

What is Cervical Myelopathy?

Cervical spondylitic myelopathy is a condition that affects the spinal cord in the neck. It is the most common spinal cord disorder in the United States. Cervical spondylitic myelopathy most frequently occurs in adults because of degenerative changes in the neck vertebrae that create pressure on the spinal cord.

Anatomy

The cervical spine is located in the neck. Your cervical spine supports your head and connects it to your trunk. The cervical spine supports less weight than any other portion of the spine. It also has the greatest amount of mobility and flexibility. Your neck can bend forward and backward, tilt from side to side, and rotate to the right and left.

Seven vertebrae make up the cervical area of your spine. The back part of the vertebra arches to form the lamina. The lamina creates a roof-like cover over the back of the opening in each vertebra. The opening in the center of each vertebra forms the spinal canal.

Intervertebral discs are located between the vertebrae in the cervical spine. The discs are made up of strong connective tissue. Their tough outer layer is called the annulus fibrosus. Their gel-like center is called the nucleus pulposus. The discs and two small joints connect one vertebra to the next. The discs and joints allow movement and provide stability. The discs also act as a shock-absorbing cushion to protect the cervical vertebrae.

Compression of the spinal cord from cervical spondylitic myelopathy most frequently occurs at C4-C7. The nerves from the spinal cord at this level supply the shoulders, arms, and hands.

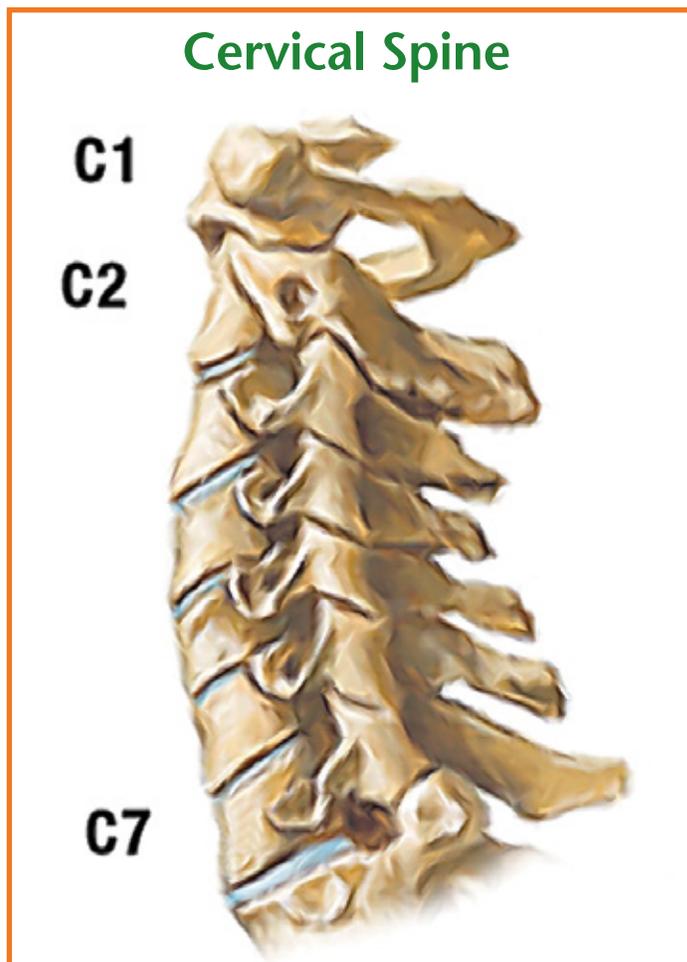
Causes

Cervical spondylitic myelopathy is most commonly caused by degenerative changes that occur in the cervical spine. These changes may put pressure on the spinal cord. Arthritis, termed cervical spondylosis, causes the shape of the vertebrae to change and the spinal canal to narrow. Bone spurs may grow into the spinal canal. The ligaments surrounding the spinal canal can thicken and reduce the space for the spinal cord.

Compression can lead to damage to the spinal cord and neurological dysfunction.

Symptoms

Cervical spondylitic myelopathy commonly causes weakness, clumsiness, and numbness in the arms, hands, and fingers. You may drop items or have a difficult time manipulating buttons, fasteners, and small objects. Your balance and walking ability may change. You may experience weakness, heaviness, or numbness in your legs. Your neck may feel stiff. Bending your neck forward (flexing) may cause electrical-like sensations that move down your spine. Pain may spread from your neck to your arms and fingers. You may have burning, tingling, stabbing, or dull aching pain or a sensation of "pins and needles."



As cervical spondylitic myelopathy progresses, the legs become weaker and stiffer. It may be difficult to straighten your legs. You may have difficulty controlling your bowels and bladder. People with advanced cervical myelopathy may need a cane or walker, to assist with walking.

Diagnosis

Your doctor can diagnosis cervical spondylitic myelopathy after reviewing your medical history, conducting an examination, and considering the results of medical imaging tests. You should tell your doctor about your symptoms, risk factors, and functional problems, such as difficulty getting dressed, feeding yourself, or walking. Your balance and gait pattern will be assessed. Your doctor may check your deep tendon reflexes, tone, strength, coordination, and range of motion.

Your doctor may initially order X-rays to better see the condition of the vertebrae in your cervical spine.

He/she may also order a magnetic resonance imaging (MRI) scan to get a better view of your spinal structures. The MRI scan is very sensitive. It provides the most detailed images of the discs, ligaments, spinal cord, nerve roots, or tumors. X-rays, CT scans, and MRI scans are painless procedures.

In some cases, doctors may use nerve conduction studies to measure how well the cervical spinal nerves work and to help specify the site of compression. This test is called a nerve conduction velocity (NCV) test. During the study, a nerve is stimulated in one place and the amount of time it takes for the message or impulse to travel to a second place is measured.

An electromyography (EMG) test is often done at the same time as the NCV test. An EMG measures the impulses in the muscles to identify damage. Muscles need impulses to perform movements. The doctor will place fine needles through your skin and into the muscles that the spinal nerve controls. Your doctor will be able to determine the presence of muscle damage, as well as the quality of the nerve impulses conducted when you contract your muscles. The NCV and EMG may be uncomfortable, and your muscles may remain a bit sore following the test.

Treatment

Cervical spondylitic myelopathy may be relieved with non-surgical treatments. Medications may help reduce pain and inflammation, and physical therapy may be helpful. If symptoms do not improve or become worse, surgery may be necessary.

Surgery is used to relieve spinal cord compression. The majority of conditions that cause spinal cord compression are located in front of the spinal cord. For this reason, anterior cervical decompression and fusion (ACDF) surgery is commonly used to treat cervical spondylitic myelopathy. The goals of ACDF surgery are to remove pressure from the spinal cord, relieve pain, restore function, and stabilize the spine.

ACDF surgery is performed through an incision at the front of the neck.

The surgeon replaces the disc or discs with a bone graft or interbody fusion cage to support the cervical spine. Surgical hardware including plates and screws may be used. The surgical hardware secures the vertebrae together and allows the bones to heal together.

Following surgery, your doctor will initially restrict your activity. You will wear a neck brace or collar while your fusion heals. You should expect to stay overnight in the hospital. You may need some help from another person during the first few days or weeks at home. You should avoid lifting, housework, and yard-work until your doctor gives you the okay to do so.

The recovery process is different for everyone. It depends on the particulars of your surgery and the extent of your condition.

Am I at Risk?

There are several factors which may contribute to cervical spondylitic myelopathy including:

- Increasing age is associated with an increased risk for cervical spondylitic myelopathy. It most frequently occurs in people over the age of 50, but may occur at any age.
- Osteophytes or bone spurs increase the risk of cervical spondylitic myelopathy.

- ❑ Arthritis in the neck can cause the facet joints to enlarge, which increases the risk of cervical spondylitic myelopathy.
- ❑ Thickened ligaments in the spinal canal, particularly the ligamentum flavum, can narrow the spinal canal and may lead to cervical spondylitic myelopathy.
- ❑ Dislocated or subluxed vertebrae, bones that have moved out of position, increase the risk of cervical spondylitic myelopathy.
- ❑ People that are born with a small spinal canal have an increased risk of cervical spondylitic myelopathy.
- ❑ “Wear and tear” or trauma increases the risk of cervical spondylitic myelopathy.

It is important to receive prompt treatment for cervical spondylitic myelopathy.

- Copyright © 2010 - iHealthSpot, Inc. - www.iHealthSpot.com

This information is intended for educational and informational purposes only. It should not be used in place of an individual consultation or examination or replace the advice of your health care professional and should not be relied upon to determine diagnosis or course of treatment.

For more information on this and other health-related issues, please visit

vermontorthoclinic.org



VERMONT ORTHOPAEDIC CLINIC

3 Albert Cree Drive, Rutland, VT 05701

802.775.2937 • 800.625.2937