



# CERVICAL LAMINOPLASTY



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# Cervical Laminoplasty

## Patient Information

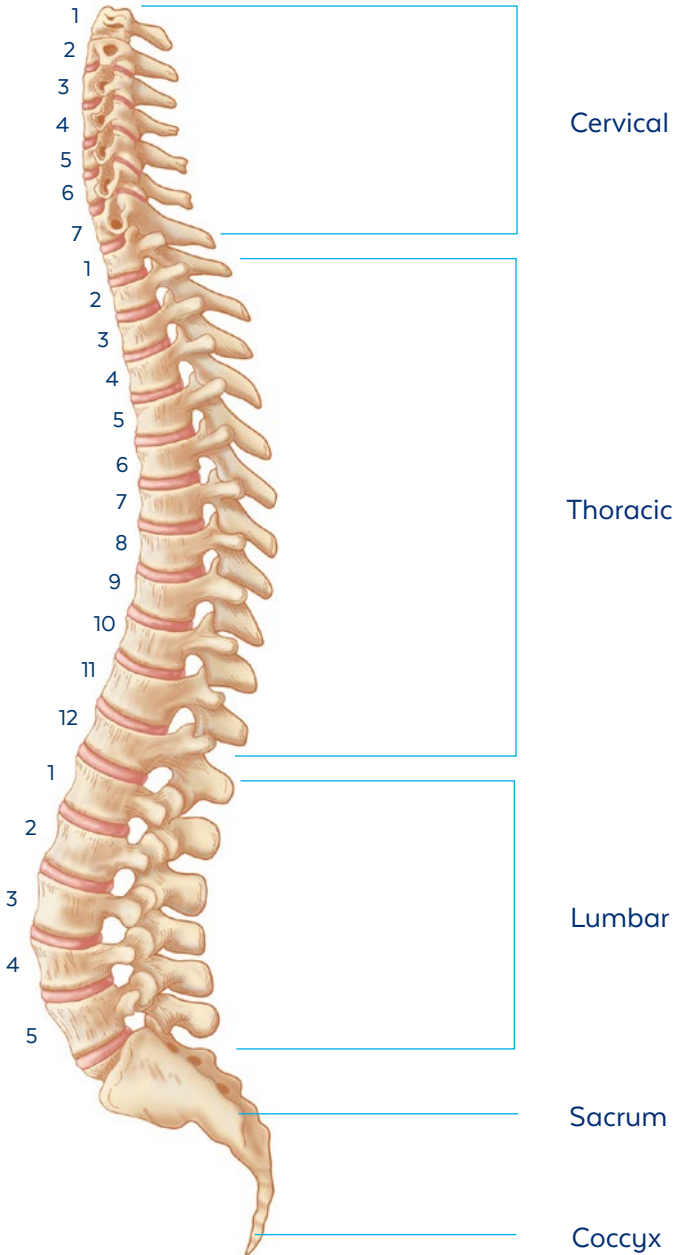
This brochure will help you understand more about:

- ▶ **General conditions of the spine**
- ▶ **Information about surgical treatment**
- ▶ **Cervical laminoplasty**
- ▶ **What to expect from surgery**

The decision to receive medical treatment is individual to the patient and the patient's symptoms. The information presented within this brochure may not apply to your condition, treatment, or its outcome as surgical techniques vary and complications may occur. It is important to discuss the viability of this procedure with your physician to decide whether this treatment option is right for you.

This brochure is intended to be an educational resource only and is not meant to be a warranty, or to replace a conversation between you and your physician or member of their health care team. Please consult your physician for a complete list of indications, contraindications, warnings, precautions, clinical results, and other important medical information related to this procedure.

# Anatomy of the Spine



# The Healthy Spine

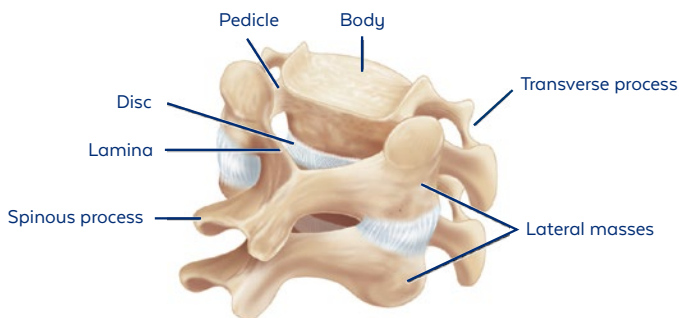
The spine is composed of vertebrae divided into three main parts:

- ▶ Cervical (7 vertebrae)
- ▶ Thoracic (12 vertebrae)
- ▶ Lumbar (5 vertebrae)

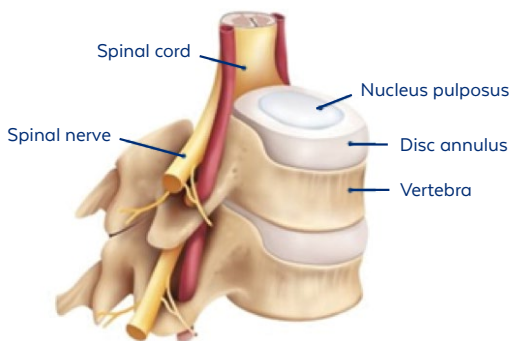
Below the lumbar spine is the sacrum which is comprised of five fused vertebrae. At the end of the spine is the coccyx, commonly referred to as the tailbone.

The vertebrae bear the weight of the upper body and provide points of attachment for muscles and ligaments. They protect the spinal canal (the cavity that runs successively through each of the vertebrae and contains the spinal cord) and are exit points for spinal nerves.

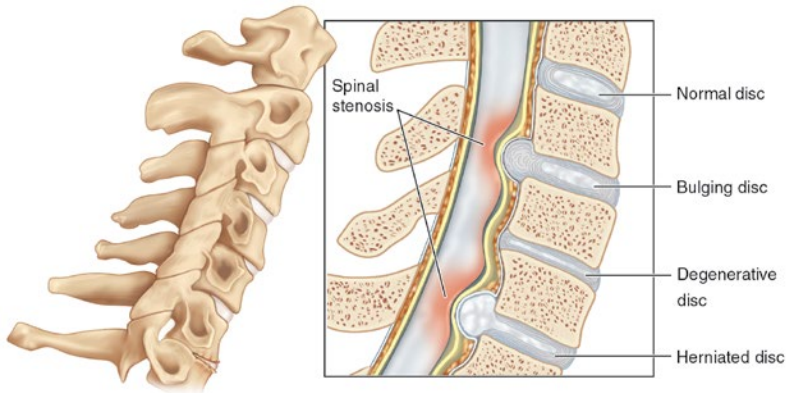
The individual vertebrae are separated by intervertebral discs that act as cushions or shock absorbers.



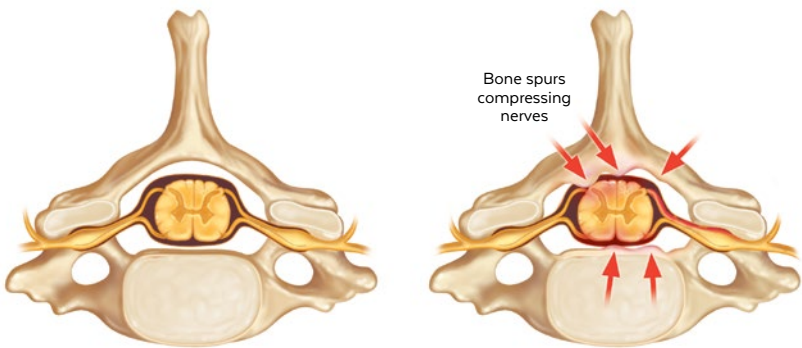
*Posterior (back) view of cervical spine*



*Anterior (front) view of cervical spine*



*Narrowing of cervical spine canal due to disc herniation (spinal stenosis)*



*Healthy cervical spinal canal*

*Narrowing of cervical spinal canal due to spinal stenosis*

# General Conditions of the Cervical Spine

In a healthy spine, the disc acts as a cushion between vertebrae. Age, genetics, injury, and daily wear and tear can contribute to damage and deterioration of the intervertebral disc.

## **Degenerative Disc Disease (DDD)**

Over time, the disc can lose flexibility, elasticity, and height. Degenerative disc disease results when the disc's shock absorbing characteristics are reduced and can lead to abnormal motion or alignment and instability of the spine.

## **Herniated Disc**

Degeneration can cause cracks and tears in the outer layer of the intervertebral disc, where material inside the disc can be forced out, causing the disc to bulge or herniate, break open, or break into pieces, placing pressure on a nerve root or the spinal cord.

## **Spinal Stenosis**

Spinal stenosis results from the narrowing of areas in the spine where nerve roots and the spinal cord must travel. This can be caused by a herniated disc, osteophytes (bony spurs), or ligaments compressing the spinal cord.

Symptoms of these conditions may include:

- ▶ Loss of motion and dexterity
- ▶ Radiating pain
- ▶ Tingling or numbness in the arm or hand
- ▶ Weakness and/or numbness in shoulders, arms, and neck

These symptoms may be treated with non-surgical methods for as long as possible. Treatments include rest, ice or heat, weight control, exercise, physical therapy, epidural injections for pain management, and medication.

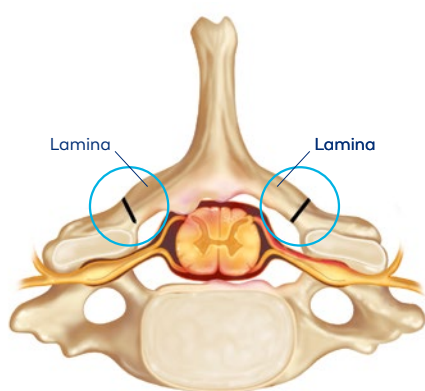
If non-surgical treatments do not bring relief after a period of time, surgical treatments may be recommended to relieve the pressure off the nerves causing pain by restoring alignment of the spine and/or the space between the vertebrae.

## What is Laminoplasty?

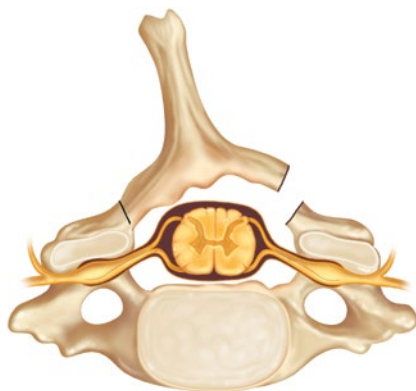
In certain instances when the spinal canal narrows, laminoplasty may be a possible treatment option if non-surgical methods have failed. Prior to prescribing a surgical treatment, physicians may perform a physical examination, evaluate the symptoms, and order tests such as X-rays and MRIs to determine which surgical method is best.

Laminoplasty is a procedure in which the lamina is repositioned to relieve the symptoms caused by spinal cord compression. The lamina is a bony structure at the rear of the vertebra. Each vertebra includes two laminae that form the roof over the spinal canal to protect the back of the spinal cord, as shown below. Decompression is achieved by opening and elevating the lamina to alleviate pressure on the spinal cord. People who undergo a laminoplasty procedure often times have multiple levels of compression.

An open door laminoplasty is a common method a surgeon uses that may allow for more space in the spinal canal. Operating through a small incision, your surgeon creates a groove down one side of the vertebra to create a hinge. The surgeon then carefully cuts through the other lamina.



*Cuts made into the laminae*



*Opened lamina*

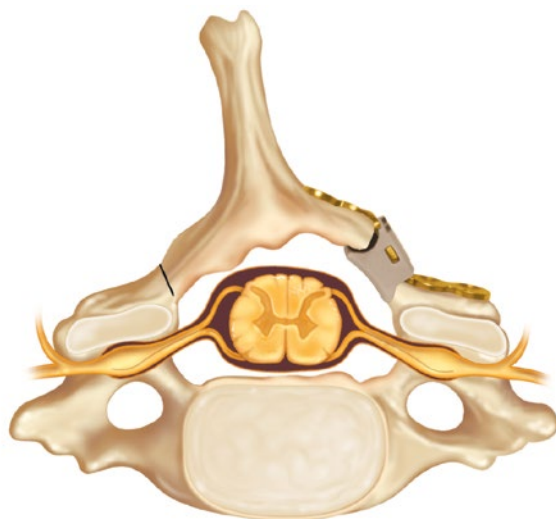


After the cuts have been made, the lamina is opened (like a door) to provide more space in the spinal canal. The surgeon lifts the side with the open cut to widen the spinal canal to relieve pressure. To hold the lamina open, the surgeon may insert an implant such as a plate and a spacer, as shown below.

## After Surgery

After the procedure, patients may experience relief in their symptoms immediately, while others may take time to improve. The length of stay in the hospital depends on factors, including the patient's overall health, extent of the surgery, and the treatment plan. A neck collar may be prescribed.

It is important to work closely with the surgeon to determine an appropriate recovery plan.



*Laminoplasty plate and spacer used to stabilize the lamina*

## Frequently Asked Questions



### Q. What may I expect from surgery?

- A.** Between two to four weeks after surgery, patients may notice improvement of some or all symptoms and reduced post-operative pain. Recovery time varies between patients.

It is the surgeon's goal for the patient to eventually return to his/her preoperative activities. A positive attitude, reasonable expectations, and compliance with your doctor's post-surgical instructions may all contribute to a satisfactory outcome.



### **Q. When will I be able to return to work?**

**A.** The amount of recovery time needed prior to returning to work varies depending on your job and you as an individual. For jobs that require strenuous physical activity, a longer recover period may be required. Please consult your surgeon for an individual recommendation.

### **Q. How long will I have restricted activities?**

**A.** As with any surgery, the duration of time between the procedure and return to normal activities is different for every patient. Your surgeon may provide a list of activities you should avoid during the first six weeks after surgery.

# Glossary

<b>Anterior</b>	Front of the body
<b>Decompression</b>	To reduce pressure
<b>Degeneration</b>	Deterioration of tissue
<b>Disc</b>	The soft tissue found between the bones of the spinal column that help cushion the spine
<b>Herniated Disc</b>	A disc that, due to overuse, injury or disease, bulges outside its normal area, potentially causing pain and limiting function
<b>Incision</b>	A surgical cut made in skin
<b>Lamina</b>	Posterior part of ring that covers the spinal cord and nerves
<b>Laminoplasty</b>	A surgical procedure that relieves pressures on the spinal cord and nerve roots by cutting and lifting the lamina
<b>Magnetic Resonance Imaging (MRI)</b>	A radiographic (like an X-ray) procedure that uses magnets to create cross-sectional images (like slices) of the body
<b>Posterior</b>	Rear of the body
<b>Radiating Pain</b>	Pain that starts in one area and travels to another, often along a nerve pathway

**Spinal Cord**

A thick column of nerves that extends from the skull to the lumbar spine to transport information to and from the brain

**Spinal Stenosis**

Narrowing of the spinal canal that places pressure on the spinal cord

**Vertebrae**

The bones of the spine that make up the spinal column, with a hole for the spinal cord to pass through

**X-ray**

An image produced by the use of radiation waves, showing bone and other tissues in the body



**About Globus Medical:** Globus Medical, Inc. is a leading musculoskeletal implant company based in Audubon, PA. The company was founded in 2003 by an experienced team of professionals with a shared vision to create products that enable surgeons to promote healing in patients with musculoskeletal disorders.



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