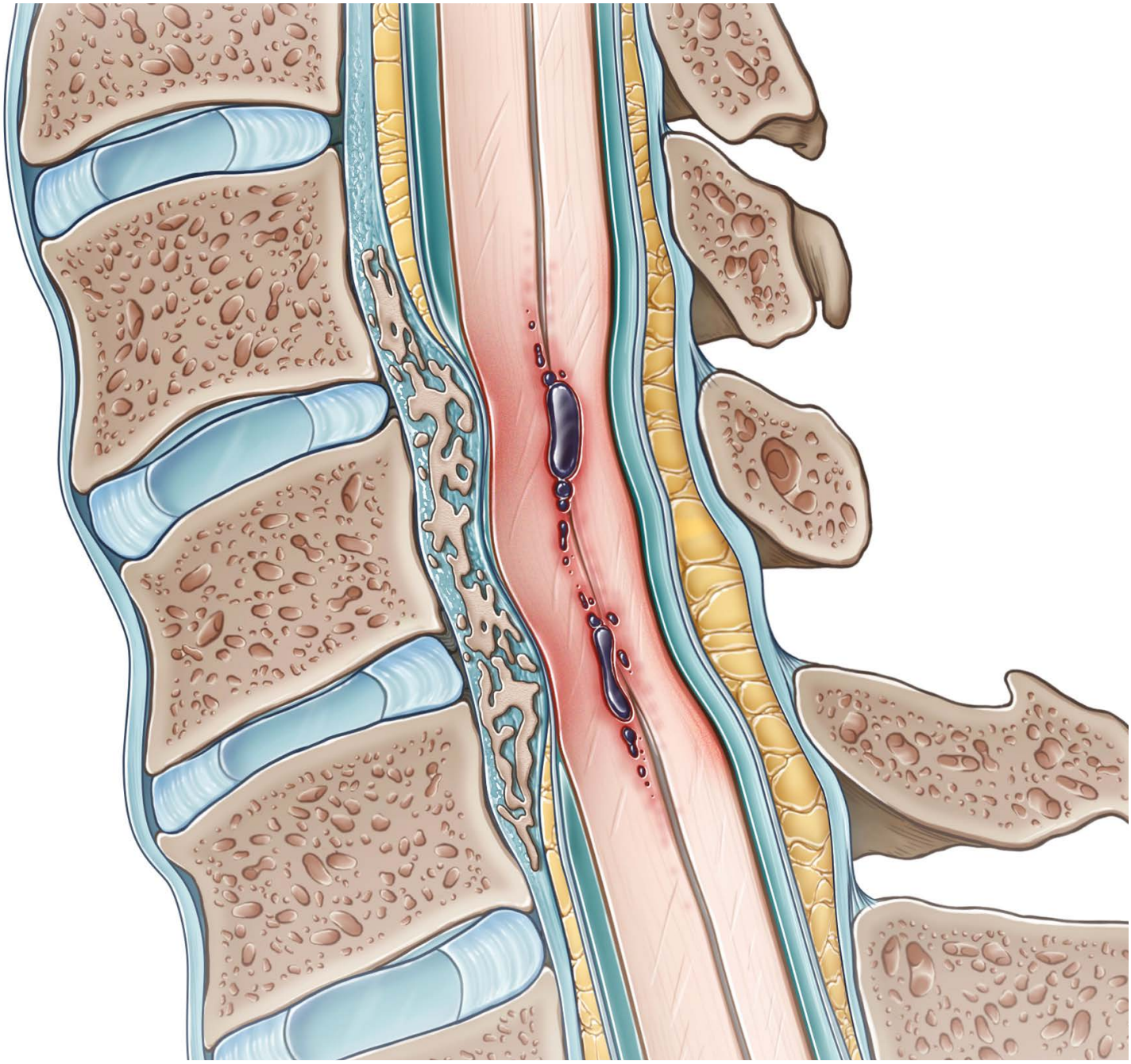
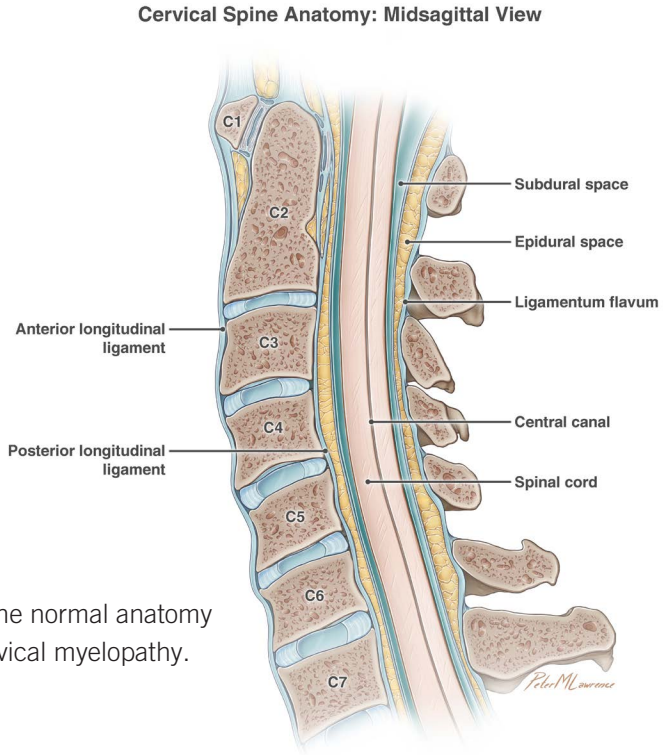
Cervical Myelopathy

BARROW
Neurological Institute



What is Cervical Myelopathy?

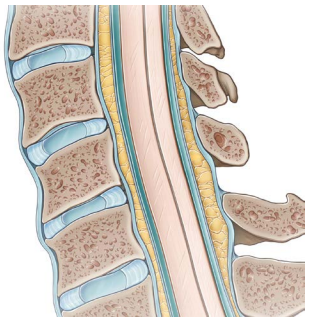
Cervical myelopathy describes compression and injury to the portion of the spinal cord in the neck. This condition can cause pain and neurological dysfunction. If left untreated, it can lead to permanent disability.



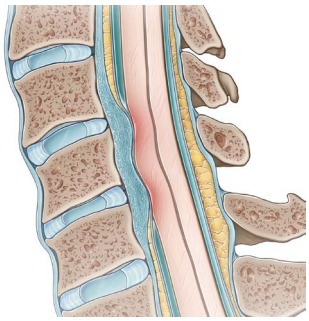
This illustration shows the normal anatomy of a spine without cervical myelopathy.

Cervical myelopathy may result from:

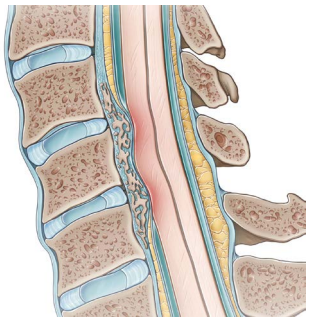
- Congenital spinal stenosis – a narrow spinal canal that is present from birth
- Degenerative changes involving the bones of the spine (vertebrae), intervertebral discs, ligaments, or joints
  - Acquired spinal stenosis
  - Bone spurs (osteophyte formation), usually caused by osteoarthritis
  - Disc herniation
  - Hardening (ossification) of ligaments surrounding the spinal cord
  - Thickening of ligaments (hypertrophy) surrounding the spinal cord
- Traumatic injury to the spine



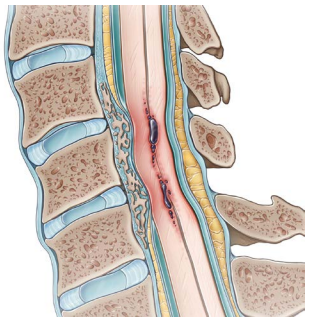
Normal Anatomy



Ligament Hypertrophy

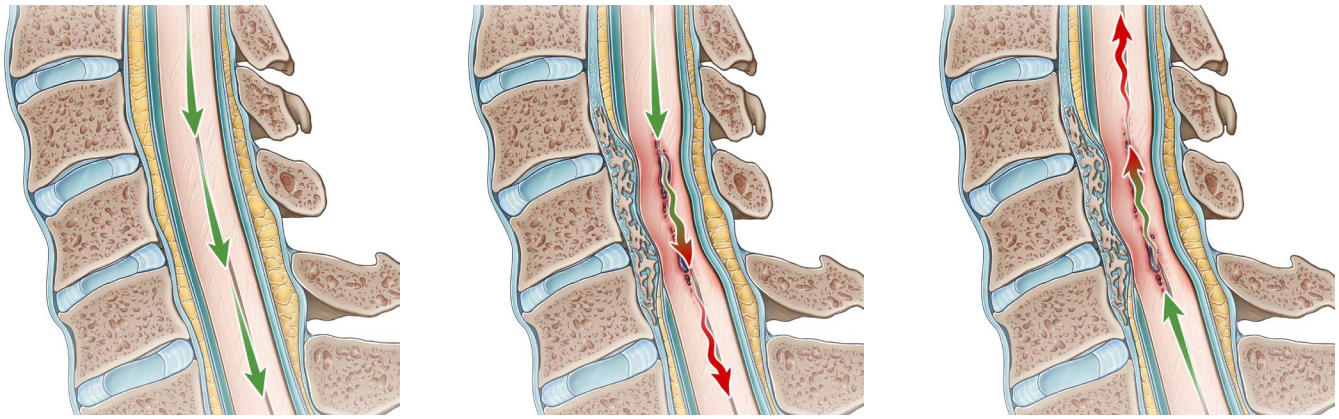


Ligament Ossification



Spinal Cord Injury

When the spinal cord becomes compressed, it is unable to properly carry messages from the brain to the extremities and vice versa.



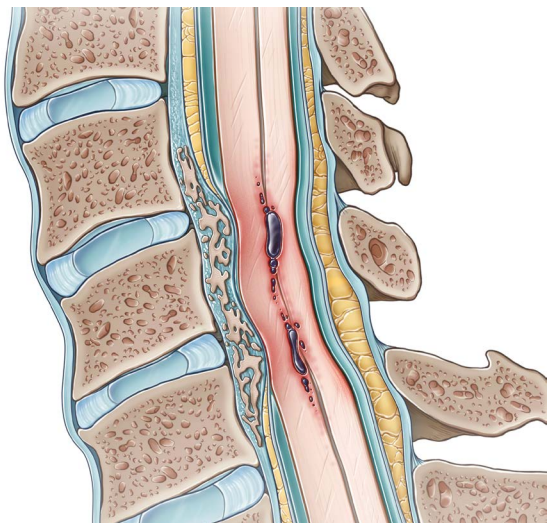
Symptoms of Cervical Myelopathy

While cervical myelopathy can cause neck pain, the following are classic symptoms of the condition.

Neurologic Symptoms	Noticeable Cues
Numbness, tingling, or altered sensation in the extremities, especially the hands	Worsened numbness, tingling, or altered sensation with neck movements
Loss of dexterity in the hands	Dropping objects, inability to manipulate buttons or pick up small objects, worsened handwriting
Imbalance and altered gait	Stumbling while walking, falling
Bladder urges	Suddenly “needing to go”
Weakness in the extremities	Worsening arm or leg function with activity

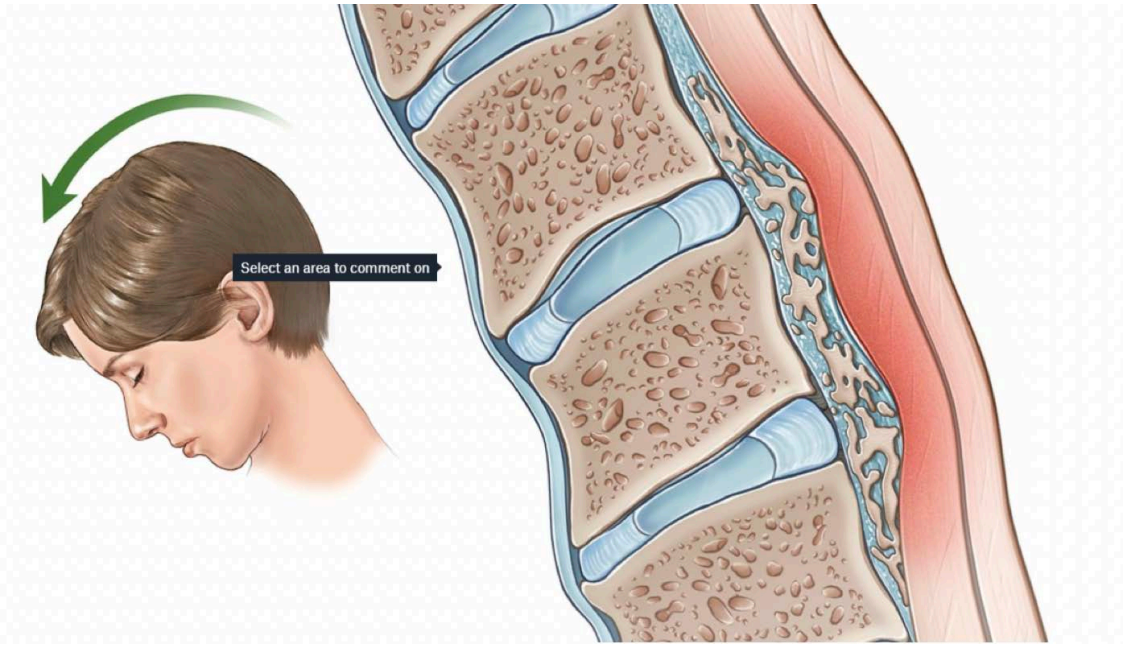
If left untreated, cervical myelopathy can damage the spinal cord and lead to muscle wasting, incontinence, and eventual paralysis—significantly impacting quality of life. Treatment within six months of symptom onset provides the best chance of recovery. If you are experiencing symptoms of cervical myelopathy, contact your doctor as soon as possible.

Permanent injury to the spinal cord due to myelopathy is known as myelomalacia. It appears as white areas on an MRI.



This illustration depicts lesions on the spinal cord caused by cervical myelopathy.

Flexion and extension of the neck worsen myelopathy symptoms because the space around the spinal cord decreases with these movements.



Diagnosing Cervical Myelopathy

Myelopathy Classification	Recommendation
Severe cervical myelopathy	Surgical intervention
Moderate cervical myelopathy	Surgical intervention
Mild cervical myelopathy	Conservative management, with surgical intervention if symptoms progress despite therapies.

Conservative Management: Physical Therapy

Physical therapy exercises, postural training, and making ergonomic improvements to your workspace may alleviate symptoms of cervical myelopathy if a component of spinal cord compression is related to poor posture or neck mechanics.

However, if arthritic debris or a disc herniation is causing compression, these strategies will not likely improve cervical myelopathy symptoms.

Conservative Management: Medications

Certain medications originally designed to treat depression and seizure disorders are effective at managing pain generated by the nerves themselves. Nerve pain is often described as a burning, stinging, or shooting sensation.

Commonly prescribed medications include:

- Gabapentin, Neurontin
- Pregabalin/Lyrica
- Duloxetine/Cymbalta
- Amitriptyline/Elavil

Although people sometimes turn to chiropractic manipulation for neck and back pain, manipulation should never be used for patients with spinal cord compression.

Considerations Before Surgery

Due to the significant investment of time, finances, and recovery associated with surgery, it is important to have a discussion with your surgeon about the expected outcomes of an operation.

The goal of an operation for cervical myelopathy is to prevent further neurological decline. However, some symptoms you may be experiencing may have separate causes that will not improve with surgery.

It is important to understand which symptoms are likely to improve or be prevented so that you can make an informed decision about your treatment.

Living With Cervical Myelopathy

Recovering From Surgery

2 WEEKS

First two weeks postoperative:

You may be prescribed a cervical hard collar and have significant restrictions on physical activity. Daily walking is OK.



2-6 WEEKS



Two to six weeks postoperative:

You may return to a sedentary job and increase activity around the house. Collar use and strenuous activity restrictions will remain in place. It is common to have new upper-back pain at this stage, as fusion procedures increase the height of your neck, stretching muscles, and nerves in your upper back that support your head.

6 WEEKS-3 MONTHS

Six weeks to three months postoperative:

You will wean off the cervical collar, if prescribed, and may gradually increase gentle neck movements. At three months after surgery, your neurosurgeon may recommend physical therapy, which usually resolves post-surgical upper-back pain.



6 MONTHS



Six months postoperative:

You should be able to return to almost all physical activities. Patients often continue to see improvement for 24-36 months following surgery.

Lifestyle Changes

Healthy lifestyle changes can help prevent further degenerative changes in the cervical spine. These include:

- Maintaining proper posture
- Avoiding direct overhead lifting
- Avoiding repetitive, maximal neck movements
- Avoiding smoking and nicotine products
  - It is essential to avoid tobacco smoking or use of nicotine products for at least one year after surgery to prevent increased risk of incision complications and surgical hardware failure.

Support Resources

- Myelopathy.org
- Facebook.com/Myelopathy
- Twitter.com/MyelopathyOrg
- Twitter.com/MyelopathySupp
- Search “Cervical Myelopathy Foundation Support Group – Spine and Cord Disorders” on Facebook

Remember:

Seeking medical advice is the best first step toward improving cervical myelopathy!





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