

# Posterior Cervical Laminoplasty

## What is Cervical Laminoplasty?

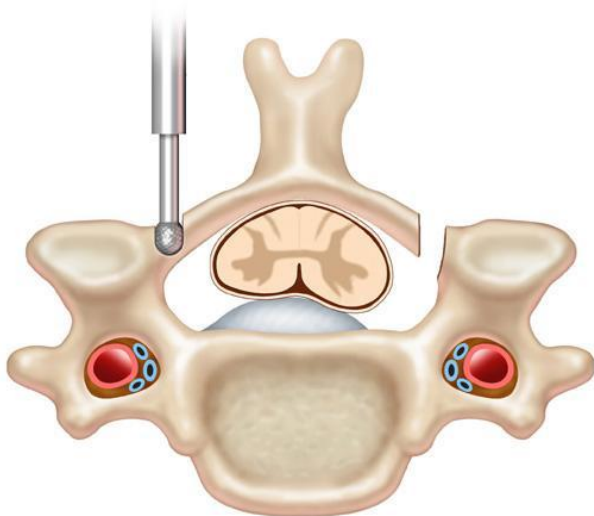
Cervical laminoplasty is a surgical technique that removes pressure from the spinal cord in the neck. Pressure on the spinal cord can be due to various causes including degenerative changes, arthritis, bone spurs, disc herniations, OPLL, tumors, or fractures. Frequently this spinal cord pressure, called **spinal stenosis**, can occur at multiple levels of the cervical spine at the same time. If this pressure is severe enough, symptoms called myelopathy can develop. Laminoplasty may be an excellent option to remove the pressure, allow the spinal cord to heal, and reverse the symptoms.

## How is Cervical Laminoplasty Performed?

One option for removing compression from multiple levels in the neck is called a cervical laminoplasty. A laminoplasty is performed via an incision in the back of the neck which is called a posterior approach. During surgery, the patient will be lying face down on the operating table. Frequently, specialized **monitoring devices** are used to check the spinal cord during the surgery to ensure that there is no damage to the spinal cord during the surgery. Instead of removing the bone and other compressive structures, the bone overlying the spinal cord (the “lamina”) is partially cut on both the right and left sides. This creates a hinge on one side of the lamina and a small opening on the other side. The lamina is then moved into the “open” position by elevating the lamina on the open side [Figure 1]. This vastly increases the space available for the spinal cord and takes the pressure off of it. A spacer made out of bone, metal, or plastic, is usually inserted to hold the spinal canal open [Figure 2]. The final position resembles an open door being held open with a **door stop**, and many surgeons refer to this technique as an “open-door” laminoplasty.

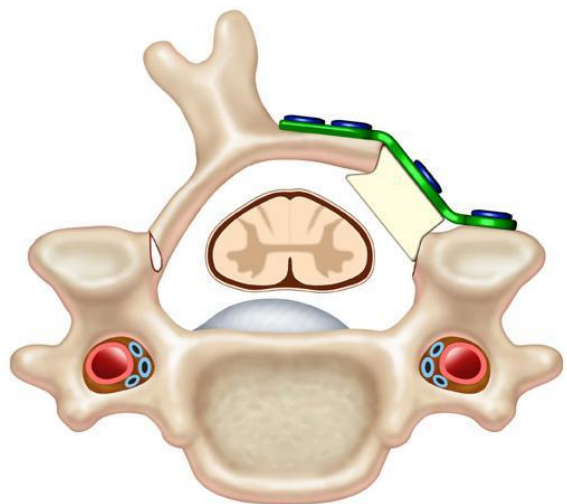
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Figure 1

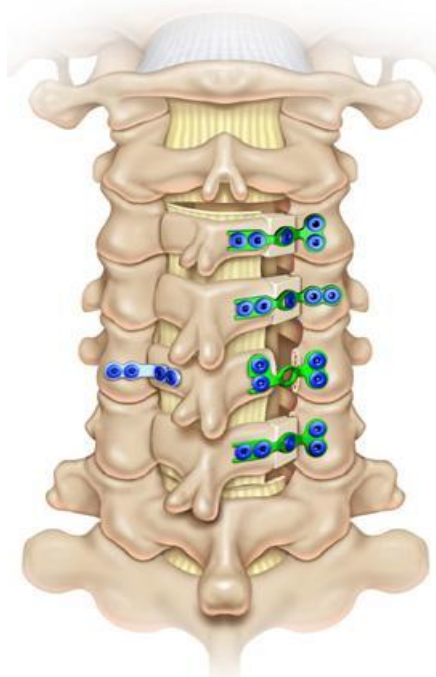


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Figure 2



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## What can I expect?

The main complaint after this kind of surgery is pain in the back of the neck. This pain can be quite severe for several days after surgery, and it then gradually improves over several months. Occasionally, one of the nerves in the neck can be stunned after surgery because of the movement that occurs when the nerve moves back to its normal location after removal of the compression. This nerve “stunning” is called a nerve palsy. This palsy can cause significant weakness, especially in the shoulder, and pain in same region. Fortunately, this palsy is almost always temporary and gets better without any treatment. Overall, the results for a laminoplasty are very good, the surgery is very well tolerated, and serious complications are very rare. After surgery, patients usually remain in the hospital for 1 -2 days. A neck collar is used for about one month. Physical therapy is prescribed after approximately one month to strengthen the neck muscles after surgery.

Patients who undergo laminoplasty frequently have multiple levels of severe spinal cord compression leading to nerve problems possibly including pain in the arms, numbness, difficulty using their hands normally, and balance problems. These problems can be very debilitating prior to surgery, but fortunately laminoplasty provides excellent decompression of the injured spinal cord. After a laminoplasty, most patients have significant recovery of the nerve function within several months after surgery, if not sooner. This nerve function improves over the next 6 – 18 months as the spinal cord continues to heal itself. Many patients can have complete resolution of the pre-operative symptoms, although long-standing spinal cord compression can lead to permanent nerve damage that never fully recovers.

Article Source: Nitin N. Bhatia, MD on May 23, 2009.

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