



## Urodynamic assessment

Urodynamic assessment aims to record the function of your bladder and its outlet to help in understanding your emptying or storage problem.

**T**he treatment of problems with urine storage and emptying requires a thorough understanding of the function of the bladder and its outlet. Your doctor has recommended that you complete a urodynamic assessment to better understand your bladder function.

Urine is produced by the kidneys, carried through long narrow tubes (the ureters) and stored in the bladder until it is appropriate to empty. As urine is produced, the bladder relaxes to store it at low pressure while the control muscle, the urethral sphincter, wrapped around the outlet (urethra), remains closed and contracted.

When full, the bladder signals the brain to make you aware of the need to empty. Contraction of the bladder and relaxation of the sphincter should allow complete emptying. Efficient bladder storage and emptying requires the coordinated activity of several muscles and nerves under the control of the brain.

Many men, women and children have problems with urine storage or bladder emptying. These problems may include:

Abnormal frequency of urination:  
"I go too often."

Abnormal urgency of urination:  
"I can't put it off."

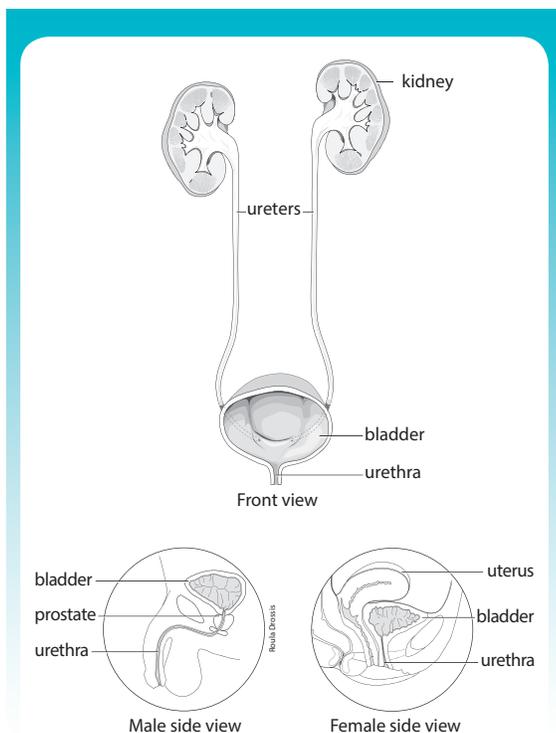
Urine leakage (incontinence):  
"I wet myself."

Difficult or incomplete bladder emptying:  
"I don't think I empty completely."

Treatment of a voiding problem depends on its cause and nature. After reviewing your voiding pattern in detail and completing a physical examination, your doctor will recommend a number of investigations to better understand your particular problem. This may include a voiding diary, urine and blood tests, imaging studies (ultrasound or x-ray), visual inspection of the bladder and urethra (cystoscopy) and a urodynamic assessment.

Urodynamic assessment aims to record the function of your bladder and its sphincter during the cycle of filling and emptying. It consists of a combination of several tests, each of which evaluates separate elements of bladder and sphincter function.

Urodynamic assessment may be performed at your doctor's office, your local hospital or at a specialized clinic. An expert nurse or doctor will conduct the study in a private and discrete setting. The testing should not be painful.



# Urodynamic assessment

## Preparation

Prior to your urodynamic assessment, you may be asked to complete a **voiding diary**, recording times and amounts of urination. Bring this to your appointment along with a list of your medications and their dosage. On the day of your examination you may eat and drink normally. Take your usual medication unless directed otherwise. **You should consume enough fluids so that you arrive at your appointment with a comfortably full bladder.**

## Urodynamic assessment

When you arrive, a nurse will review your health, medical history and voiding problem. You will be asked to disrobe and put on a hospital gown. The nurse will explain each step of the assessment and ensure that you remain comfortable. The testing may take up to one hour.

You may be asked to empty your bladder into a special toilet containing a device that records the rate, volume, duration and pattern of urine flow. The amount of urine remaining in the bladder after voiding will then be measured by ultrasound or with a thin hollow tube or catheter inserted through the urethra (**postvoid residual urine volume**).

Lying on a special reclining chair or bed, a narrow catheter will be introduced through the urethra into the bladder to allow filling and pressure measurement. A soft balloon may be placed in the rectum to measure abdominal pressure. Any discomfort related to catheter insertion can be minimized by remaining relaxed. Electrode stickers may be attached between your legs to record activity in the sphincter muscle.

Sterile water is run slowly into the bladder through the catheter until you feel full, while bladder pressure is recorded. It is important to lie still so that computer recordings are accurate. The nurse will ask you to report urges to void and feelings of bladder fullness.

You may be asked to cough or bear down on a full bladder to bring on urine leakage and allow measurement of the pressure at which leakage occurs. The bladder catheter is then removed after which you will be asked to void once again in the flow measuring toilet. A reading may be obtained with a thin catheter during voiding while measuring urine flow at the same time. In some cases, x-ray imaging may be used to visualize the bladder and its outlet during filling and emptying (**video-urodynamics**).

The specific tests required for your evaluation may vary.

## After your urodynamic assessment

There are no restrictions on your activity after the assessment; you may drive and return to work. Mild burning with urination is common and usually clears within a day or two. In some, particularly men, the urine may be stained with blood for a few days. These symptoms will clear more rapidly if you drink plenty of fluids. Severe bleeding, ongoing burning pain or fever and chills should be reported promptly to your doctor.

## Follow-up

Your urologist will review the results of your urodynamic assessment with you. The information obtained will assist in planning treatment appropriate for your specific condition.

Your urodynamic assessment has been scheduled for:

\_\_\_\_\_ (date)

at \_\_\_\_\_ (time)

at \_\_\_\_\_

\_\_\_\_\_ (location)

or

You will be contacted with a date and time of your urodynamic assessment.

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