



Urodynamic Assessment

Urodynamic assessment helps to understand problems with your bladder and its opening when storing or emptying urine.

What is a urodynamic assessment?

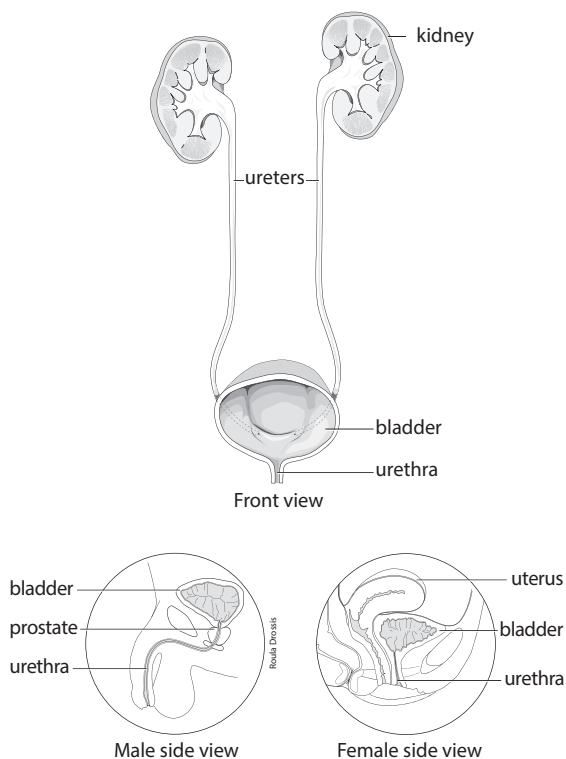
- A urodynamic assessment is any test that looks at how well parts of the lower urinary tract work together to fill, store, and empty urine from the bladder.
- The bladder, muscles (called sphincters), and urethra make up the lower urinary tract. (See diagram: "The male and female urinary tracts")
- The kidneys make urine and send it to the bladder through long narrow tubes (called ureters).
- The bladder then stores the urine until you feel the need to empty it.

- It is important to understand how well the bladder is working in order to treat any problems.
- Your doctor has recommended a urodynamic assessment.

How does my bladder know when to empty?

- As the bladder fills with urine, a control muscle (called the urethral sphincter) keeps the urethra closed and tightened, so that no urine escapes or "leaks out."
- When the bladder gets full, nerves send a message to the brain to tell you to empty it.
- The bladder then squeezes at the same time as the sphincter relaxes, so the urine can flow out.
- This "teamwork" (nerves, muscles, and brain) lets your bladder work as it should.

The male and female urinary tracts



What problems can the bladder have with storing and emptying

Common Problems with the Bladder

Patient comments	Bladder problem terms
"I go too often."	Abnormal frequency of urination
"I can't wait. I need to go right away."	Abnormal urgency
"I wet myself."	Incontinence (Urine leaks out)

- Treating a problem with urinating depends on the cause and the type of problem.

Continued on next page

How are bladder problems diagnosed?

- Your doctor will go over your daily routine for emptying your bladder and do a physical examination.
- You may have to keep a urinating diary (called a voiding diary) to record information for your doctor. (See example: "Sample record")
- You may also need other tests including:
 - Urine and blood tests
 - Imaging studies (such as ultrasound or x-ray)
 - Cystoscopy: a test that uses a tool (like a tiny camera with a light on the end of a thin tube) to see inside your bladder
 - A urodynamic assessment

Sample record

Time	Volume Voided	Volume by catheter
7:30 AM	225 mL	350 mL
12:00 PM		475 mL
4:30 PM	125 mL	375 mL

What would be helpful to know about a urodynamic assessment?

- A urodynamic assessment may be done in your doctor's office, a local hospital, or a specialized clinic.
- You will have the assessment in a separate, private place.
- The testing should not be painful.
- There are different special tests in a urodynamic assessment (such as uroflowmetry, postvoid residual urine volume, or video urodynamics).
- For more information on these tests, see sections: "What happens once I get to the appointment?" and "What happens during the urodynamic assessment."

What do I need to do before the appointment?

- Before coming to your appointment, you may need to fill out a **voiding diary** to record times and amount of urine when you urinate. (See example: "Sample record"),
- Bring this diary (if you were asked for one) to your appointment along with a list of your medications and the doses you take.
- On the day of the assessment, you may eat and drink as you normally do.
- Take your medication as usual unless you are given other instructions.
- **You should drink enough fluids the day of the appointment so that your bladder is comfortably full.**

What happens when I get to the appointment?

- When you arrive, a nurse will go over your health, medical history, and problems with urinating.
- You will undress and put on a hospital gown.
- The nurse will explain each step of the assessment and make sure that you are comfortable.
- The testing may take up to one hour.
- You may have to empty your bladder into a special toilet that takes various measurements (called **uroflowmetry**).
- Uroflowmetry records:
 - the speed (rate) of the flow of your urine
 - the length of time you take to fully empty
 - the amount of urine collected
 - the pattern of your flow (usually a flow starts slowly and speeds up as your bladder empties)
- The amount of urine left behind in your bladder after urinating (called **postvoid residual urine volume**) is measured using either:
 - ultrasound
 - or a thin hollow tube (a catheter) put into your urethra.

What happens during the urodynamic assessment?

- You will lie on a special chair that tilts back or on a bed.
- A soft balloon may be put into your rectum to measure pressure in your abdomen.
- Electrode stickers may be attached between your legs to record when your sphincter muscle moves.
- A narrow catheter will go through your urethra into your bladder.
- If you can stay relaxed, you will lessen any discomfort when the catheter is put in.
- Sterile water is slowly run into the bladder using the catheter until you feel that your bladder is full.
- At the same time, the pressure in your bladder is recorded.
- It is important to lie still so that the computer readings are accurate.
- The nurse will ask you to say when you need to urinate and feel that your bladder is full.
- You may have to cough or “push down” while your bladder is full to see if urine leaks out.
- The pressure that causes a leak is recorded.
- With the bladder catheter out, you will urinate once more into the special, flow-measuring toilet.
- At the same time, a thin catheter will measure the speed of your urine flow.
- In some cases, x-rays may be used to see inside your bladder and its opening while it is filling and emptying (called **video-urodynamics**).

What do I need to do after the urodynamic assessment?

- After the assessment, you may do your normal activities, including driving and going back to work.
- Often, you may have a burning feeling when you urinate, but this usually goes away within a day or two.
- Some men (more than women) may find their urine is “light red” (from blood) for a few days.
- These symptoms go away more quickly if you drink plenty of fluids (especially water).
- Let your doctor know at once if you have serious bleeding, a constant burning pain or fever and chills.

Bottom Line

- Your urologist will go over the results of your urodynamic assessment with you.
- The information from a urodynamic assessment helps to plan the right kind of treatment for your condition.

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