



## Condition Spotlight

### Bladder Health

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November 2011 was designated as National Bladder Health Month. The bladder is an amazing organ with a very special design. Its function is to store urine until it needs to be voided. The size of the bladder varies from person to person depending on many factors.

Textbooks tell us that a normal bladder should be able to store between 300 – 700 ml of fluid. The storage of urine can be impacted by several things including the muscle's ability to stretch, the condition of the bladder lining and the structures around the bladder. Generally speaking, the slower the bladder is filled, the more it can hold. If you take a diuretic like lasix or drink fluids associated with diuresis, the bladder will tend to hold less. If the lining of the bladder, called the urothelium, is inflamed or irritated, it will affect bladder storage. The ability of the muscle fibers to stretch, known as compliance, is another important factor in bladder capacity. Certain diseases or changes in the body can impact the storage capacity and function of the bladder.

The lower urinary tract consists of the bladder and the urethra. Symptoms associated with lower urinary tract conditions are known as lower urinary tract symptoms (LUTS). These symptoms include urinary frequency, urgency, hesitancy, dysuria, slow stream and nocturia. If you are a patient suffering from LUTS, you may be given a sheet that attempts to quantify these symptoms and how much they affect your lifestyle. This symptom score sheet from the American Urological Association (AUA) helps urologists determine the extent of a patient's LUTS. Some of the symptoms listed may give the urologist an idea of what might be wrong. For instance, slow stream urgency is usually the sign of a blockage of flow out of the bladder or bladder outlet obstruction. Dysuria, or pain during urination, is usually a sign of inflammation or infection of the lower urinary tract. Other symptoms like frequency or nocturia are less specific and can have multiple causes. Once a urologist has reviewed a patient's completed AUA

symptom score sheet, he will then most likely order further testing of a patient's urine or anatomy to determine the specific cause of the LUTS.

Sometimes when I see an elderly male with high symptoms of slow stream, urgency and hesitancy I will bring in an ultrasound machine. This machine allows urologists to take a closer look at the size and configuration of the prostate to determine if it might be the cause of those symptoms. Certain configurations of the prostate, such as the third lobe or posterior lobe, which grows out of the posterior bladder, are associated with additional obstruction of the bladder outlet. Patients with these configurations tend to have more problems emptying their bladder and also do not respond or improve much with the prostate medications generally prescribed for prostate enlargement. A different treatment approach will then be used for them. So it is important to fill out the AUA symptom score if you are asked to and do not hesitate to ask any questions as you complete it.

Another important test to determine the health of the bladder is a urinalysis. Most of the time a urologist will request a urine sample. If possible, please try not to urinate right before your appointment. If you have an urge to urinate when you arrive, please tell the receptionist at TUCC. You will be directed to the bathroom immediately to give us a urine sample before your appointment. The urinalysis is critical as it represents "a window" into your bladder condition or bladder health. This single test can generally tell us if an infection is the cause of LUTS. The urine will be tested for multiple parameters including specific gravity (concentration), pH level (important in stone disease), glucose (diabetes), bilirubin (liver function), ketosis (sign of dehydration), white blood cells (sign of inflammation), bacteria (infection) and last, but certainly not least, red blood cells (hematuria).

Eighty percent of malignancies in the urinary tract are found because blood or red blood cells are detected in the urine without any other worrisome symptoms. However, if more than a trace of blood is found in the urine and there is no infection detected, further testing of the bladder and kidney may be recommended. This is to rule out the possibility of cancer of the urinary tract. Depending on the situation, your urologist may recommend an examination of your lower urinary tract with a flexible cystoscope to visualize the urethra and bladder. This is done to help



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determine if something potentially harmful, such as bladder cancer, is causing the detection of hematuria. Generally, X-rays of the upper urinary tract, kidneys and ureters will also be recommended and scheduled at a later time. The type of X-ray ordered depends on the findings of the cystoscopy and the amount of blood in the urine. If white blood cells are detected, this is a sign of inflammation of the urinary tract. Inflammation can be caused by infection from bacteria or another agent such as a fungus. It can also be caused by non-infectious conditions like interstitial cystitis, which occurs when the inner protective lining of the bladder falters. Please be prepared to give your urologist a urine sample. Then he can look into the condition of your lower urinary tract and determine which test will be needed to complete further evaluation.

**To learn more about different conditions affecting overall bladder health, please visit [www.tucc.com](http://www.tucc.com).**

## **Bladder Health Facts**

- More than 70,000 Americans will be diagnosed with bladder cancer this year, making it the fifth most commonly diagnosed cancer in the country.
- Smoking is the leading cause of bladder cancer. Smokers are twice as likely to be diagnosed with bladder cancer than those who have never picked up a cigarette.
- While more men are diagnosed with bladder cancer than women, the rate of incidence among women is increasing. Women also tend to present with more advanced bladder cancer tumors when diagnosed.
- One in three women experience stress urinary incontinence, an involuntary loss of urine that occurs when pressure is exerted on the bladder during physical activity.
- Interstitial cystitis is a chronic bladder condition caused by damage to the protective lining of the bladder. Patients experience symptoms of urinary frequency, urinary urgency or pain in the areas between the navel and the inside of the thighs that can be mild or severe and occasional or constant. Approximately 90 percent of patients diagnosed with interstitial cystitis are women.
- Childbirth is the most common risk factor for developing pelvic organ prolapse, the loosening and potential slipping of the pelvic organs from their normal anatomical position.
- Nocturia is defined as the need to urinate at least twice per night. For women, nocturia may develop following childbirth, menopause or pelvic organ prolapse. For men, nocturia is typically attributed to benign prostatic hyperplasia (BPH) otherwise known as an enlarged prostate.