Neurogenic Bladder

What is a Neurogenic Bladder?

Your child’s bladder has two important functions: hold and empty urine. Nerves from the brain send a signal to the muscles of the bladder to either tighten or relax. Neurogenic bladder is a condition when these signals don’t work properly or are damaged and the bladder muscles are not able to hold or empty the urine.

What causes a neurogenic bladder?

In children, a neurogenic bladder may be caused by a birth defect such as Spina Bifida or other spinal cord trauma. Your child may develop a neurogenic bladder later in life from other conditions such as a tumor, accident or trauma.

What are the symptoms of a neurogenic bladder?

Every child is different. Symptoms may depend on the cause of the neurogenic bladder. Below are some common symptoms and conditions that can occur with a neurogenic bladder:
- Urinary incontinence – if the muscles are not able to hold urine in the bladder it leaks out.
- Urinary retention – if the muscles are not able to relax so the bladder can empty like it should, urine stays in the bladder.
- Hydronephrosis – this is fluid in the kidney that may occur if the bladder is not able to empty regularly.
- Vesicoureteral reflux – urine from the bladder backs up into the kidneys and over time this may damage the kidneys.
- Urinary tract infections – if the bladder is unable to empty regularly this may put your child at risk for developing an infection.
- Bladder stones - when urine sits in the bladder for long periods of time, it can develop into a stone.
- Neurogenic bowel – similar damage to the nerves that control your child’s bowel habits and can cause incontinence or severe constipation.

**How is Neurogenic Bladder Diagnosed?**

Your child’s provider will review a complete health history and perform a physical exam. Your child may also need testing to examine the bladder and nervous systems. Your provider or nurse can explain the tests in more detail for you.

- Renal bladder ultrasound to check the structure of your child’s kidneys, ureters and bladder.
- Voiding cystourethrogram (VCUG) to check for urine that goes back into (reflux) into the kidneys.
- Blood work to check if your child’s kidneys are working well.
- Urodynamic testing to see how the bladder fills with sterile saline, empties and how much pressure is in the bladder during this process.
- Magnetic Resonance Imaging (MRI) to check the spinal cord for damage or to see if there is any changes from a birth defect.
- Cystoscopy to look at the inside of the bladder with a camera to check for abnormalities.

**What are the goals to manage Neurogenic bladder?**

- Prevent the kidneys from damage and support them to continue to work well.
- Decrease or stop wetting accidents by teaching you and your child about treatment options.
- Promote self-esteem: help you and your child feel comfortable.

**What are the treatment options?**

Treating a neurogenic bladder depends on the cause. All treatment options are recommended to prevent kidney damage and should be discussed with your provider.

- Anti-cholinergic medicines. These medicines help relax the bladder and relieve spasms.
- Clean intermittent catheterization (CIC) to empty the bladder at regular times and prevent kidney damage.
- Prophylactic antibiotics to prevent urinary tract infections.
• Overnight urinary catheter drainage.
• In some cases, surgery or bladder injections may be recommended. Your provider will discuss the options with you and your child in detail.

Your provider will create a treatment plan using the options that meet your child’s needs.

Resources:

http://www.urologyhealth.org/urology