Percutaneous Nephrostomy Drainage
Interventional Radiology

What Is a Percutaneous Nephrostomy Tube?

A percutaneous nephrostomy tube is a small, soft plastic tube. It enters the skin in the side of your lower back to drain urine from the kidney. The purpose of this tube is to relieve pressure in the kidney from urine that has backed up into it. This tube is placed for many reasons. Most of the time, there is some type of blockage that prevents urine from draining out of the kidney into the bladder.

You will be required to spend the night in the hospital following the initial placement of the tube. Once in place, a nephrostomy tube needs to be changed every 6-8 weeks to make sure the tube keeps draining well. Nephrostomy tube changes are done as an outpatient.

How is a nephrostomy tube placed?

- Placement of the tube is done using:
  
  **Ultrasound:** to create pictures of your organs and record the echoes of sound waves

  **Fluoroscopy:** an exam of your organs by means of x-rays

Before the tube placement, an Interventional Radiologist will explain what is going to happen and ask for your consent to do it. Please tell the doctor if you have any allergies to contrast dye, antibiotics, anesthetic (numbing) agents, latex, or any other medicines that you may have taken before.
An intravenous (IV) catheter will be placed in your hand to give you medicines for pain and to relax you. IV antibiotics are also given.

Using ultrasound and fluoroscopic guidance, the doctor will mark your lower back with a special magic marker. This helps plan where to place the tube. After marking this area, the skin will be cleaned with a special soap. A sterile drape will be placed over your back and legs. The doctors will put on sterile gowns and wear masks.

A local numbing agent (1% Lidocaine) will be injected into the skin of your flank or lower back in order to numb the area so you won’t feel the needle go in. You will begin to get medicine to relieve the pain and help relax you. Most of the time, patients do not feel much pain, but you may feel pressure during the placement.

Once the area is numb, the doctor will put a small needle into the kidney through the skin of your flank or lower back. When it is in place, a small amount of x-ray dye will be injected in order to see your kidney and urinary system. The needle will then be replaced with a soft tube that stays in the kidney.

The other end of the nephrostomy tube will remain outside your body to drain urine into a bag. The tube is secured into place at the skin surface with a stitch. After this, a 2 x 2 gauze will be placed under the tube and then a 2 x 2 gauze will be placed on top of the tube. Then a 4 x 4 Tegaderm® dressing will be placed over the gauze. On average the procedure will take 1-2 hrs.
After the Procedure

1. You will return to a hospital room.
2. The nursing staff will be checking your vital signs such as pulse, blood pressure and temperature.
3. Nurses will watch how your tube is working. They will check the amount and color of your urine. **It is okay if your urine appears blood tinged, this is normal. It will clear up over time.**
4. You should tell the nursing staff if you:
   - feel nauseated
   - vomit
   - feel like you have a fever or have chills
   - have severe pain where the tube goes in
   - have any problems breathing

Home Care of Your Nephrostomy Tube

**Supplies you will need:**
- 4 x 4 Tegaderm®
- 2 x 2 sterile gauze
- Mild soap (ie: Dove) Blue caps for flushing the tube

**Steps to Clean the Tube and Change the Dressing:**

The tube site must remain free of bacteria that could cause an infection at the site.

- If using Tegaderm®, the dressing is changed **every 3 days.**
- **If your skin is too sensitive for Tegaderm® then a 4 x 4 or 2 x 2 sterile gauze can be used with tape.**
- If using 4 x 4 or 2 x 2 sterile gauze, the dressing should be changed once a day.

1. Gather all supplies needed.
2. Wash hands well with soap and water for 30 seconds.
3. Remove the old dressing.
4. Check the tube site for
   - increased tenderness or pain
   - increased redness or swelling
   - drainage that is green in color or smelly – small amount of green drainage is normal
   - sutures at the skin site that are loose
5. Using a clean wash cloth, clean the skin around the tube site with soap and water. Gently scrub the skin around the exit site. Rinse with wet wash cloth. Wipe dry. Allow the area to dry completely before putting the dressing on.
6. Place the Tegaderm dressing or sterile 2 x 2 gauze under the tubing and then place the additional 2 x 2 gauze over the tube insertion site.
7. Tape down the nephrostomy tube at the level of your hip. This helps prevent the tube from being dislodged.

Additional Instructions If your Nephrostomy Tube Is Connected to a Drainage Bag

If your tube is connected to a drainage bag, urine made by the kidney will drain into the bag. If your other kidney is working, you will urinate in the usual manner. Do not be alarmed if you urinate less or not at all.

The extension tubing and drainage bag will be changed when you come to the hospital for a routine change. You may need to change these before your visit. Reasons to change the tubing and bag are if the bag or tubing has a foul odor or a lot of build up inside.

**Supplies you will need:**
- Urine Leg Bags
- Nephrostomy Extension Tubing (CTU-30)
1. Gather all supplies needed.
2. Wash your hands well with soap and water for 30 seconds.
3. Connect the new urine leg bag to the tubing.
4. Unscrew the clear tubing from the nephrostomy tube in your back.
5. Discard the old tubing and bag.
6. Connect the new tubing and bag by screwing the clear extension tubing back onto the nephrostomy tube.

If your Nephrostomy Tube Is Clamped

No urine will drain from the tube if it is clamped off. There will be no drainage bag on your tube. Urine made by your kidney will drain through the ureters and down into your bladder and will leave your body when you urinate.

See Health Facts for you #5721, Flushing Your Drain.

When to Call the Doctor

Call the doctor if you have:
- Redness at the site
- Greenish drainage at the site
- New swelling at the site
- A temperature greater than 100.5° F for two readings taken 4 hours apart
- Shaking chills.
- Foul-smelling urine
- Decreased urine output from your drainage bag
- Cloudy urine with a sediment
- Pain at your tube site
- Pain in your side.
- Your stitches come out or break.

Phone Numbers

If you have any questions or problems once you are at home, call:

Radiology Department, Monday through Friday, 8:00 am to 4:30 pm at (608) 263-9729, option #3

Nights, weekends, and holidays call (608) 262-2122. This will give you the paging operator. Ask for the Interventional Radiologist on call. Give the paging operator your name and phone number with the area code. The doctor will call you back.

If you live out of the area, please call 1-800-323-8942.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person’s health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright ©/2016 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF4527.