About Your Biliary Drainage Catheter

This information will help you prepare for having a biliary catheter (thin, flexible tube) placed at Memorial Sloan Kettering (MSK) and teach you how to care for it when you are at home.

About Your Biliary System

Bile is a fluid made by your liver. It helps break down food. Your bile flows from your liver through your bile ducts to your small intestine.

When your bile duct is narrowed or blocked by scar tissue or a tumor, bile can no longer flow into the first part of your small intestine, called the duodenum (see Figure 1). This causes the bile to collect in your liver. The build-up of bile in your liver can cause infection, nausea, vomiting, fever, itching, and jaundice (when your skin and the whites of your eyes look yellow).

Figure 1. Narrow or blocked flow of bile
About Your Biliary Drainage Catheter

If your bile duct is blocked, your doctor may recommend that you have a biliary drainage catheter placed. This will allow the bile to drain from your liver.

There are 3 different ways bile can be drained from your liver. Your doctor will discuss these with you before your procedure.

- An external biliary drainage catheter goes through your skin and into your bile ducts. It will be placed above the blockage (see Figure 2). After this procedure you will have a catheter coming out of your body, attached to a drainage bag.

  ![Figure 2. External biliary drainage catheter](image)

- An internal-external biliary drainage catheter goes through your skin and into your bile ducts, across the blockage. One end of the catheter will sit in your small intestine, and the other will come out of your body and will be attached to a drainage bag (see Figure 3). This catheter lets bile flow in 2 directions, either out to the external collecting bag or into your small intestine. This is the most common kind of drainage catheter, but not everyone is able to get this type.
Internal biliary drainage (stenting) uses a metal cylinder (called a stent) to hold the blocked area open. After this procedure you may have a small catheter coming out of your body. If you have a catheter, you will return to Interventional Radiology later the same day or the following day so your doctor can see if the stent is working well. If it is, the catheter will be removed.

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

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

**Before Your Procedure**

**Ask about your medications**

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

If you take medication that affects the way your blood clots, ask the doctor
performing your procedure what to do. The doctor’s contact information is listed at the end of this resource. Some examples of these medications are:

<table>
<thead>
<tr>
<th>Medication</th>
<th>Brand Name</th>
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<tbody>
<tr>
<td>apixaban</td>
<td>Eliquis®</td>
</tr>
<tr>
<td>dalteparin</td>
<td>Fragmin®</td>
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<tr>
<td>meloxicam</td>
<td>Mobic®</td>
</tr>
<tr>
<td>ticagrelor</td>
<td>Brilinta®</td>
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<tr>
<td>aspirin</td>
<td></td>
</tr>
<tr>
<td>dipyridamole</td>
<td>Persantine®</td>
</tr>
<tr>
<td>nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen (Advil®) or naproxen (Aleve®)</td>
<td></td>
</tr>
<tr>
<td>tinzaparin</td>
<td>Innohep®</td>
</tr>
<tr>
<td>celecoxib</td>
<td>Celebrex®</td>
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<tr>
<td>edoxaban</td>
<td>Savaysa®</td>
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<tr>
<td>pentoxifylline</td>
<td>Trental®</td>
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<tr>
<td>warfarin</td>
<td>Coumadin®</td>
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<tr>
<td>cilostazol</td>
<td>Pletal®</td>
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<tr>
<td>enoxaparin</td>
<td>Lovenox®</td>
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<tr>
<td>prasugrel</td>
<td>Effient®</td>
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<tr>
<td>clopidogrel</td>
<td>Plavix®</td>
</tr>
<tr>
<td>Fondaparinux</td>
<td>Arixtra®</td>
</tr>
<tr>
<td>rivaroxaban</td>
<td>Xarelto®</td>
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<tr>
<td>dabigatran</td>
<td>Pradaxa®</td>
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<td>heparin (shot under your skin)</td>
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<tr>
<td>sulfasalazine</td>
<td>Azulfidine®, Sulfazine®</td>
</tr>
<tr>
<td>heparin (shot under your skin)</td>
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</tbody>
</table>

Whether they recommend you stop taking it will depend on the reason you are taking it. **Do not stop taking any of these medications without talking with your doctor.**

Please review the information in the resource *Common Medications Containing Aspirin and Other Nonsteroidal Anti-inflammatory Drugs (NSAIDs)* ([www.mskcc.org/pe/common_meds](http://www.mskcc.org/pe/common_meds)). It includes important information about medications you’ll need to avoid before your procedure and what medications you can take instead.

If you take insulin or other medications for diabetes, you may need to change the dose before your procedure. Ask the doctor who prescribes your diabetes medication what you should do the morning of your procedure.

If you take any diuretics (medications that make you urinate more often), you may need to stop taking them the day of your procedure. Some examples are furosemide (Lasix®) or hydrochlorothiazide. Speak with your doctor.

**If you’ve had an allergic reaction to contrast dye in the past, tell the doctor doing your biliary drainage catheter procedure. They may tell you to take medication before your procedure.**
Tell us if you’re sick

If you develop any illness (fever, cold, sore throat, or flu) before your procedure, please call a nurse in Interventional Radiology at 212-639-2236. A nurse is available Monday through Friday from 9:00 AM to 5:00 PM. After 5:00 PM, during the weekend, and on holidays, call 212-639-2000 and ask for the Interventional Radiology fellow on call.

Note the time and place of your appointment

A staff member from Interventional Radiology will call you 2 business days before your procedure. They will tell you what time you should arrive at the hospital for your procedure. If your procedure is scheduled on a Monday, you will be called on the Thursday before.

They will also tell you where to go on the day of your procedure. This will be one of the following locations:

- Presurgical Center (PSC) on the 2nd floor
  1275 York Avenue
  (between East 67th and East 68th Streets)
  M Elevator to 2nd floor

- Presurgical Center (PSC) on the 6th floor
  1275 York Avenue
  (between East 67th and East 68th Streets)
  B elevator to 6th floor

If you don’t receive a call by 12:00 PM the business day before your procedure, please call 212-639-5051.

If you need to cancel your procedure for any reason, please call the doctor who scheduled it for you.
Instructions for eating and drinking before your procedure

- Do not eat anything after midnight the night before your procedure. This includes hard candy and gum.
- Between midnight and up until 2 hours before your scheduled arrival time, you may drink a total of 12 ounces of water (see figure).
- Starting 2 hours before your scheduled arrival time, do not eat or drink anything. This includes water.

The Day of Your Procedure

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.
- 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

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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 at the hospital, 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 meet the doctor who will place the catheter. They will explain the procedure and ask you to sign a consent form.

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) to help place the 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.

In the recovery room, your nurse will continue to monitor your pain, heart rate, breathing, and blood pressure. They will monitor your catheter site for any bleeding.

About your catheter

You will have a black mark on the catheter above the disk (see Figure 4). Your nurse will show it to you. This mark should always be the same distance from the top of the disk. If it changes, this means that the catheter has moved. You must call Interventional Radiology so someone there can check it.
The external end of the catheter will be attached to a 3-way stopcock (see Figure 5). 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 drainage bag attached to your catheter. You will see bile (yellow-green fluid) flowing into the bag. The fluid may appear bloody for the first day or 2. The color will eventually be golden yellow or greenish, depending on exactly where the catheter is inside your body.

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.
Caring for Your Biliary Catheter

Your nurse will teach you how to care for your 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 the catheter.
- Flush your catheter with normal saline.
- Empty drainage from the bag.
- Record the amount of drainage.

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.

The amount of fluid draining from your catheter may vary, however if you drain more than 500 mL in 1 day, talk with your doctor about what to drink to replace the fluid and salts that you are losing in the drainage. As always, it is important to stay hydrated and eat a balanced diet.

Inspecting your biliary drainage catheter

Inspect your catheter every day using a hand held mirror, a full length mirror, or both.

1. Find the black mark to make sure it is in the correct position (see Figure 4).
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 bile in the bag. It should be flowing freely into the bag. There should be no change in the way it looks. If there is a decrease in amount, or if the bile color or sediments change, you may not be drinking enough liquids. Try to drink 8 (8-ounce) glasses of liquids every day.

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

**Flush your biliary drainage catheter**

Below is a video that shows how to flush a biliary catheter.

![Video Link](https://www.mskcc.org/pe/flush_biliary)

Please visit [www.mskcc.org/pe/flush_biliary](http://www.mskcc.org/pe/flush_biliary) to watch this video.

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.

1. Gather your supplies. You will need:
   - 1 (10 mL) prefilled normal saline syringe
   - 2 alcohol wipes

2. Wash your hands thoroughly with warm water and soap 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 down.

   ○ 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 thoroughly with warm water and soap or use an alcohol based hand sanitizer.


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.
10. Wash the measuring container with soap and water. Allow it to air dry.
11. Throw out your gloves and clean your hands with soap and water or an alcohol-based hand sanitizer.
12. 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, 5 mL, or 10 mL) from the daily totals.

**Changing your Uresil dressing**

The Uresil dressing system is designed to help keep your catheter from moving out of your bile ducts. The disk is attached to your drainage catheter. The dressing covers the disk, which keeps the catheter in place.

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 help to change your dressing and equipment, you can assemble the equipment yourself.

Below is a video demonstrating how to change your Uresil dressing.

![Please visit www.mskcc.org/pe/uresil_dressing to watch this video.](www.mskcc.org/pe/uresil_dressing)

1. Gather your supplies:
   - 1 Uresil adhesive dressing
   - 3M™ No Sting Barrier Film
   - Adhesive remover wipe
   - Alcohol wipes
   - Gauze
   - Mild soap and a cup of water
   - Non-sterile gloves
1. (2 inch x 2 inch) Telfa
2. Scissors
3. CathGrip changing kit, if changing your CathGrip
4. Waste basket

2. Wash your hands with warm water and soap or use an alcohol based hand sanitizer.

3. Clean your scissors with an alcohol pad. If your Telfa is larger than 2 inches by 2 inches, you will need to cut it to that size. Cut a slit in that piece (see Figure 6) and set it to the side.

4. 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.

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

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. Hold the silicone disk in place using 1 finger to prevent tension or pulling on the catheter. Locate the slit in the Uresil dressing. From this spot, slowly and gently peel the adhesive away from the skin while holding the disk. If the skin around the catheter is sensitive, wipe adhesive remover around the edge of the dressing to minimize discomfort.

8. Throw out the old Uresil dressing.

9. Use a gauze pad moistened with soap and water to clean the skin around and under the silicone disk. Using the same gauze, clean the top and bottom sides of the silicone disk itself. Always hold one side of the disk firmly on the skin while cleaning under the other side.
10. Rinse and dry the skin and the silicone disk with fresh gauze.

11. Wipe the top side of the silicone disk with an alcohol wipe. This removes any soap residue.

12. Look at the disk nipple. The black ink mark should be just above the disk nipple (see Figure 1). If it moved, finish changing the dressing, and then call your doctor’s office.

13. Inspect the insertion site under the silicone disk. Always hold 1 side of the disk firmly on the skin while tilting up the other side. If you see any of the following, finish changing the dressing and call your doctor’s office:
   - Redness
   - Swelling
   - Foul-smelling drainage
   - Leakage of fluid
   - You may notice new tissue growing around the insertion site. This is harmless, but it can be removed by your doctor if it is painful.

14. Apply the 3M™ No Sting Barrier Film to the skin around and under the silicone disk. Then apply more to the top of the disk where the dressing will be placed. This protects the skin and helps the adhesive stick better.

15. Slide the Telfa under the disk, around the catheter (see Figure 7). The slit should point towards the patient’s feet. The Telfa will prevent moisture from building up under the disk.

Figure 7. Sliding the Telfa under the disk, around the catheter
16. Pick up the Uresil dressing. Open the slit and place it around the catheter (see Figure 8). Line the slit up with the slit in the Telfa. Make sure the dressing is adhesive side down, shiny side up. Place the dressing over the flat part of the disk, but under the disk’s nipple. The slit in the dressing should point towards the patient’s feet.

![Figure 8. Uresil dressing](image)

17. The Uresil dressing has 3 pieces of backing. Start at the corner of the biggest piece and slowly peel the backing away. As you peel away the paper, press the adhesive to the skin. This will get easier with practice. If the dressing does not stick properly, remove the Uresil dressing and Telfa and restart at step 15.

18. Remove the other 2 pieces of backing paper 1 at a time. Press the adhesive to the skin. Overlap the slit edges of the dressing to make the dressing more secure.

19. If you’re changing the leg drainage bag or the CathGrip, follow the instructions in the sections below. If you are only changing the dressing 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 9).
20. Remove your gloves and throw them out in the wastebasket.

21. Write date of dressing change on the Uresil dressing so that you know when to change it again.

22. Wash your hands with warm water and soap or use an alcohol based hand sanitizer.

**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 drainage catheter with a Uresil disk.

Please visit [www.mskcc.org/pe/change_biliary](http://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. Empty the drainage bag and record the amount of drainage.

3. Wash your hands thoroughly with warm water and soap or use an alcohol based hand sanitizer.

4. Open the packages containing the needleless connector, 3-way stopcock, and drainage bag. Put the package with the drainage bag to one side.

5. Remove the protective cover from the base of the needleless connector and throw it away. Attach the needleless connector to center port of the stopcock (see Figure 5).

6. 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.

7. Place the assembled drainage bag back in its package. This will keep it clean until you are ready to connect it to the catheter.

8. Wash your hands again, then put on the non-sterile gloves.

9. If the bag is attached with a safety pin, remove the safety pin. Make sure the new drainage bag is within your reach.

10. 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.

11. Make sure the off tap of the stopcock is turned in the direction of the needleless connector.

12. If you need to apply a new CathGrip, select a position for it. Rest the tubing on the side of your abdomen on the selected site. 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.
13. 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.


15. 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.

16. Wipe the site with the BioPlus+ Skin Prep, which is included in the kit.

17. Allow area to dry to touch. This takes about 15 seconds.

18. Remove the paper on the back of the CathGrip one side at a time (see Figure 10). Apply to skin in the desired location. Repeat with the other side.

19. Gently press the CathGrip to the skin for 5 seconds to seal it to the skin.

20. 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 9).

21. 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.
22. 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 (see Figure 11).

Showering with Your Catheter

You may take showers but you will need to keep your dressing dry. A hand-held showerhead 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 1-time use waterproof cover to protect your dressing. When you shower, make sure 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 12).

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.

Activities While You Have Your Biliary 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.

- 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.
Routine Change of Your Biliary Drainage Catheter

Biliary drainage catheters are usually changed every 8 to 12 weeks. Your interventional radiologist may tell you to come in more or less frequently. You can make your own appointment for a routine catheter change. Call 212-639-7946 at least 3 weeks ahead of time to make an appointment.

Special Instructions for Internal-External Biliary Drainage Catheters

If you have an internal-external biliary drainage catheter, your doctor may want you to do a capping trial. During your trial, the catheter will be capped to allow all of the bile to travel down the catheter into your body, so that you will no longer need a bag (see Figure 13).

![Capped biliary drainage catheter](image)

Your catheter may be capped in the hospital before you go home, but most likely, you will be discharged home and told to cap after you have been home for a few days.

To cap the catheter, you will disconnect the stopcock from the catheter and connect to a needleless connector, at end of the catheter.

Continue to flush your catheter on the same schedule through the needleless connector.
While your catheter is capped

If you have a capped internal-external drainage catheter, you need to watch out for these symptoms:

- Leaking at the catheter insertion site.
- Pain, often in the abdomen (belly) around where the catheter is.
- A temperature higher than 100.4 °F (38 °C) or chills.

These symptoms can happen anytime after the catheter has been capped. If you develop any of these symptoms, call Interventional Radiology to let us know. Then, uncap the catheter. To do this, remove the needleless connector (cap) from the catheter and reconnect the catheter to the drainage bag. The symptoms should get better within 30 to 45 minutes.

Please do not recap the catheter without calling Interventional Radiology.

Call Your Nurse or Doctor in Interventional Radiology if:

- You have a temperature of 100.4 °F (38 °C) or higher
- You have any symptoms of blockage such as pain or leakage from your catheter.
- 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 nausea.

You have new or increased jaundice.

You have any concerns about your catheter.

Contact Information

If you have any questions or concerns, please call Interventional Radiology at 212-639-2236. You can reach a staff member Monday through Friday from 9:00 AM to 5:00 PM. After 5:00 PM, during the weekend, and on holidays, please call 212-639-2000 and ask for the doctor on call for Interventional Radiology.

Ordering Information

When you go home, your nurse will give you enough supplies to last for 2 weeks. In most cases, the visiting nurse service will order your supplies after that.

If you want to order supplies yourself, call Interventional Radiology at 212-639-2236 to place your order using the supply order numbers below. You can pick up your order 2 business days later at the IR Clinic, located at 16 East 60th Street, between Fifth and Madison Avenues.

<table>
<thead>
<tr>
<th>Item</th>
<th>MSK Number</th>
<th>Supplied</th>
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<tbody>
<tr>
<td>Adhesive remover</td>
<td>3170</td>
<td>box</td>
</tr>
<tr>
<td>Alcohol wipes</td>
<td>3330</td>
<td>box</td>
</tr>
<tr>
<td>CathGrip</td>
<td>2675</td>
<td>each</td>
</tr>
<tr>
<td>Drainage Discharge Kit (4 weeks of supplies)</td>
<td>3115</td>
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<tr>
<td>Needleless connector</td>
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<td>Micropore paper tape</td>
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<tr>
<td>Non-sterile latex gloves</td>
<td>4545</td>
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<tr>
<td>Plain gauze</td>
<td>3424</td>
<td>package</td>
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<tr>
<td>Skin Prep</td>
<td>3332</td>
<td>box</td>
</tr>
</tbody>
</table>
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 AM to 5:45 PM. To reach the pharmacy, call 646-888-0730.

Drainage Record

<table>
<thead>
<tr>
<th>Date</th>
<th>Morning output</th>
<th>Afternoon output</th>
<th>Total (subtract flush amount)</th>
<th>Notes</th>
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