Voiding Cystourethrogram (VCUG)

WHAT IS A VCUG?
A VCUG, or a voiding cystourethrogram, is a procedure that allows a radiologist to view the function of the urinary system. Through the use of a special X-ray called fluoroscopy and contrast fluid, a radiologist will examine the bladder and the lower urinary tract during voiding (urinating). This procedure is approximately 30-60 minutes long.

WHY DOES MY CHILD NEED A VCUG?
Your child’s doctor might order this procedure if your child has had a urinary tract infection (UTI) or if your child has other problems related to their urinary tract. A VCUG is often a recommended procedure for diagnosing or assessing a condition known as vesicoureteral reflux. Reflux occurs when urine moves backward from the bladder into the ureters and possibly the kidneys. This can allow bacteria to reach the kidneys causing damage to the kidneys. Not all children who experience UTIs or bladder infections have reflux. Performing this examination will determine whether reflux is occurring and will help determine treatment options.

WHO PERFORMS THE EXAMINATION?
A pediatric radiologist and a pediatric trained X-ray technologist will assist you and your child during this procedure. At times, a child life specialist will also be present during your child’s procedure.

HOW IS A VCUG PERFORMED?
- A pediatric X-ray technologist or a child life specialist will bring you and your child into the fluoroscopy room. The X-ray technologist or the child life specialist will explain the exam to you and your child.
- Your child will be asked to change into a hospital gown. Once changed, your child will be helped onto the fluoroscopy table.
- The technologist will then clean the opening of your child’s urethra with a brown soap called betadine. This soap will kill any germs that could cause an infection.
- The technologist will then insert a small tube called a catheter through the urethra until it reaches the bladder. The catheter will be taped in place. A topical anesthetic or numbing gel, called lidocaine, will also be used during the placement of the catheter.

If you have additional questions or concerns regarding the VCUG, please contact the pediatric imaging child life specialist at 617-724-1153.
HOW IS A VCUG PERFORMED? (continued)

- The technologist will then connect the catheter to a bottle of contrast fluid. The contrast fluid will flow into the bladder through the catheter. As the bladder is filled, a pediatric radiologist will periodically take X-rays. This contrast fluid will allow the radiologist to see the urinary system.

- Your child will eventually start to feel a strong urge to void (urinate). The radiologist will roll your child onto each of his/her sides. When your child’s bladder is full, he/she will be asked to void onto towels or into a bed pan. While your child voids, the catheter will flow out.

- If your child is not toilet trained, he/she will be cycled three times with the contrast fluid. This means that the bladder will be filled with the contrast fluid three times and your child will void three times. Doing this ensures that the radiologist is getting the most accurate information and images.

- Once your child has voided, the radiologist will take additional X-rays and then the exam is complete.

WHAT WILL MY CHILD FEEL DURING THE VCUG?

Your child will feel cool wet soap used to clean his/her private area. Your child will also feel some pressure and discomfort when the catheter is inserted. Many children also feel the urge to urinate when the catheter is inserted. Both of these sensations should pass once the catheter is in place. Many children describe the catheter as uncomfortable and annoying. As your child’s bladder fills with the contrast fluid, he/she will feel the urge to void. Prior to voiding, the technologist will remove the tape holding this catheter. This can sometimes feel like a band-aid. Your child may or may not feel the catheter come out when they void.

WHAT CAN I DO TO HELP MY CHILD DURING THE PROCEDURE?

You will be present during your child’s entire procedure. It is important that you try to remain calm throughout the procedure. For some children, having a parent with them is comforting enough. Others may require additional support. As a result, the radiology team has other distraction items that can be used to help your child during the procedure.

WHAT HAPPENS ONCE THE VCUG IS DONE?

The results of your child’s exam will be sent to the doctor who requested the exam. Typically your doctor will receive the results within one to two days of the exam or sooner. Urgent results are communicated to the ordering doctor shortly after the procedure has been completed.

*Women who are pregnant will not be allowed in the fluoroscopy room. (Please note that other children will not be allowed in the fluoroscopy room.)

HOW CAN I PREPARE MY CHILD FOR THE VCUG?

Your child’s age will determine how you will prepare him/her. Toddlers and preschool-aged children require a very simple explanation of the procedure just before the procedure begins. School-aged children and adolescents require a more detailed explanation of the procedure, which should be done one to two days in advance. This will allow your child time to ask any questions he/she might have prior to the procedure. Above all, it is important to be completely honest with your child about his/her procedure.