

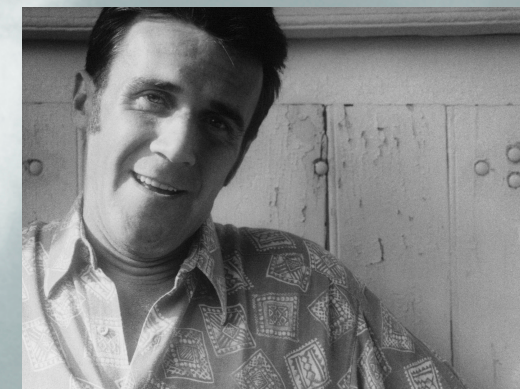
Q. What is an interventional radiologist?

A. Interventional radiologists are doctors who specialize in minimally invasive, targeted treatments performed using imaging for guidance. They use their expertise in reading X-rays, ultrasound, MRI and other diagnostic imaging equipment to guide tiny instruments, such as catheters, through blood vessels or through the skin to treat diseases without surgery. Interventional radiologists are board-certified and fellowship trained in minimally invasive interventions using imaging guidance. Their specialized training is certified by the American Board of Medical Specialties. Your interventional radiologist will work closely with your primary care or other physician to be sure you receive the best possible care.

You or a member of your family has been referred to an interventional radiologist for treatment. This brochure will answer some of the questions about the medical specialty and how an interventional radiologist can help you.

For more information on interventional radiology, please contact the Society of Interventional Radiology at 703-691-1805 or visit www.SIRweb.org.

INTERVENTIONAL RADIOLOGY
Nephrostomy Drainage





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Questions and Answers about Nephrostomy

Q. What is a nephrostomy?

A. A nephrostomy is a procedure in which a catheter is placed through your skin and into your kidney to drain your urine. A specially trained doctor, known as an interventional radiologist, performs this procedure in the radiology department. This doctor uses X-ray imaging to help guide the catheter into exactly the right place to drain your urine. Nephrostomy drainage is performed instead of surgery.

Q. Why do I need a nephrostomy?

A. The most common reason for a nephrostomy is blockage of the ureter. The kidney makes urine, which drains down the ureter from the kidney to the bladder. When your ureter is blocked, the urine backs up into your kidney. Signs of ureter blockage include pain and fever, but some people have no symptoms. Even if you have no symptoms, a blocked ureter needs treatment because if urine cannot drain out of the kidney, the kidney may stop working. Nephrostomy drainage can relieve the symptoms of ureter blockage and keep the kidney working by giving the urine a way to leave the kidney.

Another reason to need a nephrostomy is if a hole forms in the ureter or bladder, allowing urine to leak into other parts of your body. This leakage can cause pain and severe infection. Nephrostomy drainage can stop the leaking and help the hole heal.

A third reason to need a nephrostomy is to help prepare you for surgery or for some other procedure on your kidney or ureter, such as removal of a large kidney stone.

Q. How do I prepare for my nephrostomy drainage procedure?

A. *If you are already a patient in the hospital*—your nurses and doctors will give you instructions on how to prepare for your nephrostomy drainage.

If you are being admitted to the hospital on the morning of your nephrostomy drainage—follow these instructions unless your doctor specifies otherwise:

- **Eating.** Do not eat any solid food after midnight on the night before your procedure. You may drink clear fluids.
- **Medication.** Most people can continue to take their prescribed medicines. If you are a diabetic and take insulin, ask your doctor about modifying your insulin dose for the day of your procedure. If you take the blood thinner Coumadin, you must tell your doctor so that it can be stopped. Bring all your medications with you.

Everybody having a nephrostomy drainage will have blood tests done close to the day of the procedure. On the day of the procedure, an intravenous (IV) line will be placed into one of your veins and antibiotics will be given to you through it. The antibiotics help to prevent infection. The IV will be used to give you other medicines and fluids during the procedure. It will stay in place until after your nephrostomy drainage is complete. Before your nephrostomy drainage begins, a member of the interventional radiology team (doctor, nurse, or technologist) will talk with you about the procedure in detail and answer any questions you may have.

Q. What is nephrostomy drainage like? Does it hurt?

A. Before the procedure starts, pain medication will be given to you through your IV. Additionally, your interventional radiologist will use local anesthetic to numb the skin and deeper tissues in the area of your back where the catheter will be placed. After that, you will only feel some pressure during the procedure.

Nephrostomy drainage has three major steps: placement of a needle into the kidney, placement of a guide wire farther into the kidney, and placement of the drainage catheter. The procedure usually lasts about one hour, but it is not possible to know exactly how much time your procedure will require.

Q. What happens after the nephrostomy drainage?

A. After the procedure is over, you will go to your hospital room. Your nursing staff will observe you to make sure you are all right. They will let you know when you can eat and how long you need to stay in bed. Because everyone is different, it is not possible to predict how many days you will need to stay in the hospital.

If you had symptoms of ureter blockage before your nephrostomy drainage catheter was placed, you will notice those symptoms gradually going away. You will be sore for seven to 10 days after your catheter is inserted.

The nephrostomy drainage catheter is about the same size as IV tubing or a bit smaller. The catheter will be connected to a drainage bag and your urine will drain out of your body into the bag. In some cases, the drainage bag will not be needed after a few days and the catheter will be capped off.

Q. How long will I need the drainage catheter?

A. It depends on why you need your catheter. If the catheter is to be placed to relieve blockage of the ureter you will need the catheter as long as the blockage is present. Your ureter can be blocked by stones, infection, scar tissue, or tumor. Some patients need their nephrostomy drainage catheter for the rest of their lives. If your catheter is to be placed because you have a hole in your ureter, you will need the catheter until the hole has healed. If your catheter is to be placed in preparation for surgery, or another procedure on your kidney or ureter, you will need the catheter until afterwards. Your doctors will discuss with you how long you are likely to need a nephrostomy drainage catheter.

Q. What are the risks of nephrostomy drainage?

A. Nephrostomy drainage is safe, but complications can occur. The two most frequent complications are bleeding and infection. That is why you need to stay in the hospital after the catheter is placed. Because everyone is different, there may be risks associated with your nephrostomy drainage that



are not mentioned here. A member of your interventional radiology team will discuss the risks of your nephrostomy drainage procedure with you in detail before the procedure starts.

Q. What are the benefits of a nephrostomy drainage?

A. If your ureter is blocked, the nephrostomy drainage catheter will relieve your symptoms, such as pain, fever or chills. Before this drainage procedure was developed, patients with blocked ureters had to undergo surgery to drain the urine.

In some cases, the catheter can help your doctors eliminate the source of the blockage. For example, if your ureter is blocked with stones, your doctors may be able to remove the stones through the catheter tract without surgery. If your ureter is blocked with scar tissue, your doctor may be able to use instruments through the catheter tract to enlarge the ureter in the area of scarring. Your doctor will talk to you about the best way to manage the cause of your blocked ureter.

If you have a hole in one of your ureters, the catheter will drain the urine and help to prevent serious infection while the hole heals. In most cases, this makes surgery to close the hole unnecessary.