

Angiography: Percutaneous Drain

How to prepare and what to expect

This handout explains what a percutaneous drain is and what to expect when you have one.

What is a percutaneous drain?

Your doctor has asked us to place a *drain* (small plastic tube) into your body through the skin on your abdomen. The word *percutaneous* means “through the skin.”

An *interventional radiologist* will do this procedure. This is a doctor with special training doing procedures guided by X-rays, *computed tomography* (CT) scans, or *ultrasound* (sound waves). Placing the drain using live images is much safer and involves less recovery time than regular surgery.



Talk with your care provider if you have any questions about your drain.

Why do I need a drain?

Drains are placed for many different reasons. Some of the more common reasons are:

- **Abscesses:** Pockets of fluid that are infected or may become infected and need to be drained. If you have an abscess, you may also need antibiotics.
- **Leaks:** Fluid from the bowel, pancreas, bile ducts, or the urinary tract that need to be drained to allow the leaks to heal.
- **Infected hematomas:** Infected buildup of blood under the skin.
- **Urinary obstructions:** Blocks in the urinary system. These can cause kidney problems, infections, or both.
- **Biliary obstructions:** Blocks in the biliary system. These can cause liver problems, infections, or both.

Are there any risks to having the drain placed?

Placing a percutaneous drain is usually a very safe procedure, and the benefits far outweigh the risks. But, unexpected events can occur. The most common problems that occur are:

- Bleeding, if a blood vessel is damaged
- Blood infection, if bacteria get into the blood stream
- Skin infection, if the catheter stays in a long time
- Injury to a nerve or vital organ such as the bowel

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

How long will I need the drain?

How long the drain must stay in place depends on where it is placed and what problem it is treating. Sometimes, drains must stay in for weeks or months. We will remove the drain as soon as it is safe to do so.

Over time, drains can get clogged. If your drain needs to be in place for many months, it will need to be replaced about every 2 to 3 months.

Before Your Procedure

- **Blood tests.** You most likely will need to have some blood tests done within 30 days of your procedure. Sometimes, we do this when you arrive for your appointment. We will let you know if we need a blood sample before that day.
- **Arrival time.** If you are an *outpatient* (not staying in the hospital), a Radiology nurse 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:
 - Tell you when to arrive at the hospital
 - Give you reminders about what to do on the morning of your procedure
 - Answer any questions you have
- **Interpreter services.** If you do not understand English well enough to understand these instructions or the details of the procedure, tell us right away. We will arrange for a hospital interpreter to help you. **A family member or friend may not interpret for you.**

- **Blood-thinning medicines.** If you take any blood thinners such as Coumadin, Lovenox, or Plavix, you may need to stop taking the medicine from 24 hours up to 10 days before the procedure, depending on which medicine you are taking. The Radiology nurse will give you instructions if you have not already received them.
- **IMPORTANT:** If you have ever had a heart stent, a prosthetic heart valve, or a pulmonary embolism, or have atrial fibrillation with a history of a stroke, please contact the provider who prescribed your blood-thinning medicine. Tell this provider that you are having a percutaneous drain placed. Your provider may need to change or stop your blood-thinning medicine.
- **Changes to diabetes medicines.** If you have diabetes and take insulin or metformin (Glucophage), we will give you instructions about holding or adjusting your dose for the day your port is placed.

Sedation

When your drain is placed, you will be given a *sedative* (medicine to make you relax) through an *intravenous* (IV) tube in your arm. You will stay awake, but feel sleepy. This is called *conscious sedation*. You will still be sleepy for a while after the procedure.

Cautions

Conscious sedation may not a safe option for you if you have certain health conditions. Tell us **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, lung, or kidney 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)

If you have any of these conditions, talk with the providers in Radiology about the type of sedation that will be used for your procedure. Instead of conscious sedation, you may receive:

- Only a local *anesthetic* (numbing medicine), such as lidocaine
- A local anesthetic and a single pain or anxiety medicine (this is called *minimal* sedation)
- *General anesthesia* (medicine to make you sleep), given by an

anesthesiologist (a specialist in giving medicines for procedures)

Day Before Your Procedure

- The day before your procedure, you may eat as usual.
- Make plans for a responsible adult to take you home after your procedure and stay with you the rest of the day. **You may NOT drive yourself home or take a bus, taxi, or shuttle by yourself.**

Procedure Day

At Home

- 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.
- Starting **6 hours** before your procedure, **stop eating solid foods.** You may only have *clear liquids* (liquid you can see through), such as water, broth, 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.
- Bring with you a list of all the medicines you take.
- 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.

At the Hospital

Unless you are told otherwise:

- Check in at **Admitting** on the 3rd floor (main level) of the hospital. Admitting is near the lobby, to the right and behind the Information Desk.
- You may have also been given instructions to go to **outpatient lab** for a blood draw. The outpatient lab is behind the Cascade elevators, next to outpatient pharmacy. You can go to the lab either before or after you check in at Admitting.
- After checking in and having your blood drawn, take the Pacific elevators to the 2nd floor. Check in at the Radiology reception desk.
- A staff member will:
 - Take you to a pre-procedure area
 - Give you a hospital gown to put on

- Give you a bag for your belongings
- While you are in the pre-procedure area:
 - Your family or a friend can be with you.
 - A nurse will ask you some health questions, take your vital signs (such as heart rate), place an *intravenous* (IV) tube in your arm, and go over what to expect.
 - A radiologist or physician assistant will talk with you about the procedure. They will ask you to sign a consent form, if you have not already done so.
 - You will be able to ask any questions you have.
 - You may want to use the bathroom at this 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 exam table. We will help you get into position.
- We will use these devices to monitor you during your procedure:
 - Wires on your chest will help us watch your heart
 - A cuff around your arm will let us check your blood pressure
 - Prongs in your nose to give you oxygen and a probe on one of your fingers to show us how well you are breathing the oxygen
- *Ultrasound* images will be taken of the area where the drain will be placed. Ultrasound uses sound waves to create images of the inside of the body.
- The entire medical team will ask you to confirm your name and your allergies. They will then talk about the procedure that will be done. This review is done for your safety. It is done before every procedure. If needed, an interpreter will be in the room or will be able to talk with you and hear you through an intercom.
- Next, a radiology technologist will use a special soap to clean the skin around the procedure area. The technologist may need to shave some hair in the area where the doctor will be working. **Tell this person if you have any allergies.**
- If you are able to receive conscious sedation, the nurse will begin giving you the sedative. This will make you feel drowsy and relaxed.
- Your doctor will apply a local anesthetic to your skin where the tube will be. You will feel a sting for about 10 to 15 seconds. After that, the area will be numb and you should feel pressure, but no sharp pain.

Please tell us right away if you can feel pain. We can give you more anesthetic, if needed.

- Your doctor will insert a long needle into the area where the drain will be placed. A small wire will be inserted through the needle. The needle will then be removed.
- A plastic drain tube about ¼ inch wide (about the width of a pencil) will be inserted and the wire will be removed. The tube will be secured on your skin with stitches and then covered with a dressing. A bag is usually added to the end of the tube to catch any fluid.
- The entire procedure usually takes about 1 to 2 hours.

After Your Procedure

- You will be observed for a short time in Radiology. Then you will go to a recovery floor for about 1 to 2 hours until the sedation wears off.
- Most times, you will be able to eat and drink, and your family and a friend may visit you.
- If you are an outpatient, you will be able to leave the hospital when you are fully awake, able to eat, use the restroom, and walk.
- It is rare to have problems with this procedure. If problems occur, we may need to keep you in the hospital 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 drain, 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. This may last for up to 24 hours.
- For 24 hours, do **not**:
 - Drive a car or use machinery
 - Drink alcohol
 - Make important decisions or sign legal documents
 - Be responsible for the care of another person
- You may shower or take a bath 24 hours after your procedure.
- There is usually only minor pain after this type of procedure. If your doctor says it is OK for you to take acetaminophen (Tylenol) or

ibuprofen (Advil, Motrin), this should ease any discomfort you have. If your doctor expects you to have more severe pain, you will receive a prescription for a stronger pain medicine. Call us if the pain cannot be controlled with your prescribed medicines.

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

When to Call

Call us **right away** if:

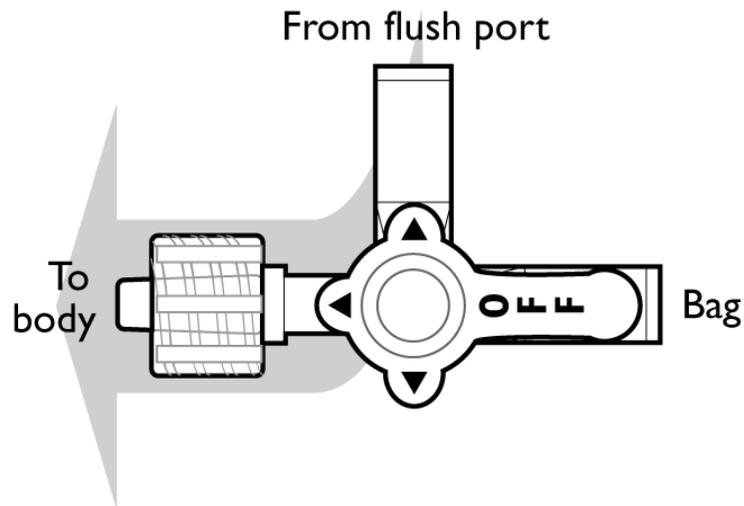
- You have severe bleeding or there is new blood in the drainage
- You have a fever higher than 101°F (38.3°C) or chills
- You are vomiting
- There are leaks around the catheter
- Your drain comes out or moves
- Drainage stops suddenly, after days of a lot of drainage

Caring for Your Drain

- Every time you empty the drainage bag, record the amount of fluid you collected. The drainage bags have markings in milliliters (ml). Empty into a container that has measurement markings. **Record your output every day.** When you come for drain evaluations, bring your written record.
- Call us when the drainage output is less than about 10 ml a day for 2 to 3 days in a row. You **may** be ready for the drain to be removed.
- Many drains must be flushed daily to keep them from clogging. Your doctor will tell you if your drain needs to be flushed and how often.
- If your drain has a 3-way *stopcock* (valve), you can flush the drain without removing the bag. Remember that the stopcock switch (which may be marked with the word “OFF”) points to the channel that is off. On all drains, the switch is the longest part of the stopcock.

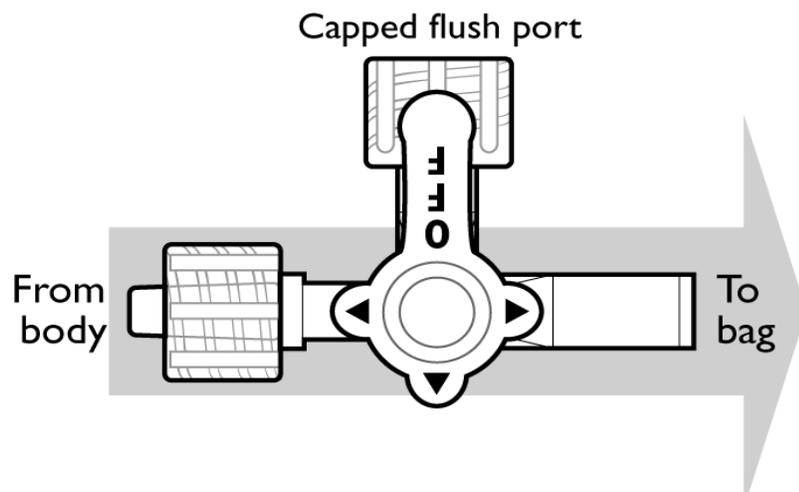
Flushing the Drain

1. Turn the switch so it points to the drainage bag (*see top drawing on page 8*). The word “OFF” (which is on the longest part of the stopcock) will be closest to the drainage bag. This position allows you to inject fluid into the tube from the flush port.
2. Inject the amount of fluid your doctor told you to use. Most times, this is about 10 cc.



In this drawing, the stopcock switch points to the drainage bag. (The word “OFF” is closest to the drainage bag.) This position allows you to inject fluid into the tube from the flush port.

3. Turn the switch so it points to the flush port again (*see drawing below*). The word “OFF” (which is on the longest part of the stopcock) will be closest to the flush port. Your drain will now drain into the bag.
4. If your instructions include “clamping” the tube or allowing it to drain internally, turn the switch so it is pointed at your body. This means the word “OFF” (which is on the longest part of the stopcock) is closest to your body. This position closes the channel that drains from your body. **Use this position ONLY to change or empty the bag. This position prevents your tube from draining.**
5. Keep your dressing clean and dry.



*In this drawing, the stopcock switch points to the flush port. (The word “OFF” is **not** pointing to your body or the drainage bag.) This position allows your drain to drain into the bag.*

Caring for Your Dressing (Bandages)

- You may shower, but keep your drain covered. Do **not** take a bath, sit in a hot tub, or go swimming. Fluid may get into your drain.
- Change your dressing daily and clean the drain site with normal saline. Your nurse will teach you how to do this.
- If your dressing gets wet or dirty, you must change it.
- When you leave the hospital, you will be given enough flushing and dressing supplies to last 3 days. You will need to buy more supplies at a medical supply center or a drugstore.

When to Call

Call your doctor if:

- Your wound becomes red, tender, and has a green discharge
- You have a fever higher than 101°F (38.3°C)

Cover your wound with a dressing and call your doctor **right away** if:

- Your drain moves so that you see more of it outside of your body than before
- Your drain falls out

Who to Call

Patient Care Coordinator..... 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

Urgent Care Needs

If you feel you need urgent care, **go to the nearest Emergency Room or call 911 right away**. Do not wait to contact one of our staff.

Questions?

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

UWMC Imaging Services:
206.598.6200