Spinal Cord and Bladder Management

MALE LONG TERM CATHETERS

The 5 parts of the urinary system work together to get rid of waste and make urine. Urine is made in your kidneys and travels down 2 thin tubes called ureters to your bladder. Urine is stored in the bladder. Sphincter muscles close tightly, like a rubber band around the opening of the bladder and help keep urine in the bladder. As the bladder fills with urine, the sensation you feel to urinate becomes stronger. When the bladder reaches its limits, nerves from the bladder send a message to the brain that the bladder is full. The brain sends signals to the sphincter muscles telling them to relax and then urination occurs. The urine exits the bladder through the urethra.

Following a spinal cord injury you may not feel the urge to urinate when your bladder is full and you may not have control of your bladder.

Spastic (reflex) bladder is when your bladder fills with urine and a reflex automatically triggers the bladder to empty. One major problem with a spastic bladder is that you don’t know when or if the bladder will empty.

Flaccid (non-reflex) bladder is when the bladder muscle reflexes are sluggish or absent. If you can’t feel that your bladder is full, it may become over-distended or stretched. The muscle tone of the bladder is affected by this stretching. The urine can back up through the ureters into the kidneys.

Sphincter muscles may also be affected after a spinal cord injury:

- Dyssynergia occurs when sphincter muscles do not relax when the bladder contracts and urine can’t flow through the urethra
- Urine then backs up into the kidney. This is called “reflux.”
- The bladder may not empty completely
- Treatments include medications or surgery.

Even though you may not feel the urge to urinate, you still need to empty your bladder. If not, reflux can occur and can damage the bladder, ureters and kidneys. Failure to empty the bladder to relieve pressure can result in serious health problems and even death.
**Bladder Management Method**
You and your health care provider will work together to come up with an effective bladder management program that works best for you to avoid bladder accidents and prevent complications including infections.

**Proper Bladder Care**
Having a spinal cord injury puts you at an increased risk for urinary system complications. Proper bladder care can help you prevent problems and maintain your health.

- Drink the proper amount of water. If you have an indwelling catheter, 15 (8oz) glasses or water are recommended daily.
- There may be times that you need to drink *more water* than what is normally recommended. If you drink beverages that contain sugar, caffeine or alcohol, you may need to increase your water intake. More water is needed because sugary or caffeinated drinks and alcohol cause you to urinate, which means that your body absorbs less water.
- There are times that you may need to drink *less water* than what is normally recommended especially if you have a medical condition such as congestive heart failure. Always consult with your health care provider for guidance on how much water is recommended for you.

**Condom, Foley and Suprapubic Catheters**
Condom catheters cover the penis and urine drains into a collection bag. Condom catheters should be changed daily and every other day at the longest. A Foley catheter is a narrow tube inserted through the urethra (the tube that carries urine from the bladder through the penis) into the bladder and are usually changed monthly. A suprapubic catheter is a small tube inserted into your bladder through a small hole in your abdomen (belly). Health care providers insert suprapubic catheters and will also change the catheter when needed.
Cleaning Urinary Supplies
It is very important to keep your urinary supplies clean. Be sure you have a cleaning area such as a sink or pan, disinfectant solution such as 2 parts white vinegar and 3 parts water or 1 tablespoon of chlorine bleach mixed with about ½ cup of water, small funnel or syringe, not required, but it helps to clean inside the bag, connector & tubing and a place to hang the leg bag and bed bag for drying.

Process for cleaning urinary supplies
- Disconnect the dirty bag, tubing and connector from the catheter.
- Attach a clean bag, tubing and connector to the catheter.
- Empty all of the urine out of the dirty bag.
- Clamp the drainage valve closed.
- Use a small funnel or syringe to pour a mixture of water and disinfectant solution through the connector and tubing into the bag.
- Shake bag gently so solution cleans all parts of the inside of the bag.
- Soak the bag in the disinfectant solution for about 20 minutes.
- Open the drainage clamp to empty the solution from the bag.
- Wash off the outside of the bag with fresh solution.
- Repeat the procedure with water.
- Hang the bag up to dry.

Clean your urine drainage bag every day and check your tubing and connectors every 2-3 days for sediment buildup. If you see sediment or mineral buildup after cleaning, soak the rubbing and connector in the disinfectant solution and described above for 6-8 hours. If this does not remove buildup, replace the tubing or connector.

Tips to help you stay healthy:
- Always wash your hands before and after any bladder management care.
- To care for a Foley or suprapubic catheter, cleanse the urethral area (where the catheter exits the body) and the catheter with soap and water every day.
- After removing a condom, wash your entire genital area with soap and water and dry the area before putting on another condom.
- If you experience any bladder or bowel leakage, be sure to wash your body and dry well before putting on clean clothes.
- Be sure to have a medical checkup at least yearly (or as recommended by your health care provider). This will include an examination of your urinary system and may include a renal scan or ultrasound to be sure that your kidneys are working properly. The exam may also include an x-ray of your abdomen (a KUB) to be sure that your kidneys, ureters and bladder are healthy.
Potential Urinary Complications
Most urinary complications can be prevented with proper urinary system care. However, people with spinal cord injuries are likely to develop urinary tract infections (UTIs) even with proper bladder care.

Bacteria are tiny microscopic life forms that group together and different bacteria can live in various body systems. Bacteria that live in the urinary system can multiply quickly and lead to an infection or disease.

Signs of infection that you should watch for:
- Gritty particles or mucus in the urine
- Cloudy urine
- Bad smelling urine
- Pink or red urine which is a sign that there is blood in the urine

You may be able to prevent an infection by:
- Drinking more water
- Avoiding beverages with sugar, caffeine and alcohol
- Emptying your bladder more often than normal

Use of Antibiotics
Antibiotics are prescribed to kill the “bad” bacteria that are causing the infection. Patients with spinal cord injuries have special considerations for the use of antibiotics for a UTI. These considerations are:
- 80% of individuals with a spinal cord injury have bacteria in their urine at any given time. This is common because bacteria from the skin and urethra are brought into the bladder during catheterization. Some patients are unable to fully empty their bladder which leaves some bacteria in the urine staying in the bladder.
- Antibiotics are only needed for treatment of a UTI if you have one or more of the following symptoms of infection: fever, chills, nausea, headache, change in muscle spasms and autonomic dysreflexia (AD). Depending on the level of your injury, you may feel burning while urinating or pain in the lower back, pelvic area and abdomen.
- If you are having any symptoms of an illness, see your health care provider. A urine sample will be taken to determine if you need antibiotics.
- Antibiotics should not be taken to prevent infection unless there is some medical need to prevent an infection. Every time you take an antibiotic, the bacteria have a chance to change which reduces or eliminates the effectiveness of the antibiotic to kill the bacteria in the future.

There are “good” bacteria in the digestive system which help the body maintain a natural balance of organisms. Antibiotics kill both good and bad bacteria. Sometimes doctors recommend taking probiotics during or after taking antibiotics to restore the number of good bacteria lost while taking antibiotics. Common sources for probiotics include yogurt, cheese, milk, sour cream and kefir.
There is no evidence to show that cranberry juice reduces the number of bacteria in the urine of people with spinal cord injury. There is no harm in drinking cranberry juice that is all natural and sugar free to avoid unnecessary additives.

If you get more than 2 **UTIs** per year, it may be a sign of other problems with the urinary system. Kidney (renal) failure was once the #1 cause of death for individuals with spinal cord injury. However, today improved bladder management has caused this number to decrease. Sepsis (a blood stream infection from a urinary tract infection) is a more common cause of death.

**Kidney and bladder stones** can form in the urinary system. These stones can cause blockages, hinder kidney/bladder function and cause infection. A patient with a lower level injury can usually feel the pain from a kidney stone but those with higher level injuries are not likely to feel the pain. Blood in the urine can be a sign of a kidney stone. Recurring or prolonged symptoms of Autonomic Dysreflexia (AD) without an apparent cause can be a sign that you have a kidney stone.

**Urine leakage or incontinence** is a problem that some individuals with a spinal cord injury experience. Medications are sometimes used to control bladder spasms and tighten the sphincter muscles. Surgical options include a urinary reservoir or pouch that is made from bowel tissue. The ureters are implanted into the new bladder pouch and the urine is drained with a catheter through an opening or stoma in either the navel or stomach wall. Another option is to enlarge the bladder using bowel tissue.

**Bladder cancer** is more common in patients with spinal cord injuries than in those without. Research shows that there is a small increase in the risk of bladder cancer in a patient with a spinal cord injury who has been using an indwelling catheter and smokes. Regular cystoscopic examinations are recommended for those who have used an indwelling catheter for 10 years or more.