There are many children who have problems with urination. Most children with urination problems have some sort of dysfunction of their urinary tract. The lower urinary tract is made of the bladder, the external sphincter muscles, and the urethra. The normal process that allows the bladder to empty urine is actually a very complicated process, and any disruption of this process can lead to voiding problems.

There are many symptoms of bowel and bladder dysfunction. These symptoms can occur with or without associated incontinence, which is defined as involuntary wetting at inappropriate times or places in children over 5 years of age. Symptoms of bowel and bladder dysfunction are listed below:

- Urinary frequency (more than 10 times per day or more than once per hour consistently)
- Pain or burning with urination (dysuria)
- Urinary urgency before or after urination
- Feelings of incomplete emptying of the bladder
- Infrequent voiding (less than 4 times per day)
- Frequent urinary tract infections
- Difficulty generating a urinary stream
- Straining or pushing when urinating
- Delaying urination with holding maneuvers (pee-pee dance)
- Blood in urine
- Bedwetting beyond 8 yrs of age

Bowel and bladder dysfunction can be diagnosed by obtaining a thorough history from the child and family regarding the child's normal pattern of urination, typical fluid intake during the day and bowel habits. Family history is important particularly in bedwetting as there is a hereditary component. The history helps to determine how the detrusor (lower bladder floor muscles) and internal sphincter are effecting voiding. The GI tract plays an important role in this as chronic constipation or even mild functional constipation (stooling without difficulty but failure to completely empty the rectum) can inhibit normal bladder functioning. We are finding more and more data that the most common cause of bowel and bladder dysfunction is some form of constipation. Children with both constipation and urinary problems will not have improvement in their symptoms unless the constipation is treated.

At New Hampshire's Hospital for Children our pediatric urology program works directly with our pediatric gastroenterology division. Our offices are within a multispecialty group that includes the gastroenterologists. Thus we have the ability to communicate with the GI team to optimize the child's bowel and bladder treatment.

Bedwetting or nocturnal enuresis is a common condition in children. It's usually the last hurdle in potty training. In a group of thirty 5 year olds, 4 to 5 wet the bed. In a group of thirty 10 year olds, 2 to 3 wet the bed. Each year, 1 to 2 children stop wetting at night. Less than 1% continues into adulthood.

The exact cause of “bedwetting” is unknown. It is rarely a bladder/kidney problem. Rather, it is a late development of the part of the brain that controls the bladder during sleep. In some, the brain dose not sense the bladder filling during sleep or does not wake the child when the bladder is full. The risk factors that increase the likelihood of bedwetting are:

- Daytime bowel or bladder dysfunction (urine holding during the day and or constipation)
- Hereditary: chances increase if a parent, sibling or other relative has or had bedwetting
- Gender (boys tend to wet the bed more than girls)
- ADHD
- Obesity

Many of these children will be referred to pediatric urology for treatment.
evaluation and treatment; others will be managed by their primary care providers. When a child is referred to Pediatric Urology at New Hampshire’s Hospital for Children, we obtain a history and examine the child. The first visit is about 60 minutes. We have the child come in with a full bladder and perform a uroflow (voiding on a special potty). This will give a print out indicating pelvic floor activity during voiding and a bladder scan to evaluate for urine retention. Depending on the history we may or may not obtain an abdominal x-ray to evaluate for constipation. This information helps us to formulate a plan for the child and family.

Treatment for bowel and bladder dysfunction and bedwetting takes time, patience and commitment from the child and the parents. There are no quick fixes and it is important to remember that incontinence is an involuntary process and not something the child can stop or control. The social and emotional impact is very difficult for both the child and the parents. We start with the following basic plan:

- **Timed voiding schedule.** Using the bathroom every 2 hours during the day in the morning, at mid-morning break, lunchtime, mid-afternoon break, home from school, before dinner and just prior to bedtime (regardless of the urge to void).
- **External sphincter relaxation techniques** which are pulling his/hers pants down all the way to the ankles and fully spreads legs when voiding to relax the pelvic floor muscles.
- **Increase the daytime fluids** by drinking 6 to 8 glasses of water per day and then shift fluid intake to the beginning and middle of the day and limit fluid intake in the afternoon and especially after 5:30 PM.
- **Avoid bladder irritants** which include the 4Cs: Caffeine, chocolate, citrus and carbonation.
- **Constipation treatment with miralax**

Should these simple measures fail to improve the child’s daytime problem we may offer pelvic floor rehabilitation. For children, this is done at Elliot Physical Therapy. To improve bedwetting, we offer hypnotherapy. Pelvic floor rehabilitation helps the child isolate the pelvic floor muscles with the use of biofeedback. This is done over several weeks with 4 to 8 sessions depending on the child’s progress. Hypnotherapy is done in the urology office. It consists of 4 sessions in 2 weeks allowing the child to learn self hypnosis. Hypnotherapy exercises the part of the brain that is used to control unconscious organ function (example: control of the heart beat and breathing while asleep). By developing a heightened concentration on the bladder, hypnotherapy can help a child hold more urine and recognize a full bladder during sleep.

Our goal at New Hampshire’s Hospital for Children is to use an integrative approach and offer all treatment modalities that can be beneficial for your child. We incorporate state-of-the-art conventional medicine with complementary therapies. These therapies include the above mentioned mind body techniques, nutrition, exercise, stress reduction, supplements, acupuncture, botanical medicine, and manual medicine. Many of these treatments can be combined to optimize your child’s bladder and bowel function.

To learn more about this program or to schedule an evaluation, call 663-3222. We are located at 275 Mammoth Road in Manchester in the Elliot Pediatric Specialties office.

**Mary Gheen, APRN**

Mary Gheen is a nurse practitioner in pediatric urology. She recently relocated her services to New Hampshire’s Hospital for Children (NHHC) in Manchester. She has had an affiliation with the Elliot since 2008 and referred many children for radiology procedures, emergency room visits, inpatient day procedures, physical therapy with pelvic floor rehabilitation and neonatal consultations for kidney or bladder disorder. She has managed all types of urologic conditions both medical and surgical and she looks forward to caring for your child’s needs.