

Urodynamic Tests

Urology Care
FOUNDATION™

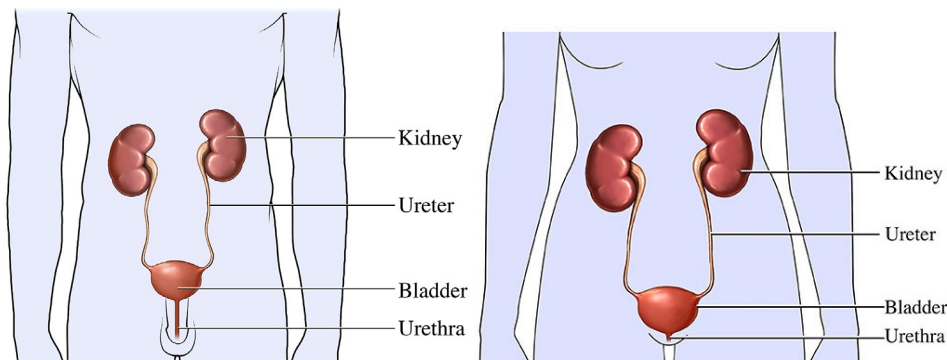
*The Official Foundation of the
American Urological Association*

HOW DOES THE URINARY SYSTEM WORK?

The bladder and kidneys are part of the urinary system. These are the organs that make, store, and pass urine. When the urinary system is working well, the kidneys make urine and move it into the bladder. The bladder is a balloon-shaped organ that serves as a storage unit for urine. It is held in place by pelvic muscles in the area below your belly.

When it is not full of urine your bladder is relaxed. Nerve signals in your brain let you know that your bladder is getting full. Then you feel the need to urinate. The brain tells the bladder muscles to squeeze (or “contract”). This forces the urine out through your urethra, the tube that carries urine from your body. Your urethra has muscles called sphincters. They help keep the urethra closed so urine doesn’t leak before you’re ready to go to the bathroom. These sphincters open up when the bladder contracts.

MALE AND FEMALE URINARY SYSTEM



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WHAT ARE URODYNAMIC STUDIES?

Urodynamic studies (UDS) are used to diagnose problems with the way the bladder, sphincters, and urethra work. There are many studies for this. Typically, one or more UDS are performed at the same time to learn what’s causing your symptoms. These tests can show if or why there is a leak, blockage (urine does not flow out of the bladder and down the urethra freely), pain or other problem in the lower urinary tract.

The most common urodynamic tests are:

- Cystometry (CMG)
- Electromyography (EMG)
- Urethral Pressure Profile
- Uroflowmetry
- Voiding Pressure Study (Pressure Flow Study)

You don’t need to prepare for most of these tests. Some

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Urodynamic Tests

testing centers will ask you to stop a medicine or drink differently before a test. For some tests, you'll want to arrive with a full bladder.

WHY WOULD I NEED A URODYNAMIC STUDY?

Urodynamic studies help find the cause of problems related to:

- Urine leaks/controlling your urine
- Emptying your bladder all the way
- The need to use the bathroom often
- The need to use the bathroom urgently
- A weak urine flow
- Urine flow that stops and starts (“intermittent”)
- Painful and ongoing urinary tract infections

Your health care provider will first talk with you about your symptoms. Then, you should have a physical exam and provide a clean urine sample for a simple urine test. If more information is needed for a diagnosis, your urologist would use other imaging/diagnostic tests.

In addition you may be asked to complete a bladder diary. Writing down when you make trips to the bathroom for a few days can help you and your healthcare professional understand your symptoms better. A diary may help show you some things that make your symptoms worse. Your treatment plan will be based on your diagnosis.

WHAT DOES EACH TEST DO?

Cystometry (CMG)

Cystometry (CMG) is used to measure your bladder sensation, bladder elasticity, bladder capacity and detect if there are abnormal bladder spasms. A catheter measures pressure inside the bladder. These tests help diagnose problems with urine control. For example: incontinence (leaking) and/or overactive bladder.

Electromyography (EMG)

Electromyography (EMG) tests the electrical activity of the muscles and nerves in your pelvic area. EMG is used if a urinary problem is from nerve or muscle damage. Small sticky sensors are placed near the rectum to test muscle and

nerve activity. It measures the coordination of muscles and sphincters during the filling and emptying of the bladder.

Urethral Pressure Profile

This test studies the strength of your urethra and its outlet. This test may also be used to find the cause of incontinence (leaking). A catheter with a sensor records information about pressure in your urethra.

Uroflowmetry

Uroflowmetry measures how much urine comes out and how fast. Often for this test, you will be asked to arrive with a full bladder for best results. Your doctor may suggest this test if you have trouble urinating, or have difficulty emptying your bladder. By measuring the average and fastest rates of urine flow, it can show if there is a blockage (from an enlarged prostate).

Pressure Flow Study

A pressure flow study measures the pressure in your bladder as you urinate. In addition, it measures the urine flow rate. This study can find blockage of the urethra and a weak bladder or other issues. To take this test you will be asked to urinate with a pressure catheter in your urethra. The catheter is small and your urine will flow around it. This study measures how well your bladder muscles work as it

WHAT YOU SHOULD KNOW:

- Urodynamic tests look at how well the bladder, sphincters, and urethra are storing and releasing urine.
- Most of these tests focus on the bladder's ability to hold urine and empty completely.
- Most urodynamic tests do not involve special preparations.
- Results for simple tests are often available immediately after the test, while other test results may take a few days to come back.
- A urologist is the doctor trained to specialize in the urinary tract for men and women.

Urodynamic Tests

WHAT QUESTIONS SHOULD I ASK?

- What urodynamic tests do you recommend for me and why?
- Will I need to do anything to prepare for the test?
- Will I need antibiotics?
- How soon will I know the results of my test?
- Will you give me a treatment plan, or should I see a urologist?

RESOURCES

American Urological Association

Urodynamics Clinical Guideline

<https://www.AUAnet.org/education/guidelines/adult-urodynamics.cfm>

Interstitial Cystitis Association

www.ichelp.org

National Kidney and Urologic Disorders Information Clearinghouse (NKUDIC)

Urodynamic Testing

<http://www.niddk.nih.gov/health-information/health-topics/diagnostic-tests/urodynamic-testing/Pages/Urodynamic%20Testing.aspx>

National Library of Medicine

Cystometric Study in English

<https://www.nlm.nih.gov/medlineplus/ency/article/003904.htm>

Estudio cistométrico en Español

<https://medlineplus.gov/spanish/ency/article/003904.htm>

Uroflowmetry in English

<https://medlineplus.gov/ency/article/003325.htm>

Uroflujometría en Español

<https://medlineplus.gov/spanish/ency/article/003325.htm>

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