

URODYNAMICS

Urodynamics is an important test of bladder function that evaluates both bladder *storage* and *emptying*. It is useful to evaluate any problems of storage or emptying ranging from severe urinary incontinence to urinary retention, a condition in which one cannot urinate. The goal of the urodynamics is to reproduce, if possible, the very same symptoms that the patient is experiencing.

Uroflow involves urinating into electronic device that records the force of the urinary flow.

Filling Cystometry is a test in which a small catheter is placed into the bladder and the *residual volume*, the volume remaining after finishing urinating, is measured. The bladder is then slowly filled with water and both the volume and the pressure are recorded on the computer. This provides information on bladder *sensation* (feeling), *capacity* (which is normally about 12 ounces), *compliance* (elasticity and stretchiness), and the presence or absence of *involuntary bladder contractions*, a condition in which the bladder contracts without its owner's permission.

Leak point pressure is the pressure in the abdomen that causes leakage with straining or coughing, useful in women with stress incontinence.

Pressure/flow study is done after the bladder is filled to capacity. You are asked to urinate and the flow rate and bladder pressure are recorded. This test is extremely useful, particularly in men, to distinguish between a weak bladder muscle and prostate obstruction, both of which can cause the same symptoms of a weak urinary stream and obstructive symptoms. In general, *low flow–low pressure* implies a weak bladder muscle while *low flow–high-pressure* implies obstruction.

Pelvic floor EMG uses patch electrodes similar to those used for an EKG. They are placed on the perineum to measure the activity of the pelvic floor muscles (the Kegel muscles). Under normal circumstances, there is increasing pelvic floor muscle activity during filling and relaxation during emptying.

Preparation for Urodynamics: Please take the **oral antibiotic** sample given to you approximately one hour before the test. Come to the office with a **full bladder** so you can do the uroflow. Be sure to come in with the **questionnaires** from the booklet completed as well as a **24-hour voiding diary**.