MedStar Health

Rehabilitation Research and Training Center
At MedStar National Rehabilitation Hospital

Underactive Neurogenic Lower Urinary Tract Dysfunction

What is Neurogenic Lower Urinary Tract Dysfunction (NLUTD)?

Disease or injury of the nervous system can cause NLUTD, a spectrum of urinary dysfunction that includes Underactive NLUTD. In Underactive NLUTD, the bladder muscle either does not contract at all or contractions may be weak. As a result, the bladder is not able to fully empty the stored urine. This retained urine can lead to infections and other serious problems. People who do not have bladder sensation may not realize that their bladder is retaining urine but may experience some of the signs or symptoms listed below. It is important to note that people may have a combination of both Underactive and Overactive NLUTD.

What are the signs or symptoms of Underactive NLUTD?

- Slow urine stream (a "dribble" of urine)
- Straining to urinate
- Feeling like your bladder is still full even after emptying/using the bathroom
- Using the bathroom frequently, but only being able to release a small amount of urine.
- Frequent urinary tract infections (UTIs)

Please see our fact sheet "NLUTD Symptoms" for more in-depth information. It is important to note that these are generalizations and ***diagnosis can only be accomplished with urologic testing***

How do I know if I have Underactive NLUTD?

Underactive NLUTD can only be definitively diagnosed by a test called Urodynamics. Urodynamic testing is a procedure that looks at how well the bladder, sphincter, and urethra are storing and releasing urine.

How can Underactive NLUTD affect my life?

Underactive NLUTD can make it hard for you to live life the way that you want. You may not feel as free to go out because you must schedule frequent bathroom visits or avoid social activities due to fear of bladder accidents. Underactive NLUTD can also lead to UTIs and kidney problems.

However, there are strategies to help take back control of your life.

How can I manage Underactive NLUTD and get back to living my life?

It is important to manage your bladder to keep your body healthy. The goals of treatment are to keep your bladder and kidneys healthy and allow you to fully empty your bladder of urine when and where you choose to do so. Your medical provider or urologist can help you find strategies and treatments that fit your lifestyle and needs.

Here are some of the options:

- **Timed Voiding:** Emptying your bladder at scheduled time intervals, such as every 2 to 4 hours

- **Double Voiding:** Wait for a minute or so after you finish emptying your bladder and then try to go again

- **Medications:**
  - There are limited medications to improve bladder emptying by stimulating the bladder muscle
    - Bethanechol is a medication that increases bladder contractions; however, its use has been met with only limited success

- **Pelvic floor therapy:** Make sure you are relaxing your pelvic floor muscles completely when it is time to urinate. Sometimes people can even learn to put light pressure over the bladder with a hand to help the bladder empty (Credé maneuver)

- **Emptying your bladder with a urinary catheter. Types of catheterization include:**
  - "In and out", which is using a catheter at scheduled times throughout the day to empty your bladder (also called "intermittent catheterization").
  - Indwelling, or a catheter that is always present in your bladder, that continually empties your urine into a collection bag that is kept by your side or attached to your leg.

- **Surgical options to make urinating or catheterization easier include:**
  - Artificial sphincter - A cuff is surgically placed around the urethra while a pump is placed under the skin. The pump is used to open the sphincter and allows you to pass urine.
  - Urinary diversion - A procedure in which a stoma, or hole, is made in the lower abdomen to allow for easier catheterization.
  - Sphincter resection - A portion of the urethral sphincter muscle is removed, allowing urine to flow more easily.

- **Promising experimental approaches include:**
  - Sacral nerve stimulation - This technique helps to correct the messages that are sent along the nerves that control your different bladder muscles. Electrodes are placed either on the skin or surgically implanted and send mild electrical pulses to your bladder instructing the muscles to release the urine when you are ready to empty your bladder. This is FDA approved only for underactive bladder in patients without a neurologic injury, but more research is needed to see if it may help people with NLUTD.

Please see our fact sheet "Managing NLUTD" for more in-depth information.

Visit MedStarResearch.org/BladderRehab to learn more.