

Percutaneous Nephrostomy Tube

What to expect

This handout explains a nephrostomy tube – what it is, why it is needed, how long you may need it, and possible benefits and risks. It also includes instructions to follow before your procedure to place the tube, what to expect during and after the procedure, and self-care at home.

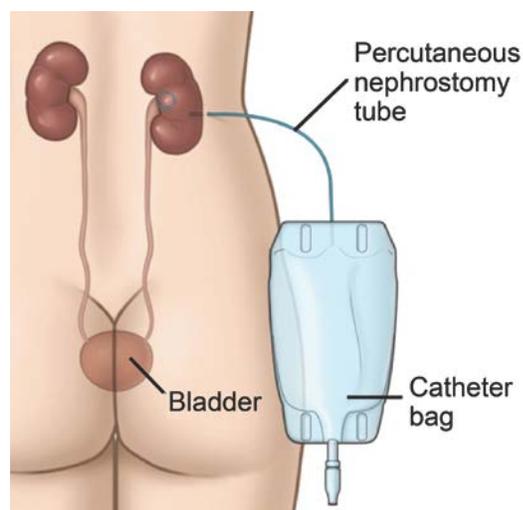
What is a nephrostomy tube?

A *nephrostomy tube* is a small plastic tube. It is placed through your skin (*percutaneous*) and into your kidney. It will drain urine from your kidney into a *catheter bag* outside your body.

Why do I need a nephrostomy tube?

You may need a nephrostomy tube if you:

- Have a blockage or a leak in your urinary system.
- Are being treated for kidney stones.



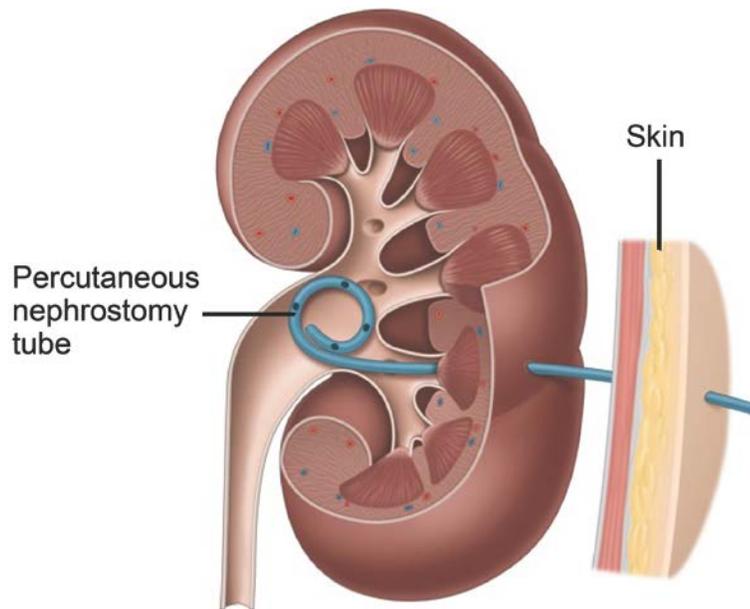
The nephrostomy tube will drain urine from your kidney into a catheter bag outside your body.

Are there any risks to having a tube placed?

Placing a percutaneous nephrostomy tube is usually a very safe procedure, and the benefits are much greater than the risks. But, unexpected problems can occur. The most common complications are:

- Bleeding, if a blood vessel is punctured
- Blood infection, if bacteria get into the bloodstream
- Skin infection, if the tube stays in a long time
- Injury to a nerve or organ such as the bowel

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



The nephrostomy tube will enter your body through an insertion site in your skin.

How long will I need the tube?

Nephrostomy tubes may stay in for weeks or months. How long you will need the tube depends on why it was placed and what problem it is treating. We will not keep the tube in any longer than it needs to be.

If you need this tube for a long time:

- It will need to be replaced about every 2 to 3 months. Please talk with your referring health care provider.
- When you are discharged from the hospital, you will get instructions on long-term care for the dressing (bandage) and drainage bags.

Before Your Procedure

- If you are an outpatient, a 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 give you important instructions and answer any questions you have.
- If you do not understand English well enough to understand the instructions from the nurse 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 **cannot** interpret for you.
- Most patients need blood tests done within 14 days of this procedure. We may be able to do your blood tests when you arrive for your procedure. We will tell you if we need a blood sample before that day.

- If you take any blood-thinning medicines (such as Coumadin, Lovenox, Fragmin, or Plavix), you may need to stop taking the medicine for 3 to 9 days before your procedure. **Do NOT stop these medicines unless your doctor or nurse has told you to do so.** We will give you instructions as needed.
- If you have diabetes and take insulin or metformin (Glucophage), we will give you instructions about adjusting or not taking your dose on the day of your procedure.
- You **must** arrange for a responsible adult to drive you home after your procedure and stay with you the rest of the day. **You cannot drive yourself home or take a bus, taxi, or shuttle.**

Sedation

- When your nephrostomy tube is placed, you will be given a *sedative* medicine such as midazolam (Versed) or fentanyl. A sedative medicine makes you sleepy, helps you relax, and lessens your discomfort. This is called *conscious sedation*.
- You will receive this medicine through your *intravenous* (IV) line. The IV is a tube that will be connected to a vein in your arm or hand.
- If you think you may have an allergy to sedation medicine, please tell us.
- You will be awake during your procedure, but will feel sleepy and very relaxed. You will still be sleepy for a while after your procedure.
- For some people, using conscious sedation is not safe. If this is true for you, you will need *anesthesia* (medicine to make you sleep) during the procedure.
- Tell us **right away** if you:
 - Have needed anesthesia for basic procedures in the past (such as for other radiology procedures)
 - Have *sleep apnea* or chronic breathing problems (you might use a CPAP or BiPAP device while you sleep)
 - Use high doses of a prescription pain medicine that contains a drug called an *opioid*
 - Have severe heart, lung, or kidney disease
 - Cannot lie on your stomach for about 1 to 2 hours because of problems with your back, breathing, or abdomen (such as chronic pain, a recent surgery, or a hernia)
 - Have a hard time lying still during medical procedures
 - Weigh more than 300 pounds (136 kilograms)
 - Have had a bad reaction to conscious sedation in the past

- Think you may be allergic to sedation medicine like midazolam (Versed) and fentanyl
- Know that you have problems with your airway or swallowing, or you have a limited mouth opening
- Have a mass (such as a cyst or tumor) in your neck
- Have an enlarged tongue or tonsils
- Are pregnant and past 16 weeks gestation

If any of these are true for you, we may need you to visit our Pre-Anesthesia Clinic before your procedure.

Day Before Your Procedure

If you are a patient at UWMC, a staff person from the hospital will call you by 5 p.m. the night before your procedure. If you are having your procedure on a Monday, they will call you the Friday before. If you do not hear from them by 5 p.m., please call 206-598-6209 .

The staff person will tell you when to come to the hospital and will remind you how to prepare for your procedure.

The Day of Your Procedure

To prepare for sedation, follow these instructions exactly:

- **Up to 6 hours** before your procedure, you may eat as usual.
- **Starting 6 hours** before your procedure, have only *clear liquids* (liquids you can see through) such as water, Sprite, cranberry juice, or weak tea (without milk or cream).
- **Starting 2 hours** before your procedure:
 - Do **not** eat or drink anything.
 - Do **not** take any of the medicines that you were told to stop before this procedure.
 - If you must take medicines, take them with **only** a sip of water. Do **not** skip them unless your doctor or nurse tells you to.
 - Do **not** take vitamins or other supplements. They can upset an empty stomach.
- Bring a list of all the medicines you take with you to the hospital.
- Please plan to spend most of the day in the hospital. If there is a delay in getting your procedure started, it is usually because we need to treat other people who have unexpected and urgent health issues. Thank you for your patience if this occurs.

Check-in

Unless you are told otherwise:

- **If you are a patient at University of Washington Medical Center (UWMC)**, check in at Admitting on the 3rd floor (main level) of the hospital. Admitting is to the right and behind the Information Desk in the lobby.
- **If you are a patient at Harborview Medical Center (HMC)**, check in at the Ambulatory Procedure Area (APA) on the 8th floor of the Maleng Building.

At the Hospital

- A medical assistant will give you a hospital gown to put on and a bag to put your belongings in. You may use the restroom at that time.
- A staff person will take you to a pre-procedure area. There, a nurse will do a pre-procedure assessment. A family member or friend can be with you in the pre-procedure area.
- An IV line will be started. You will be given fluids and medicines through the IV.
- An interventional radiology doctor will talk with you about the procedure, answer any questions you have, and ask you to sign a consent form, if you have not already done this.

Your Procedure

- A nurse will take you to the radiology area. This nurse will be with you for the entire procedure.
- You will lie on your stomach on a special table. X-rays will be taken so that your doctor can clearly see where to place the nephrostomy tube.
- Stickers will be placed on your body. These stickers connect to a monitor and help us keep track of your heart rate.
- You will have a cuff around your arm. It will inflate from time to time to check your blood pressure.
- A radiology technologist will clean your skin around the procedure area with a special soap. **Tell this person if you have any allergies.** The technologist may need to shave some hair in the area.
- Members of the medical team will ask you to confirm your name and will tell you what we plan to do. This is for your safety.
- Your nurse will give you the sedation medicine through your IV to make you feel sleepy and relaxed before we begin.
- If needed, an interpreter will be in the room or will be able to talk with you and hear you through an intercom.

- Your doctor will apply a local *anesthetic* (numbing medicine) to the place where the tube will come out of your skin. You will feel a burning for about 5 to 10 seconds, but then the area will be numb. After that you should feel only pressure, but not sharp pain.
- Your doctor will guide a needle to the area where the drain will be placed. Then the doctor will replace the needle with a plastic drain tube about $\frac{1}{8}$ inch wide. The tube is held on your skin with stitches and a device like a Band-aid that keeps the tube from slipping or tugging.
- The procedure usually takes about 1 to 2 hours. For some patients, it may last 3 hours or longer. Ask your doctor if you have any questions.

After Your Procedure

- We will watch you closely for a short time in the Radiology department. When you are ready to leave Radiology:
 - If you are an outpatient, you will go to another unit in the hospital. A nurse on that unit will monitor you.
 - If you are an inpatient, you will return to the unit you were on before the procedure.
- You will most likely be able to eat and drink. Your family may visit you.
- If you are an outpatient, you will be able to leave the hospital when we know your tube is working well, and when you are fully awake and can eat and walk.
- Problems after this procedure are rare. But if they occur, you may need to stay 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 nephrostomy tube, and other important instructions. **It is a good idea to have a family member or friend with you when the nurse gives you these instructions.** This person can help you remember the instructions later.

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 drowsy or have some short-term memory loss.
- For 24 hours after your procedure, do **not**:
 - Drive a car
 - Use machinery
 - Drink alcohol
 - Make important decisions or sign legal documents

- Be responsible for the care of another person
- Shower or take a bath
- After 24 hours, you may shower, but be sure to protect the insertion site from getting wet. Check with your doctor if you want to take a bath. It is important that the insertion site stays dry.

Medicines

- Resume taking your usual medicines as soon as you start to eat. Take only the medicines that your doctors prescribed or approved.
- Most people have only minor pain after this procedure. If your doctor says it is OK for you to take acetaminophen (Tylenol), this should ease any discomfort you have.
- If your doctor expects you to have more severe pain, you will receive a prescription for a stronger pain medicine. Call us if your pain is not controlled with your prescribed medicines. (See phone numbers on the last page of this handout.)

Caring for Your Nephrostomy Tube

Caring for your new tube is very important. The tube must drain well and the entry site must stay clean to avoid infection.

If you need a nephrostomy tube long-term, it will need to be changed every 3 months. Your doctor will tell you if you need to return for a tube change.

- Change your dressing every 2 days, or sooner if it gets wet or dirty.
- You may also have a tube holder that keeps the tube in place. Most tube holders must be changed every 2 weeks. If your instructions are different, your nurse will tell you how often to change the tube holder.

Emptying Your Drainage Bag

You will need to empty your bag before it becomes ½ full. If you were not told to record the amount of fluid, you can empty the bag into the toilet.

If you were told to record the amount of fluid in the bag:

- When you empty the bag, **make note of the total amount of fluid** (output). Drainage bags are marked in milliliters (mL).
- Record your output every day. Bring this written record when you come in for tube evaluations.

You will also receive detailed instructions for cleaning the bags.

Flushing Your Tube

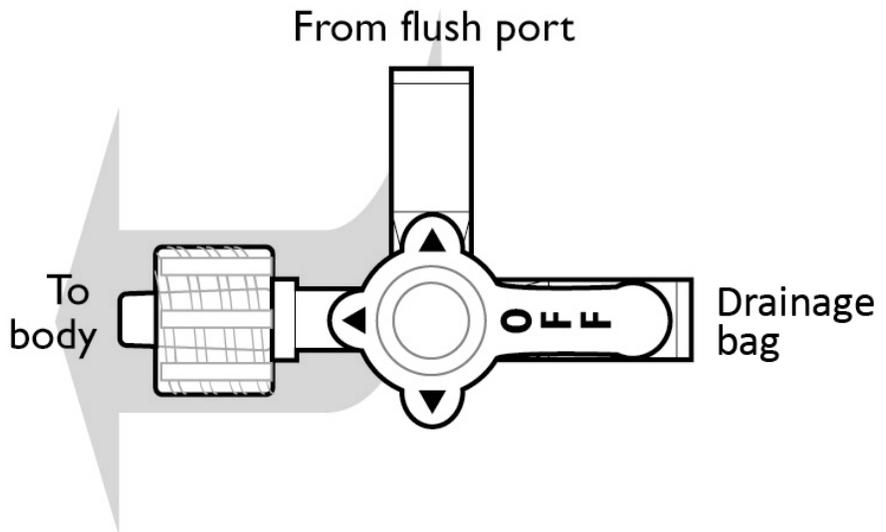
- Some (but not all) tubes need to be flushed every day to keep them from clogging. Your doctor will tell you if your nephrostomy tube needs to be flushed and how often.

- Your nurse will show you and your caregiver how to flush your tube, if flushing is needed. We will make sure you understand how to do this before you go home.
- If your tube has a 3-way *stopcock* (valve), you can choose to flush it without removing the bag.
- The stopcock switch is the longest part of the stopcock. It points to the channel that is off. It may be marked with the word “OFF.”
- If your urine output is:
 - Clear, do **not** flush your tube. If you have a stopcock and your urine stays clear, you may not need the stopcock for flushing. Call Interventional Radiology if you have questions about this.
 - Bloody or cloudy, and you have the 3-way stopcock, flush your tube daily with 10 cc of saline until your urine is clear.
 - Bloody or cloudy and there is no stopcock attached to your tube, call Interventional Radiology or your referring provider.
- Pad the stopcock with a cloth or gauze while you sleep at night. It can be uncomfortable to have the stopcock press against your skin for hours.

If You Were Told to Flush Your Tube

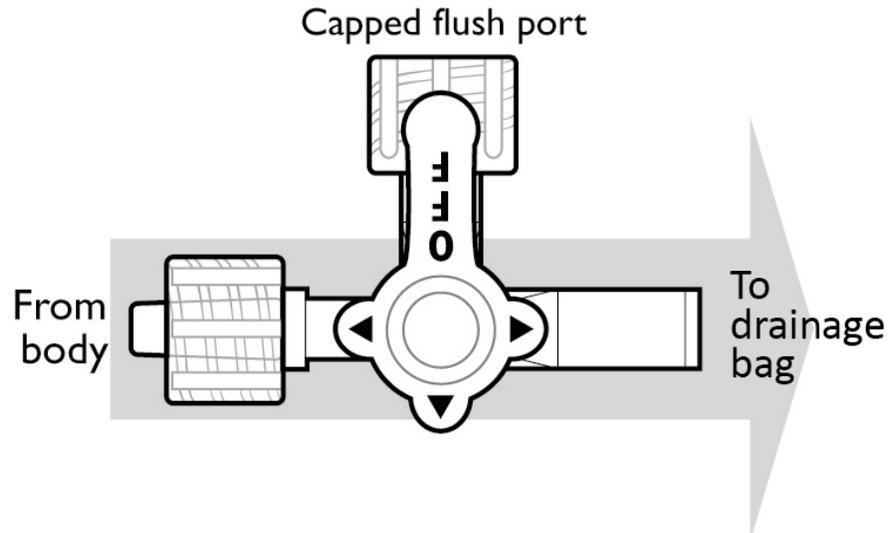
Follow these steps to flush your tube:

- Turn the switch so it points to the drainage bag (see drawing below). The word “OFF” (or the longest part of the stopcock) will be closest to the drainage bag. When the switch is in this position, you can inject fluid into the tube from the flush port.



This drawing shows the stopcock switch pointing 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.

- Inject the amount of fluid (most times about 10 cc) your doctor told you to use.
- Then turn the switch so it points to the flush port again (see drawing below). The word “OFF” (the longest part of the stopcock) will be closest to the flush port. Your tube will now drain into the bag.



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

- If your instructions say to “clamp” the tube or allow it to drain internally, turn the switch so it is pointing to your body. This means the word “OFF” (the longest part of the stopcock) is closest to your body. In this position, the channel that drains from your body is closed. Since it stops your tube from draining, use this position **only** to change or empty the bag.

Supplies You Will Need

You will need these supplies to care for your nephrostomy tube:

- **StatLock device (optional) or other tape like tube holder/ stabilizer:** The Interventional Radiology department at UWMC will provide this device. You cannot buy one outside the hospital.
- **Slit gauze or regular gauze and tape:** You will receive a 3-day supply after your procedure. You will need to buy more at a drugstore as you need it.
- **10 flush syringes, stop cock, caps, and alcohol wipes (if needed):** You will receive 3 flush syringes and a small supply of these other items after your procedure. You will need a prescription to buy more syringes. You can buy the other items at a drugstore.

- **1 regular drain bag:** You will have a regular drain bag after your procedure that connects to your lower leg.
- **1-night Foley bag with adapter (optional):** This will be given to you at discharge. This is a bag that should be used at night.

When to Call

Call us **right away** if:

- You have severe bleeding or there is new blood in your drainage bag.
- You have a fever higher than 101°F (38.3°C) or chills.
- You are vomiting.
- Your nephrostomy tube is leaking.
- Your tube comes out or moves.
- Your urine output stops or is much less than it has been. If this happens, flush once and call Interventional Radiology.
- Your urine output becomes bloody. If this happens, flush once and call Interventional Radiology (see phone numbers below).

Who to Call

University of Washington Medical Center (UWMC) Patients

From 7 a.m. to 5 p.m.:

Interventional Radiology nurse coordinator 206-598-6897

Procedure Scheduling 206-598-6209

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

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

Harborview Medical Center (HMC) Patients

From 7 a.m. to 5 p.m.:

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

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

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

If You Have an Emergency

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

The illustrations on pages 1 and 2 of this handout are used with permission from the European Association of Urology (EAU), patients.uroweb.org.

Questions?

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