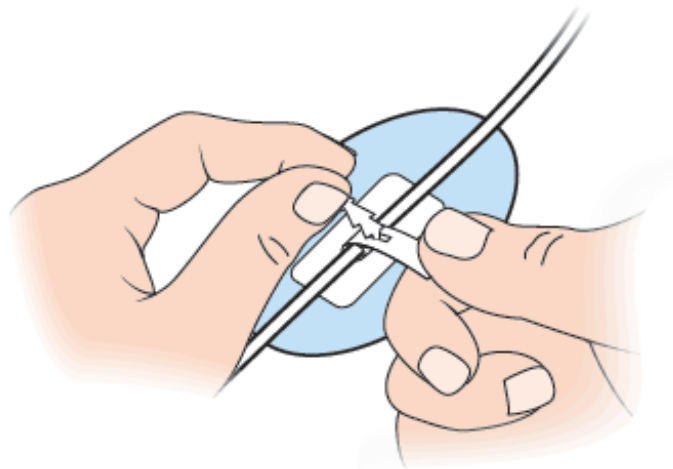


Figure 5. Securing the catheter in the CathGrip

1. Make sure that there is no pull or tension on the catheter. If you notice any tension or pull, change the position of the catheter in the CathGrip.

Activities While You Have Your Sutured Drainage Catheter

- You can go to work and exercise with your catheter in place. Avoid movements that involve stretching from side to side or continual bending. These could dislodge the catheter.
- Do not swim, take a bath, or submerge your catheter in water. Speak with your doctor in Interventional Radiology if you have a vacation planned so that we can teach you what to do in this situation.
- The suture that holds the catheter in place can become uncomfortable. Generally, this happens when the suture is pulled away from the skin. To prevent or minimize this, make sure the catheter is not pulled when attaching the CathGrip. Keep the tubing secured to your body with a CathGrip at all times.
- When you are getting dressed, be sure not to tug on the catheter. Do not allow the tubing to become kinked by clothing such as pantyhose or a belt. Try not to lie on your catheter when you sleep. This will prevent kinking of the catheter. Clothing can usually cover the catheter.

When to Call Your Healthcare Provider

Call your healthcare provider if you have any of the following:

- There is no drainage from your catheter or if the amount of drainage is much less than usual.
- The drainage looks bloody.
- There is leakage around the insertion site.
- You cannot flush the catheter or it leaks when it is flushed.
- The location of the black mark has changed.
- There is no longer drainage from the catheter when the 3-way stopcock is in the upright position
- The clamp has broken or opened.
- There is a kink in the tube that you cannot straighten out, causing a blockage.
- You have pain, tenderness, or swelling at the catheter site.
- Your skin around the catheter looks red, irritated, or different from the way it normally looks.
- You have a fever of 100.4 °F (38 °C).
- You have any concerns about your catheter.

Ordering Supplies

Your healthcare provider will give you enough supplies to last for 2 weeks. When you need more supplies, you can either order them through your visiting nurse service or we'll arrange for the supply company to send them to you. The items you need and their supply numbers are listed below.

Item	Supply Number
Adhesive Remover (1 box)	3170
Alcohol Wipes (1 box)	3330
CathGrip (each)	2675
Micropore paper tape (1 box)	3174
Non-sterile gloves (1 box)	4545
Plain gauze (1 package)	3424
Skin Prep (1 box)	3332
Telfa (each)	3327
Drainage bag (each)	3361

Prefilled syringes

You will need a prescription for prefilled normal saline syringes. You can get the prescription from the IR clinic. If your local pharmacy does not have the syringes, you can get them from the outpatient pharmacy at Memorial Hospital at 1275 York Avenue, between East 67th and

East 68th Streets. It is open Monday through Friday from 9:00 a.m. to 5:45 p.m. To reach the pharmacy, call 646-888-0730.

Drainage Record

Date	Morning output	Afternoon output	Total (subtract flush amount)	Notes

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you’re not sure how to reach your healthcare provider, call 212-639-2000.

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

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