

Visceral pain

Visceral pain is located in the stomach and digestive area and can be caused by undiagnosed gastrointestinal complications such as ulcers, constipation, or appendicitis. Since a person with SCI may not have the usual symptoms associated with these medical conditions, a physician with limited experience caring for SCI patients may have difficulty making the correct diagnosis and prescribing the right treatment.

Visceral pain can also exist even if there is no medical problem. In that case, it would be a neuropathic pain that is caused by abnormal nerve signals but felt in the abdomen.

Alternative treatments

In addition to the treatments mentioned under each type of pain in this brochure, there are many other treatments for pain. People have gotten some relief with massage, aerobic exercise, acupuncture, stress reduction techniques, hypnosis and psychotherapy. Your physician can discuss these alternatives with you.

Prevention and self-care

Overall health can have a big impact on pain. Pain can get worse and be harder to treat if you are rundown, stressed, suffering repeated urinary infections, or not getting enough sleep. For this reason it is very important to pay attention to your health and lifestyle habits, and to get prompt treatment for medical problems.

Distraction can be a useful way to cope with chronic pain. Even though severe or constant pain may sometimes overwhelm everything else in life, making an effort to distract yourself can actually help reduce pain and can make you feel like you have some control over your life. A counselor or psychotherapist can help you learn psychological strategies such as distraction and relaxation techniques.

Things to remember:

- ◆ **Everyone's pain is a little different.** Your rehab doctor can help you find treatments that work best for you. You may have to try more than one medication or method before getting relief.
- ◆ **Get treatment for medical problems.** Medical conditions such as urinary tract infections and spasticity can make pain worse.
- ◆ **Maintain a healthy lifestyle.** Good diet, healthy weight, and regular exercise improve overall health and also reduce some kinds of SCI pain.
- ◆ **Get a wheelchair seating evaluation.** Poor posture and improper wheelchair technique can cause serious pain problems. Your rehab doctor or physical therapist can help determine if you need a change.
- ◆ **Pay attention to your emotional health.** Stress, depression, and other emotional upsets often make pain worse. Counseling or other treatments can help.

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Staying Healthy After a Spinal Cord Injury

PAIN AFTER SPINAL CORD INJURY



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Pain and Spinal Cord Injury

Pain is a frequent problem for many individuals with spinal cord injury (SCI) and can interfere significantly with daily life. A person with SCI is likely to experience many types of pain that can be troublesome to categorize. Location, type, duration and severity of pain can vary a great deal and are key to understanding its cause and choosing the right treatment.

If you have chronic (long-standing) pain, it is important that you talk to your doctor about what type of pain you have since the treatments differ.

Neuropathic pain

This is the most common type of chronic pain in the SCI population and the hardest to treat. Neuropathic pain is usually felt at or below the level of the injury. It is caused by abnormal signals from the nerves that were damaged by your SCI, and this is why a person can feel neuropathic pain in an area that otherwise has no sensation.

It is often difficult to identify a specific stimulus or cause of neuropathic pain. Your doctor may ask you to undergo an x-ray or MRI (magnetic resonance imaging) scan of the spine to make sure there is no bone or spinal cord abnormality such as a syrinx (a cavity that develops in the spinal cord of about 2% of the SCI population). If your doctor does not find a specific abnormality, then your pain is considered to be caused by the abnormal signals of your SCI.

Many different medications are used for neuropathic pain, including antidepressants at low doses, anticonvulsants such as gabapentin, narcotics (morphine, codeine), nonsteroidal anti-inflammatory drugs such as ibuprofen, and others. Sometimes combinations of drugs work better than a single drug. In some cases, treating spasticity helps reduce the pain.

Types of neuropathic pain:

◆ **Transitional zone pain** (also called **segmental pain**) is usually felt at the level of injury in a band-like pattern around the trunk, or it may involve the arms. Transitional zone pain is treated with medications and sometimes with a surgical procedure called DREZ (dorsal root entry zone lesion).

◆ **Radicular pain** can be felt at any level and is caused by nerve root damage from broken pieces of bone, dislocated disc material or inflammation. Radicular pain is usually located on one side only. It can be worse with rest and is often improved with activity. This type of pain can begin within days to weeks after injury and may be hard to distinguish from pain caused by the injury itself. Radicular pain often improves with nonsteroidal anti-inflammatory medications (NSAIDs) such as ibuprofen.

◆ **SCI pain** (also called **central pain, dysesthetic pain, or diffuse pain**) is the term used for neuropathic pain that occurs below the level of injury. This kind of pain is usually felt all over the body rather than in a specific area. It can get worse if you are fatigued or stressed; smoke tobacco; or have bowel or bladder problems, pressure sores, or spasticity.

SCI pain usually starts a few weeks or months after injury. If it starts years after injury or gets worse, it might be caused by a syrinx or a problem with the vertebrae (the bones of the spine) and should be evaluated by a physician.

SCI pain is very hard to treat and individuals with SCI pain have found relief from a combination of drugs, or from drugs in combination with physical therapy or other treatments. Some treatments, like implanted morphine pumps, work well but only temporarily. Often a holistic approach that includes a combination of exercise, medication, stress reduction, or complementary medicine (such as acupuncture), can help relieve SCI pain.

Musculoskeletal pain

Musculoskeletal pain comes from problems in the muscles or skeleton and is common in the population as a whole, especially as people get older. In the SCI population, musculoskeletal pain can be produced by injury at the time of SCI, injury following SCI, overuse or strain, arthritic changes, or wear and tear of the joints, often from wheelchair use. Treatments usually involve medications, physical therapy, equipment changes, or all three.

◆ **Shoulder pain** in people who use a manual wheelchair may be helped by changing the posture in the wheelchair and doing specific physical therapy exercises. Propelling a wheelchair can lead to an imbalance of the shoulder muscles, such that the muscles in back are weak compared to those in front. A physical therapist can teach you exercises that strengthen the muscles in back and stretch the muscles in front to help reduce shoulder pain.

◆ **Back pain** is a common problem in people with paraplegia. If there has been a fusion, the spine is more rigid at the levels of the fusion. Increased motion is likely to occur just above and just below the fusion, and this can lead to back pain. A different back rest that provides more support can help, although this may reduce upper back mobility. Low back rests allow more motion but do not provide as much back support.

People with tetraplegia (quadriplegia) may also have back pain, especially if they are able to walk but still have weakness. Even patients with complete tetraplegia can have upper back and neck pain.

◆ **Musculoskeletal pain at or below the level of injury** is usually confined to one specific area. It often worsens with activity, gets better with rest and an ice pack, and responds well to nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen.