

Voiding Cystourethrogram

What is a Voiding Cystourethrogram?

A Voiding Cystourethrogram (VCUG) is a minimally invasive test that uses fluoroscopy (like an X-ray movie) and a contrast agent to visualize your child's urinary tract and bladder. At Texas Children's Hospital, we use state-of-the-art equipment that is specially designed for imaging pediatric patients safely using the lowest amount of radiation exposure necessary for the exam.

Why is this exam performed?

A VCUG allows the Radiologist to gather detailed information about your child's urinary tract and bladder. Common indications for VCUG:

- Urinary tract infection
- Hydronephrosis
- Vesicoureteral reflux
- Posterior urethral valve
- Multicystic dysplastic kidney
- Ureteral surgery
- Voiding dysfunction
- Megaureter
- Horseshoe kidney

What to expect

Since your child will be awake for the exam, one parent or guardian (or two adults if the child has a disability) may be with the child in the exam room. It may be helpful to make arrangements for other siblings. For safety reasons, you will be asked to step out of the exam room if there is a chance you could be pregnant.

Preparing your child is key to the success of this study. To help prepare your child, our Child Life

Specialists will help ease your child's fear and anxiety. Please let a staff member know if you are interested in a Child Life consultation at no additional cost.

Your child and the accompanying adult(s) will be taken to the procedure room by a technologist and be asked to change into a gown. The child will need to remove underwear and socks as well. The room has an x-ray machine, a long table, and a television monitor. If you have any questions, the Radiologist or X-ray Technologist will answer them before the test begins.

For this 45-60 minute exam:

- Your child will lay down on the long fluoroscopy table.
- Your child's bladder will be catheterized for the exam. Our highly trained technologists will ensure the privacy and comfort of your child. It is important that your child remains still. We will give you suggestions on ways to distract your child in order to help keep them calm during this part of the study.
 - For females, we will position her legs in a "butterfly" or "frog" position.
 - For males, we will have him lay on his back with his legs flat on the table.
- The technologist will apply numbing jelly on the urethral area and allow it to sit for a couple of minutes covered by gauze.
- With your child in the previously described position, the gauze will then be removed. With sterile gloves and using a sterile tray, the technologist will wipe the urethral area with cotton swabs soaked in "brown soap" which is an iodine-based cleaning agent, and two cotton swabs soaked in sterile water. This will feel cold to your child, which is normal.

- The technologist will insert a small catheter into the bladder and secure it to your child's leg with tape. Your child might feel some pressure or the urge to urinate. Taking long, deep breaths will help.
- The catheter will be connected to a bottle of a contrast agent that will fill your child's bladder. This will be visualized on the X-ray monitor.
- The Radiologist/Radiology Physician Extender will move the X-ray camera and ask to roll from side to side to see different parts of the urinary tract. The camera will not touch your child.
- The Radiology team will encourage your child to hold the contrast in even though he/she may feel the urge to urinate (determined by age).
- Once your child's bladder is completely full, the Radiology team will ask for your child to urinate on the table while visualizing the urethra on the X-ray monitor. The catheter will come out during voiding (determined by age). Warm water will be poured on your child's urethral area or feet to encourage urination.
- Once the exam is complete, the catheter will be removed.
- You will be provided discharge instructions at the conclusion of your appointment.

After the procedure

Your child may have discomfort, pink urine, or feel a burning sensation while urinating after the catheter is removed. This is normal and should be temporary. Some parents report a small amount of discharge in the underwear or diaper of the patient. This is typically from the cleaning solution used prior to catheter insertion. Call your child's doctor if your child has red blood in the urine, pain or fever.

Receiving your VCUg results

Call your doctor for a follow up appointment as instructed. You can also call the doctor who ordered the study for the results 24 to 48 hours after the test. If you have any additional questions or concerns, please don't hesitate to call Radiology Nursing at 832-826-5371.

If you would like a CD of your child's study, please call the film library at 832-822-1202. The Radiologist's report will also be included on the CD.