

Getting Ready...

My Child Is Having A VCUG



INOVA FAIRFAX
HOSPITAL FOR CHILDREN





Welcome to Inova Fairfax Hospital for Children.

Your child is going to have a *voiding cystourethrogram*, a diagnostic test commonly referred to as a VCUG. It is very important for both you and your child to be prepared for the procedure. Being prepared will help you get your child ready for the test and support him or her through the VCUG.

The information in this booklet describes the VCUG. The material is designed to answer your questions and will help you explain the VCUG to your child. This information does not replace information given to you by physicians, radiology technologists and other members of your child's medical team.

What is a VCUG?

VCUG stands for *voiding cystourethrogram*. It is a test that uses X-rays and contrast liquid to study the urinary system. The urinary system helps the body get rid of waste after it uses the nutrients from the food we eat. The urinary system also helps the body maintain the right balance of water and chemicals. The kidneys, the bladder, the tubes connecting them – called ureters – and the urethra make up the urinary system. (Figure 1)

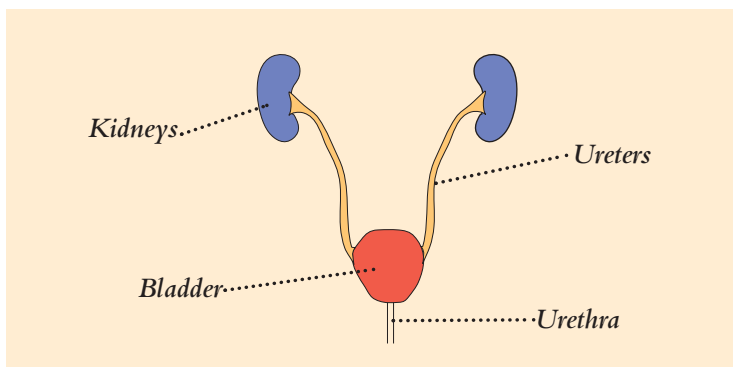


Figure 1: Urinary System



Why does my child need a VCUg?

The body uses nutrients from the food we eat, and the kidneys filter out the waste. The remaining fluids flow from the kidneys, through the ureters and into the bladder. This fluid, the urine, is stored in the bladder until it leaves the body through the urethra during urination.

Some children have a condition called *vesicoureteral reflux*, or simply *reflux*. (Figure 2) Reflux causes urinary problems, especially urinary tract infections (UTIs), because reflux allows bacteria and germs to reach the ureters and kidneys. Not all children with UTIs have reflux. However, it is important to know if your child has reflux because it could determine the treatment.

A VCUg allows the radiologist to look at the urinary system to see if fluids are moving in the right direction. By determining this, more can be learned about the cause of your child's urinary problems and if your child may have problems in the future.

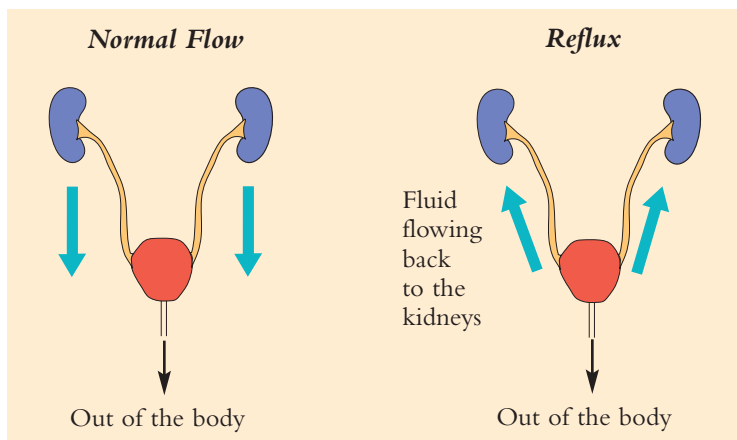


Figure 2



What happens during a VCUg?

During a VCUg, the radiologist uses X-rays to look at the urinary system. To examine the flow in the urinary system, the radiologist uses a contrast liquid that shows up clearly on the X-rays.

When your child comes in for a VCUg:

- He or she will change into a hospital gown.
- The radiology technologist will take an X-ray of your child's pelvic area. During the entire procedure, everyone in the room must wear a protective lead apron. Your child also will wear protective lead shields on areas of the body not being X-rayed.
- A nurse will clean the opening of the urethra using gauze and soap. The nurse will insert a small rubber tube, called a catheter, (*Figure 3*) into the urethra. The tube is inserted until it reaches the bladder and is then taped in place.

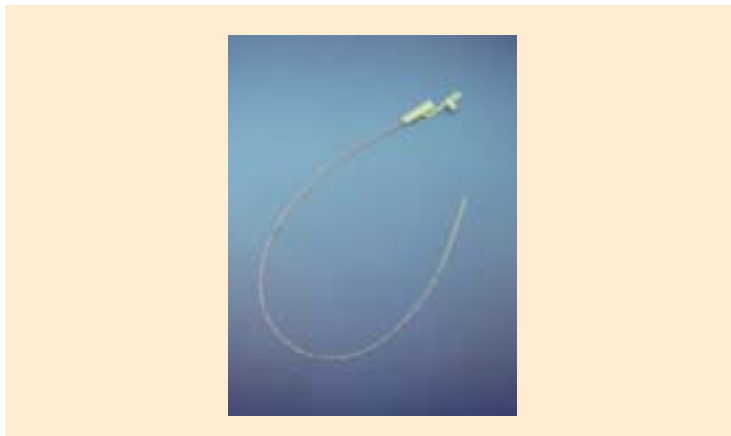


Figure 3: Catheter



- The catheter is connected to a bottle of contrast liquid. The contrast liquid flows into the bladder through the catheter while the radiologist takes more X-rays. (Figure 4) The contrast liquid allows the radiologist to see the bladder clearly and will not harm your child. Your child will start to feel a strong urge to urinate. The radiologist will ask your child to hold it in until the bladder is full. This will take about five minutes.
- When the bladder is full, your child may release the liquid by urinating or voiding. Smaller children void automatically; older children may have to try harder to release the liquid.
- As your child voids, the tape will be removed, and the catheter will come out. The radiologist will continue taking X-rays until the bladder is empty.
- The radiologist will explain the results and give them to your referring physician.

The entire process will take approximately 20 minutes.



Figure 4: *View of bladder filling up*



What will my child feel during the VCUG?

Your child will not feel the X-ray camera taking pictures. Your child will feel the wet soap and pushing as the nurse wipes the area for the catheterization. As the nurse inserts the catheter, your child will feel some discomfort and pressure. This also may make your child feel the need to urinate. Some children say this part of the test hurts a little, but many say it is simply uncomfortable. Once the catheter is in place, your child probably won't feel it is there.

As the bladder is being filled, your child will feel a growing urge to urinate. Your child will feel the tape coming off and he or she may feel the catheter as it comes out during voiding.

How can I help prepare my child for the procedure?

When and how to prepare your child for a VCUG depends on his or her age. For infants, no preparation is necessary, as long as you understand the procedure. Toddlers require very simple preparation and explanation just before the procedure begins. Older children require more detailed information in advance. Adolescents should be prepared far enough in advance to give them time to ask questions.

Most children will be concerned about what they will feel throughout the VCUG. Many ask, "Will it hurt?" It is important to be honest with your child and resist saying it won't hurt. A good alternative is to say, "I can't promise it won't hurt a little, but I can tell you it will be very quick." Or you can say, "Your test might feel kind of strange or uncomfortable, but I'll help you get through it." It is important to tell your child what to expect, including the different sensations he or she may feel.



When you arrive for your appointment, you and your child will meet with a child life specialist, who will discuss the procedure in an age appropriate way with your child. The child life specialist will be able to address any concerns your child may have and, if necessary, help him or her come up with some ways to get through the procedure. We take these extra steps because our goal is to decrease your child's anxiety and make this experience as comfortable as possible. For younger children, this may be as simple as blowing bubbles and taking a few minutes to create a soothing and safe environment.

How can I help my child during the procedure?

Many times the mere presence of a parent or caregiver is enough to soothe a child. Some children may need extra help getting through their VCUG. Taking deep breaths with your child can help relax the body and relieve anxiety.

The radiology team also has many “distraction” tools to use during the VCUG as an alternative focus. These include soothing toys, bubbles, music, or simply keeping the child distracted by talking.

While some children benefit from being distracted, others are very interested in their VCUG. In this case, we are happy to tell them what is going on and show them their X-rays on the screen.





Children use many different ways to cope with their procedures. Some want to play with toys or watch a movie for distraction. Some want to pay attention to what is going on. Some need to cry throughout the procedure. Crying is a healthy coping mechanism because it allows them to express their emotions. Therefore, be sure your child understands it is okay to cry.

Children react to stressful situations in different ways. The radiology technologists, nurse, child life specialist, and radiologist are all dedicated to making this experience as comfortable as possible for both you and your child.

What happens after the VCUG?

As the test is being conducted, the radiologist will be able to tell you what the study shows. These results will be sent to your referring physician, with whom you may follow up.

**If you have any questions
regarding how to prepare
your child for this appointment,
call the Child Life Department:
703-645-3969.**



Inova Health System is a not-for-profit health care system based in Northern Virginia that consists of hospitals and other health services including emergency and urgent care centers, home care, nursing homes, mental health and blood donor services, and wellness classes. Governed by a voluntary board of community members, Inova's mission is to provide quality care and improve the health of the diverse communities we serve.

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*3300 Gallows Road
Falls Church, VA 22042
703-204-6777*