Spinal Cord Injury Kit Fact Sheet 4

Other Effects of Spinal Cord Injuries

What Is Spasticity?

Following a spinal cord injury, the body is in a state of "spinal shock," which can last from weeks to months after the injury. During this time, normal reflexes are no longer present below the level of the injury. Following the period of spinal shock, reflexes will return, and spasticity may develop.

Spasticity occurs when normal reflexes become exaggerated and are no longer under control by the brain. Under normal circumstances, the body responds to different stimuli in the environment by moving the body in an appropriate way. For example, if a pin pricked your finger, you would respond by moving your finger away from the pin. These responses are called reflexes, and they generally do not require conscious thought. The nervous system is designed so that many of the reflex movements that we make are controlled primarily by the spinal cord, but can be regulated by information from the brain.

When the spinal cord has been damaged, information about the environment can no longer reach the brain, and the brain can no longer regulate reflex activity that occurs in response to changes in the environment. When this happens, the reflex activities in the spinal cord can become exaggerated over time and cause spasticity. However, spasticity will only occur if the damage is at or above the *conus medularis*.

You may consider spasms a problem to be corrected. If spasms become severe enough, some form of medical treatment may have to be taken to reduce them. However, it is important to remember that spasms can be a great help as well as a hindrance. They can keep muscles in tone that would otherwise waste away following a spinal cord injury. In addition, some individuals with spinal cord injuries can learn to use their spasms to aid them in such functions as turning over in bed and transferring in and out of a wheelchair.

It is frequently difficult to identify the stimulus that causes a particular spasm. It might be a draft of cold air, a pin prick, sensations from a pressure sore, tight shoes or braces, or bladder stones. In fact, any stimulus entering the cord below the level of injury can cause a spasm. Worry, tension, and anxiety can aggravate spasticity. However, with experience, you will learn which stimuli can trigger spasms and how to avoid or utilize them.

What Are Pressure Sores, and Why do They Occur?

Pressure sores are areas of the skin where the skin tissue has broken down. They are also called bedsores or decubitus ulcers. Individuals with SCIs are extremely susceptible to developing pressure sores due to a number of factors, including sitting or lying in one position for a long period of time.

As the name implies, pressure is the main cause of skin breakdown. The body has many areas where bones come close to the outer skin and do not have a thick layer of fatty tissue to protect them. Areas that are particularly prone to pressure sores are those places that support your weight when you're sitting or lying in bed. When the body rests on a surface for a long period of time, the bone compresses the skin and reduces the flow of blood to the area. If the blood supply to the skin is blocked for too long, the skin will begin to break down.

Since an SCI reduces or eliminates sensation below the level of the injury, you will probably not be aware of any signals indicating that you have been sitting or lying in a position for too long. Therefore, it is essential to take preventive measures against unrelieved pressure. Change positions frequently to prevent the skin in any one area from being compressed for too long. Maintain good nutritional and hygiene habits; they are essential to maintaining healthy skin. Inspect the skin daily to see if a sore is developing. If you detect a problem, it is important to alert your physician immediately. Many measures can be taken to remove the cause of the sore and to prevent it from becoming worse.