VB SPINE

Patient Guide to

Cervical Spinal Stenosis

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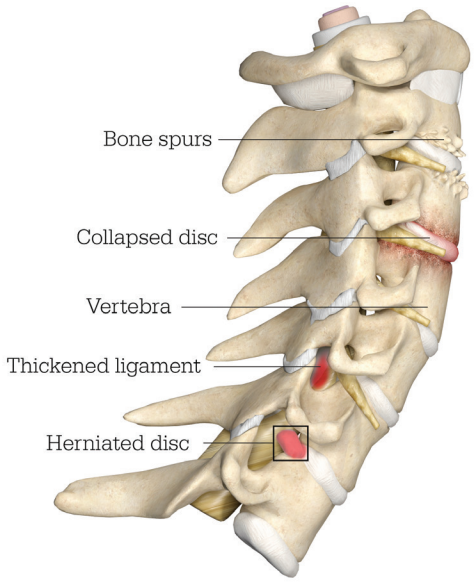
What Is Cervical Spinal Stenosis?

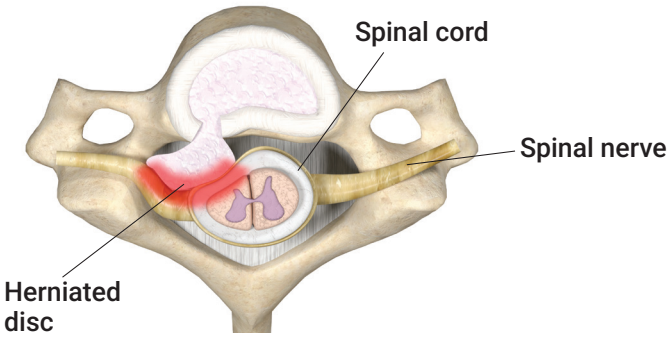
Spinal stenosis is a narrowing of the space for the spinal cord or nerves. Cervical stenosis can affect the central spinal canal, the area of the spine in the neck which contains the spinal cord, or the **neural foramen**, (see Glossary). When either of these spaces is compressed, the nerves may begin to function abnormally.

What Are Some of the Possible Risk Factors for Cervical Spinal Stenosis?

Degenerative changes in the spine, including those listed below, can cause narrowing of the spinal canal and/or neural foramen:

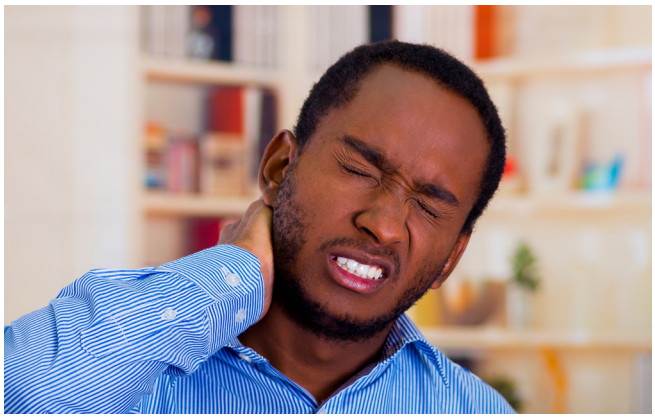
- Collapsed discs
- Bone spurs (see Glossary)
- Fluid-filled cysts
- Herniated discs (see Glossary)
- Thickened spinal ligaments





What Are Some Common Symptoms of Cervical Spinal Stenosis?

- Numbness and tingling in the arms
- Unstable feeling when walking
- Clumsiness in one or both hands (ex: difficulty buttoning clothes, frequently dropping small objects, etc.)
- Weakness in the arms
- Neck pain
- Loss of bowel or bladder control



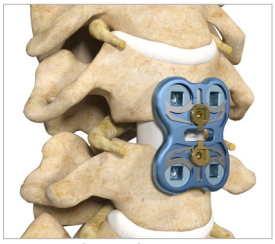
What Are Some of the Non-Surgical Treatment Options?

Anti-inflammatory and/or pain medications, bracing, physical therapy or spinal epidural injections may be used to treat symptoms of stenosis. Surgery may be considered for those patients who do not improve but usually only if they have associated neurological symptoms or deformity of the spine.

Surgical Treatment Options for **Cervical Spinal Stenosis**

In general, surgical treatment options presented by your surgeon are aimed at relieving pressure on nerve roots in an attempt to address pain.

Anterior Cervical Discectomy and Fusion (ACDF)



Incision: front of the neck (anterior cervical)

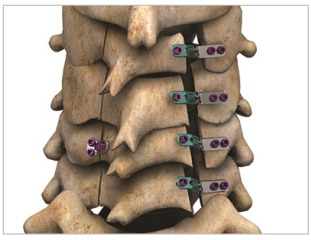
During an ACDF procedure, your surgeon will make an incision on the front of the neck in order to reach the spine. Once necessary tissues have been safely moved out of the way, surgical instruments are used to remove the disc material and/or **bone spurs** (see Glossary) that may be putting pressure on the spinal cord and/or nerves. Once the disc is removed, the space between the spinal bones (vertebrae) is filled with either a piece of **donor bone** (see Glossary) or an implant made of metal or plastic and filled **natural bone material** (see Glossary). Your surgeon will then place a stabilization device such as a metal plate with screws to help hold the vertebrae together.*

Cervical Laminectomy And Fusion

Incision: back of the neck (posterior cervical)

A **cervical laminectomy** (see Glossary) and fusion are performed through an incision on the back of your neck. This procedure involves fully or partially removing bone, including **bone spurs** (see Glossary), that covers and surrounds the spinal cord and spinal nerves. This is done to enlarge the space for the spinal cord and/ or nerves. The goal of the procedure is to relieve pressure on (compression of) the cord or nerves. Your surgeon will then perform a **spinal fusion** (see Glossary) in order to stabilize the spine. This procedure usually includes the placement of stabilization devices such as metal screws and rods to help hold the spinal bones (vertebrae) together. Your surgeon will also place **natural** or synthetic **bone material** (see Glossary) to assist in the healing process.*

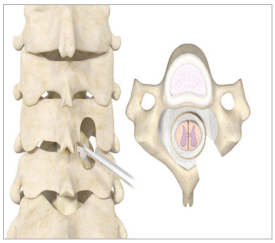
Cervical Laminoplasty



Incision: back of the neck (posterior cervical)

A cervical laminoplasty procedure is similar to a **cervical laminectomy** (see Glossary), except the bones on the back of the spine are not fully removed. Your surgeon will make special cuts in the bone to create an "open door" hinge that will allow the pressure on the spinal cord to be relieved. Small metal plates and/or **donor bone** (see Glossary) pieces are used to keep the hinge open and the pressure off the nerves. A **spinal fusion** (see Glossary) is not performed, which may help preserve some of the motion of the neck and spine.

Cervical Foraminotomy



Incision: back of the neck (posterior cervical)

Through a small incision in the back of the neck, your surgeon will remove a small, non-essential portion of the bone to visualize the spinal nerve. Then, **intervertebral disc** (see Glossary) material or **bone spurs** (see Glossary) that are putting pressure on the nerve can be removed. Because the amount of bone removed in this procedure is minimal and does not affect the stability of the spine, there is no need to place any implants.

* The placement of these implants is intended to assist in a healing process called spinal fusion (see Glossary). If successful, spinal fusion will typically take place in the weeks and months following surgery, and can be assessed by your surgeon on imaging studies (e.g. x-rays) taken during follow up visits.

Glossary

Bone spurs: bony projections that can develop as a result of the natural aging process

Discectomy: surgical removal of the whole or a part of an intervertebral disc

Donor bone: bone graft that comes from a donor and is referred to as allograft bone. Allograft bone usually comes from bone banks that harvest the bone from cadavers

Foraminotomy: surgical removal of a portion of the foramen, the opening through which the spinal nerves pass on their way from the spinal canal to the arms or legs

Herniated disc: the shift of an intervertebral disc into an abnormal position

Intervertebral disc: soft structure found between each of the spinal bones (vertebrae) that acts as a shock absorber

Laminectomy: surgical removal of the entire lamina, a bone at the back of the spine

Laminoplasty: surgical procedure where the lamina, (a bone at the back of the spine) is hinged open like a door and secured in its new position with suture, donor bone or a metal plate to enlarge the spinal canal.

Natural bone material: bone material that can come either from a patient's own body (autograft) or be donated (see donor bone) from a bone bank after being harvested from a cadaver (allograft)

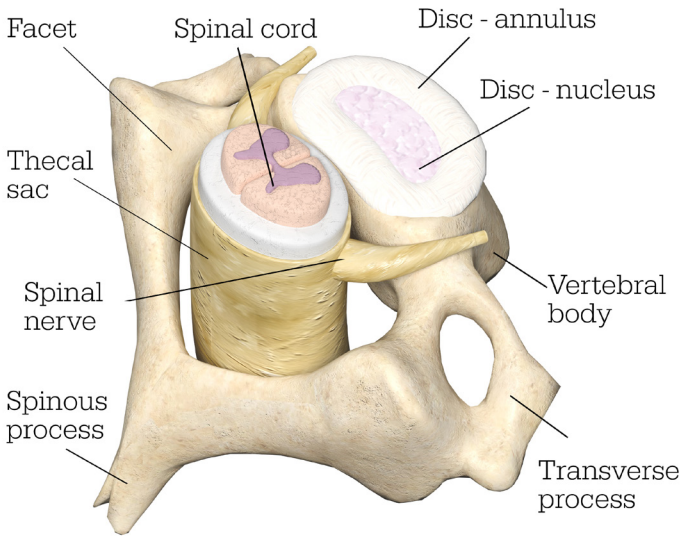
Neural foramen: the opening through which the spinal nerves pass on their way from the spinal canal to the arms or legs

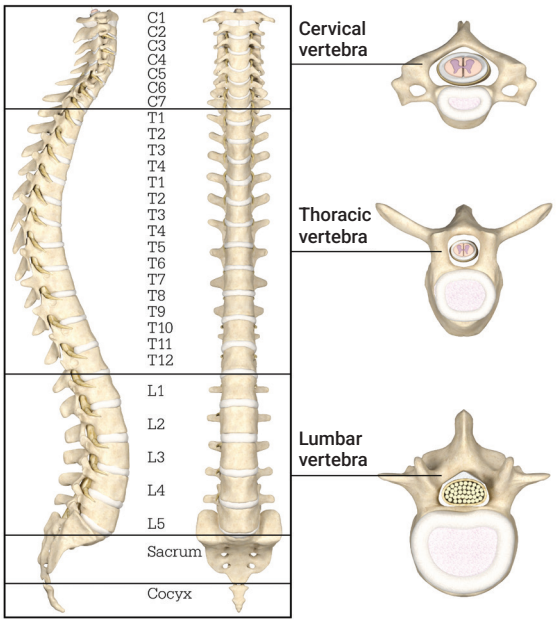
Spinal fusion: permanent connection of two or more vertebrae in the spine, eliminating motion between them. Spinal fusion involves techniques that are designed to mimic the normal healing process of broken bones

Stenosis: narrowing of the space for the spinal nerves or spinal cord

Vertebra/Vertebral body: spinal bone

Key Spinal Structures To Know





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