Urinary Incontinence and Pelvic Floor Function

What is Urinary Incontinence?
Urinary incontinence is the involuntary loss of urine. Incontinence is a treatable condition, and your physical therapist can help.

Who is affected by urinary incontinence?
The National Institutes of Health reports that approximately 20 million adult women and 5 to 15 million adult men have experienced urinary incontinence. The higher prevalence of urinary incontinence in women can be attributed to pregnancy, childbirth, menopause, and the structure of the female urinary tract.

What causes urinary incontinence?
There are many reasons why a woman may leak urine. Sometimes it’s caused by an illness, and bladder control returns when the illness goes away. For example, bladder or vaginal infections can cause incontinence for a short time. Being unable to have a bowel movement or taking certain medications also may make it hard to control your bladder. Sometimes diseases such as arthritis can make it hard to get to the bathroom in time and can make it even harder to control urinary leakage. Often, the cause can be as simple as a weakening of the muscles that help to hold and release urine.

How can physical therapy help a leaky bladder?
Physical therapy starts by evaluating the lumbopelvic area for mobility and motor control. Then, using a combination of manual therapy, therapeutic exercise, and behavioral training, we can help “teach” the bladder to hold more urine. The emphasis of treatment is on strengthening the core muscles, particularly the pelvic floor and lower abdominals. During the course of treatment for urinary incontinence, other problems often improve, such as low back or hip pain.

Many times women may have tried “Kegels”, or pelvic floor exercises, with sometimes limited success. Without proper instruction, up to 50 percent of women perform these exercises incorrectly. Physical therapy can teach you how to perform these exercises properly in combination with general core strengthening.

If you have already been evaluated by your health care provider and have received treatment for any underlying medical conditions that may be causing your problem, you are ready to get help from a physical therapist who specializes in treating pelvic floor dysfunction.
Types of Urinary Incontinence

- **Urge Incontinence:** Sudden and uncontrollable need to urinate, often with the inability to get to the bathroom in time.
- **Stress incontinence:** The involuntary loss of urine with activities that suddenly increase the pressure inside the abdomen. This can happen with coughing, sneezing, laughing, bending, lifting, jumping, changing positions, or during sports.
- **Mixed incontinence:** A combination of both stress and urge incontinence.
- **Functional incontinence:** Incontinence caused by an inability to get to the bathroom because of limitations in mobility. This is most common in the elderly.
- **Overactive bladder:** Frequent urination caused by abnormal nerve function. The nerves send signals to the bladder at the wrong time, causing its muscles to squeeze without warning. This often occurs with urge incontinence.
- **Overflow incontinence:** Involuntary loss of urine due to the inability to feel that the bladder is full. This is most common with certain medical conditions, such as diabetes, spinal cord injury, pelvic trauma, or multiple sclerosis.
- **Reflex incontinence:** Loss of urine when the person is unaware of it. This could be caused from an abnormal bladder opening or from a leak in the bladder, urethra, or ureter. The condition could be congenital or may be caused by an injury, pelvic surgery, or cancer.
- **Other:** Vaginal delivery and caesarean sections can cause urinary incontinence, as well as some surgical procedures, such as hysterectomy, pelvic surgery, and lower intestinal or rectal surgery.

**Urination**

Here is a brief explanation of normal urinary function that may help you understand how dysfunction can occur.

The kidneys clean the blood of impurities and produce urine. The urine is transported through the ureters to the bladder, where urine is stored until voiding. The bladder is lined with an involuntary muscle called the detrusor. It stays relaxed as the bladder fills. As the bladder fills, another involuntary muscle called the internal urethral sphincter contracts to hold the urine. The bladder holds the urine until the nervous system signals an urge to use the bathroom.

The brain signals the bladder to stay relaxed and the sphincters to hold until an appropriate time. The voluntary muscles below the bladder are known as the external urinary sphincter or collectively, the pelvic floor. These muscles will contract as the urge becomes stronger. They also serve as a “plug” to the urethra during increases in abdominal pressure, such as a cough or sneeze.

In response to a signal from the brain, urination occurs when the pelvic floor/sphincters relax at the same time that the detrusor muscle in the bladder contracts to expel urine out of the body.
**Urgency**

Urgency may occur if the bladder cannot stretch due to bladder irritants (see below). The bladder will contract sooner or more forcefully when it is trying to eliminate what is irritating to its lining.

Urgency comes in waves. The first signal to urinate usually occurs when the bladder is half full. If you have an “overactive bladder,” your bladder may feel as though it is full, when it really is not, and creates an urge. Your nervous system is actually getting false information from your overactive bladder, and most likely, a weak pelvic floor. The urge wave will peak, and then lessen. It is best to urinate at the bottom of an “urge wave” when you have more control over your bladder. Otherwise, you might have an accident when attempting to get to the bathroom.

If you anticipate having an urge, such as when returning home after a long car ride, sit in the car and try some of the urge suppression techniques listed in the next section before standing. Sometimes gravity can signal an urge when you attempt to stand, especially if you are bearing down and stretching the pelvic floor. Talk with your physical therapist about this and other ways to suppress urgency.

**Behavioral Therapy for Bladder Control**

Part of learning to control your bladder is learning how to suppress urgency when it is not convenient to void. The following tips can help you gain more control of your bladder when you experience urgency:

- **Slow Down**: Hurrying to the bathroom can cause an adrenaline rush, actually causing your bladder to contract stronger.
- **Breathe Deeply**: Slow, deep breaths calm the nervous system, causing the bladder to relax and lessen the urge.
- **Sit Down**: Pressure on the pelvic floor lessens the bladder contraction; you can also cross your legs or sit on a rolled towel.
- **Perform Kegels**: Perform 4 to 5 quick, strong contractions of the pelvic floor, which also lessens the bladder contraction.
- **Focus on Something Else**: Concentrate on something else, such as a difficult math problem or counting backwards from 100 by 7’s.
- **Rub the Palms of Your Hands Together**: Creating friction, known as hand warming, also calms the nervous system and lessens urgency.

**Bladder Irritants**

It is best to avoid these potential irritants while your bladder is learning how to relax and hold more urine. Keeping a bladder diary can help you discover which irritants affect you the most and make you more aware of poor bladder habits. Ask your physical therapist for a copy of a bladder diary to record your information.

- Drinks with caffeine: coffee, tea, soda
- Carbonated beverages
- Chocolate
- Medicines with caffeine: some painkillers and allergy medicines
• Artificial sweeteners or substances: Aspartame, MSG, tanic acid in coffee
• Certain foods, especially acidic: citrus fruits, tomato and tomato-based products, spicy foods, honey, corn syrup
• Inactivity: not getting enough exercise
• Increased stress or anxiety
• Constipation
• Unstable glucose levels if you have diabetes

When Should You See Your Doctor?
See your doctor or health care provider if you are experiencing frequent urination, urgency, leaking, blood in your urine, or if you have pain with urination or with intercourse.

Healthy Bladder Habits

• Urinate every 2-5 hours
• Avoid going to the bathroom “just in case,” so your bladder can learn to hold more urine
• Your urine stream should last at least 8 seconds – less than that, you really didn’t HAVE to go
• Avoid urinating in the middle of the night
• Drink 6-8 glasses of clear fluid daily – urine should be pale yellow in color
• Avoid bearing down or holding your breath while lifting
• Avoid constipation – try to consume 20-30 grams of fiber per day along with plenty of water and exercise
• Avoid bladder irritants
• Get moving...20 minutes of daily exercise helps to calm the nervous system and lessens the excitatory signals to the bladder.

When a Dysfunction Occurs
A dysfunction occurs when the pelvic floor muscles are weak or do not contract properly to hold the urine in. (see pictures below) Consequently, if the pelvic floor is descended and like a hammock, it will signal to your bladder to contract all day long. This can happen during pregnancy or with as little as a ten pound weight gain, or from chronic coughing such as with bronchitis. There can also be dysfunction from trauma to the pelvic floor muscles during pregnancy, childbirth, chronic straining, surgery, or abnormal compensations.