COMMONLY ORDERED TESTS

Renal Bladder Ultrasound (RBUS)  •  Voiding Cystourethrogram (VCUG)
Lasix Renal Scan (Mag-3 or Nuclear Scan)  •  Urodynamics

As part of your child’s urologic evaluation, some X-Ray studies may be scheduled. Below is a description of the most commonly ordered tests.

Renal Bladder Ultrasound
(also called “RBUS”)

Why this test?
A renal (kidney) ultrasound is a test performed to visualize the size and shape and general appearance of the kidneys. It does not tell about kidney function. The test uses sound waves, and the test is not painful. This is an excellent way to look at the urinary tract.

How is this test conducted?
The child will lie on an exam table. The technician will use a cool gel, and will move a small square receiver over the child’s abdomen to visualize the structures and to visualize the kidneys and bladder.

How long will this test last?
This test generally takes about 30 minutes to conduct.

Do I have to worry about special preparation or eating restrictions?
No special preparation is needed.

Voiding Cystourethrogram
(also called “VCUG”)

Why this test?
A voiding cystourethrogram is a test typically used to diagnose vesicoureteral reflux. This test also gives us important information about the size and shape of the bladder, the bladder neck opening, and the urethra (the tube that takes urine from the bladder outside the body). It is important to make sure that there is no blockage in the urethra.

What is vesicoureteral reflux?
The normal flow of urine is from the kidneys down the ureters to the bladder. With reflux, the urine flows from the bladder to the kidneys.

How is this test conducted?
The test is done by placing a thin tube into the bladder from the urethra (the tube we urinate through). First the child will be placed on an exam table, and then the area will be cleaned with a special antibacterial soap where the catheter will be placed. X-Ray dye is place into the bladder through the tube, and pictures are taken of the bladder. X-Rays will also be taken as the child urinates. These pictures can be seen on a television screen in the room.

How long will this test last?
This test generally takes about 20 minutes to conduct.

Do I have to worry about special preparation or eating restrictions?
No, unless your child is scheduled for conscious sedation. If so, the scheduling personnel will review the restrictions with you.

My child is anxious about these test. Can an anesthetic be used?
In general, we do not use anesthetics, because it is important for the child to urinate (pee) normally after the bladder is filled. Some children only reflux during urination, and if sedation is used, these children can be missed. In some instances, a topical anesthetic can be used. You can discuss that with the radiologist at the time of the exam.
Lasix Renal Scan
(also called “Mag-3” or “Nuclear Scan”)

Why this test?
This test helps identify significant blockage in the urinary tract, usually in the ureter (the tube that drains the kidney). This test also helps us determine how the kidney functions.

What is hydronephrosis?
Dilation of the kidney(s) and possibly ureters.

How is this test conducted?
The child will be placed on an exam table. An IV and catheter will then be placed. The tiny IV will give medications that help us to determine the function and drainage of each kidney. This test is very important, especially important in the more severe grades of hydronephrosis. It is usually performed following a diagnostic ultrasound. It is important to have good bladder drainage during this test, and a catheter is usually placed during this exam.

How long will this test last?
This test generally takes a total of one and one-half (1½) hours.

Do I have to worry about special preparation or eating restrictions?
No special preparation is required.

Urodynamics

Why this test?
Urodynamics is actually a group of tests that is used to study the bladder pressures. It tells us how the bladder functions as it fills and empties.

How is this test conducted?
The test is performed by placing a tiny tube into the bladder so the bladder can be filled slowly. This is a special catheter that is hooked to a transducer. The transducer measures pressure in the bladder. A small thin tube is also placed into the child’s rectum. This remains throughout the test. The tube is very soft, and is not painful.

PLEASE NOTE: If your child is catheterized at home, and does not urinate normally, it will not be necessary for you to do this part of the test. This test can also be performed under fluoroscopy, so that the bladder can be visualized at the same time. EMG patches are placed on the buttocks and inner thigh. EMG patches are stickers that look very similar to Band-Aids™. They help us measure how well the urinary sphincter (muscle that holds urine) performs.

How long will this test last?
This test generally takes between 45 minutes to one hour.

Do I have to worry about special preparation or eating restrictions?
If you have an infant, it is helpful to bring a bottle to calm the child during the test. You could also bring the child’s favorite movie, or CD to help entertain and distract the child while this test is performed.

Your child should drink plenty of fluids prior to the exam, so that they can void into a special toilet that measure how fast and how much they urinate.

If your child has a history of constipation, it is very helpful to treat that prior to this appointment.

IMPORTANT: Please inform your doctor if your child is taking ANY medications (including vitamins), and ask whether the medications should be continued prior to the urodynamics evaluation.