

Information for Parents About Urodynamic Testing

Your doctor has recommended the following test:

- Urodynamics
 Video urodynamics

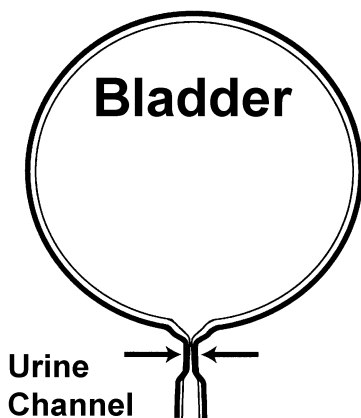
If you were not given an appointment already, you should call 708/216-6901 #2 (after hearing the greeting, touch "2") to schedule the test.

General Information:

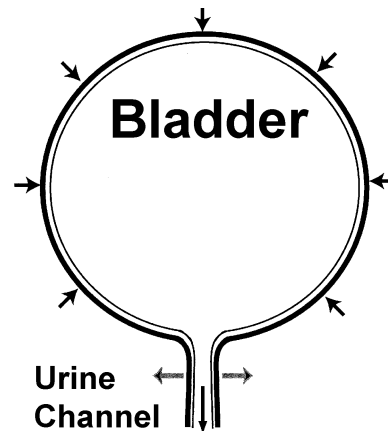
Children with spina bifida or other neurologic abnormalities often have problems with the urinary system. Some children have trouble controlling urination (incontinence). In some patients, the bladder is unable to empty when it is full (urinary retention). In other patients, the bladder can empty only partially. Besides causing urine leakage, bladder problems can also cause urine infections and potential kidney damage. In order to tell how well the urinary system works we use **urodynamic testing**.

In the normal urinary system, the kidneys filter the blood to produce urine. Urine drains down into the bladder where it is stored. The control muscle (sphincter) wraps around the urine channel and squeezes to hold urine in the bladder. When the bladder is full, the sphincter muscle relaxes to open the urine channel and the bladder emptying muscle (detrusor) squeezes to empty the bladder. These two muscles should take turns, one squeezing while the other relaxes and vice versa.

Normal Bladder Function



Bladder Filling. The sphincter (control muscle) is closed and the bladder emptying muscle (detrusor) is relaxed. The bladder fills with low pressure.



Bladder Emptying. The sphincter (control muscle) is relaxed, opening up the urine channel while the bladder emptying muscle squeezes to push the urine out.

In some patients, these two muscles (the sphincter and the detrusor) squeeze at the same time. This can cause dangerously high pressures in the bladder leading to urine leakage, urine infection and potential kidney damage. In some patients, the bladder emptying muscle cannot squeeze to drain the bladder. In order to tell how both of these muscles are working we do three tests:

Uroflow-If the patient can urinate, we do this test to see how much urine comes out of the bladder and how fast the urine empties. The patient urinates into a special toilet to take the measurements. After the uroflow, a catheter is put into the urine channel to see if any urine is left in the bladder.

Cystometrogram - A catheter with two openings is put into the bladder through the urine channel. Through one opening we can measure pressure. Through the other opening, the bladder is filled with sterile water. A separate catheter is put into the rectum to help us measure pressure in the abdomen. While the catheter is in the bladder we measure how much the bladder holds and how much pressure is present in the bladder at different volumes. This helps us to know if the bladder fills easily and whether the bladder puts any strain on the kidneys

Leak Point Pressure - Some patients cannot control their sphincter (control muscle) voluntarily. In these patients, it is very important to know how much pressure is present in the bladder when urine begins to drain. This measurement is called the leak point pressure. While the bladder is filling with sterile water, we watch to see if leakage occurs around the catheter and we measure the pressure in the bladder at which leakage occurs. When the leak point pressure is low, there is little risk of damage to the kidneys. A high leak point pressure means that the bladder is putting a strain on the kidneys making it difficult for them to drain urine into the bladder.

Video Urodynamics – Sometimes it is helpful to use low dose x-ray imaging called fluoroscopy to determine how the bladder and urine channel function together during urination. If your doctor orders this test, pictures will be taken while your child is urinating to see if the urine channel opens properly and to detect reflux (backwards leakage of urine from the bladder to the kidney). You will be able to stay with your child during this testing unless you are pregnant. If you are pregnant, please bring another family member or close friend to stay with your child while the pictures are being taken.

Preparation for the Testing:

Performing urodynamic testing while a patient has a urine infection can be dangerous. If you suspect that your child may have a urine infection (cloudy or strong smelling urine, fever, blood in the urine, etc.) please call the nurses as soon as possible (708/216-5111 or 708/216-3658) so that the urine can be tested and any infection can be treated before the urodynamic test.

On the day of the urodynamic study, it is helpful for your child to drink extra fluid (water, juice, soda, etc.) for at least one hour before the test. Encouraging your child to drink as much as possible before you come to the urodynamics laboratory will help assure that the bladder is full for the first part of the test (uroflow).

Children are often nervous about medical tests. Sometimes they are nervous because they don't know what to expect. Sometimes they are afraid that the test will hurt. We will explain the testing before we start the urodynamics. Talking to your child about these tests may help him/her to ask questions. If your child can feel in the area of the urine channel, he/she will have discomfort when the catheters are placed. Once the catheters are in place, the testing takes about 45 minutes to 1 hour. This can be boring for a child. It may help to bring some books, music tapes or videotapes, or DVDs. Any activity that your child may enjoy while sitting or lying would be fine. We hope you will plan to stay with your child during the test.

After the Testing:

If your child can feel during urination, he/she will probably feel burning and stinging during urination for one to two days. Children's pain medication (Motrin, Advil, Tylenol, etc.) can be helpful. You should use the dose recommended on the package. Sometimes sitting in a bathtub filled with warm water will help.

Following the testing, if your child has fever, pain in the abdomen, nausea, vomiting, cloudy or foul smelling urine, she/she may have a urine infection. Please call your doctor if any of these symptoms occur.

Testing Results:

Even though the testing is finished in about an hour, analyzing the results may take longer. You will be contacted by your physician or the nurse with test results or they will be discussed during your follow-up visit. Please feel free to ask questions about the testing and the results.

For more information about Dr. Hatch please visit our web site [www.luhs.org/urology]

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Appointments:

Central Scheduling (all clinics) 708/216-8563

Darien 630/985-4989

Elmhurst 708/327-7030

Hickory Hills 708/233-5333

Homer Glen 708.645.3400

Oakbrook Terrace 630/953-6600

Wheaton 603.665.5995

Directions and maps available at www.luhs.org

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