



How Does a Spinal Cord Injury Affect Bodily Functions?

Effects on Sensation and Movement

The higher the injury is along the backbone, the more movement and sensation will be altered or lost. For example, an injury to the spine in the cervical (or neck) level may cause paralysis in both arms and legs and result in “quadriplegia,” while a lower injury, such as at the thoracic (or upper-back) level, may affect only the legs and lower parts of the body and result in “paraplegia.” Letters and numbers are used by physicians and therapists to refer to the specific level of the injury. For example, a C4 injury means the damage is at the level of the 4th cervical spinal cord segment, a T6 injury means the damage is at the level of the 6th thoracic spinal cord segment, and so forth.

Injuries are also classified as “complete” or “incomplete,” although every individual injury is different. Typically, a complete injury results in a total loss of movement and sensation below the level of injury. By contrast, an incomplete injury does not cause total loss of movement and sensation. Importantly, the classification of an injury can sometimes change during recovery. That is, some injuries that are initially believed to be complete may be discovered later to be incomplete. Therefore, regardless of the level of the injury, it is important to work with

physicians and therapists to maximize the degree of function that remains.

Effects on Bowel and Bladder Function

Another significant impairment that can occur as the result of an SCI is the loss of bowel and/or bladder control. In the following sections, the changes that can occur in bowel and bladder function are explained. Because this information is basic in nature, you should direct specific questions about your individual injury, and about the management of complications, to a health professional such as a physician or a therapist.

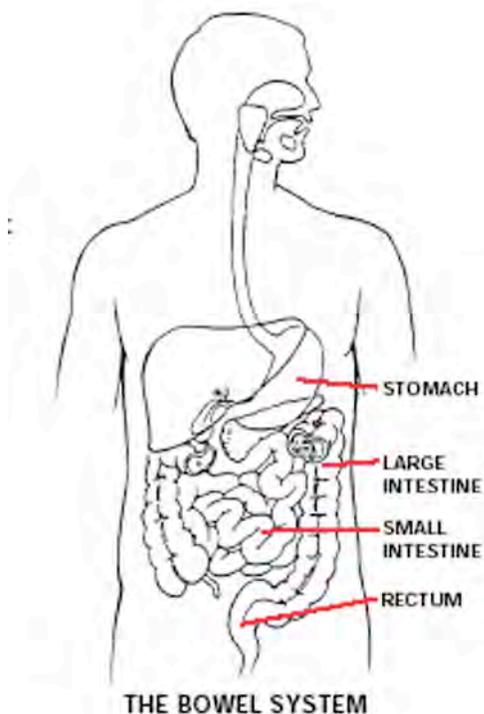
How Will the Bowel be Affected?

The bowel is a part of the intestinal tract and is responsible for the elimination of solid waste from the body. Part of the bowel’s action is automatic, and part of it is under voluntary control. Following an SCI, voluntary control over waste elimination may be lost.

In order to eliminate waste from the body, the muscle at the end of the bowel (the anal sphincter) relaxes, allowing intestinal and abdominal muscles to force out the waste material. Although voluntary control of these muscles may be impaired, the automatic muscles of the intestinal tract will continue to empty the bowels.



Initially, you may not be able to tell when your bowels are full or when the automatic muscles will empty them. It is necessary to establish a schedule of eliminating waste on a regular basis to prevent accidents, constipation, and possible blockage of the bowels.



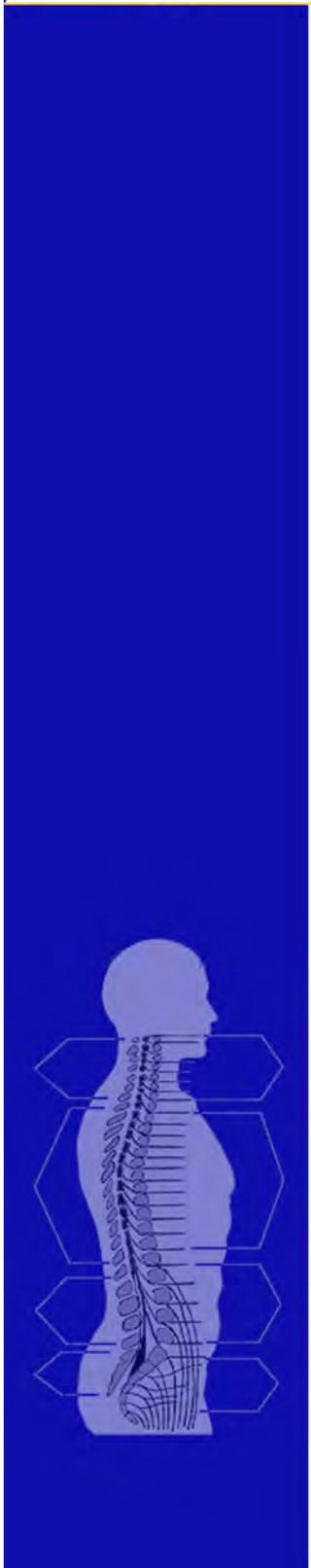
Medications and other products are available to assist in establishing a schedule of waste elimination. Fortunately, most individuals with SCIs are successful in regulating bowel movements through training and can establish a schedule that is convenient for them.

How Does the Bladder Work?

The urinary tract consists of the kidneys, the bladder, and two sets of “tubes” that connect these organs with the outside of your body. The kidneys filter waste material and fluids not needed by the body. The ureters are two tubes that carry these waste materials, called urine, from the kidneys into the bladder.

The urine flows from the bladder to the outside of the body through a second tube called the urethra. Like the bowel, the urinary tract is partly automatic and partly under voluntary control. Because the nerve pathways connecting the bladder with the brain are interrupted in many SCIs, you will probably not be aware when your bladder is full, and you will probably not be able to prevent it from emptying.

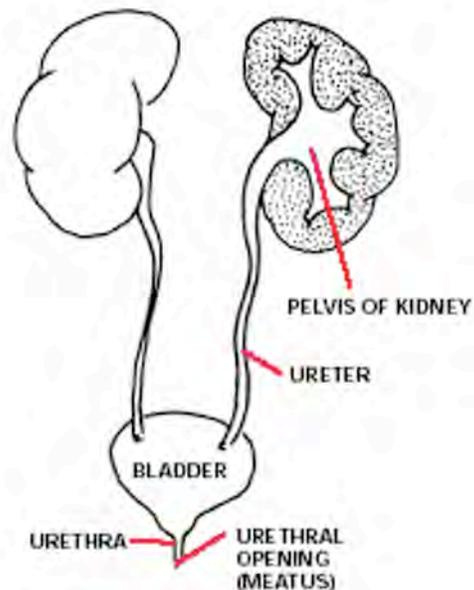
This interference in bladder function is called a neurogenic bladder. When you first entered the hospital following your injury, a tube called an indwelling catheter may have been inserted into your bladder to assist the body in eliminating urine. During the first few weeks after the injury, you may have a catheter inserted periodically to encourage the bladder to fill and empty as it did before the injury. Use of a catheter to empty urine prevents the urine from backing up from the bladder into the kidneys (called reflux), which could cause a kidney infection. The routine emptying of the bladder can also help prevent urinary tract infections.



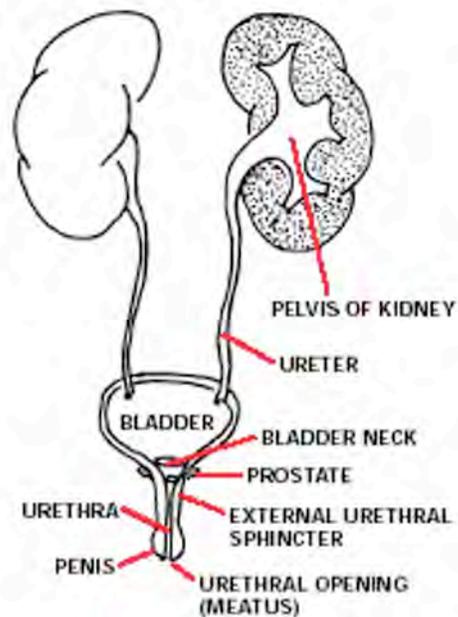


The extent of your injury will determine the type of bladder management program that will work best for you. There are many methods used to develop reflexive elimination of urine, and a management program will be set up based on your needs.

For managing both bowel movements and urinary function, it is important to work with your physicians and therapists to develop a schedule that best suits your needs. Because every SCI is different, there is a great deal of variability in the amount of control an individual will have. Depending on the location and severity of the injury, bladder and bowel control may be altered or completely lost. However, the disruption or loss of bladder and bowel control can be managed. It is essential to work with your rehabilitation team to develop a program that works well for you.



FEMALE URINARY SYSTEM



MALE URINARY SYSTEM

How does a spinal cord injury affect bodily functions?

