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.

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.

What problems can the bladder have with storing and emptying

<table>
<thead>
<tr>
<th>Common Problems with the Bladder</th>
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</thead>
<tbody>
<tr>
<td><strong>Patient comments</strong></td>
</tr>
<tr>
<td>“I go too often.”</td>
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<tr>
<td>“I can’t wait. I need to go right away.”</td>
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<tr>
<td>“I wet myself.”</td>
</tr>
</tbody>
</table>

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

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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

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.

Sample record

<table>
<thead>
<tr>
<th>Time</th>
<th>Volume Voided</th>
<th>Volume by catheter</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 AM</td>
<td>225 mL</td>
<td>350 mL</td>
</tr>
<tr>
<td>12:00 PM</td>
<td>475 mL</td>
<td></td>
</tr>
<tr>
<td>4:30 PM</td>
<td>125 mL</td>
<td>375 mL</td>
</tr>
</tbody>
</table>
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.