Decompressive Surgery for Lumbar Spinal Stenosis

Decompressive Lumbar Laminectomy
The most common type of surgery for lumbar spinal stenosis is decompressive laminectomy (also known as open decompression). It’s especially helpful at relieving leg pain caused by lumbar spinal stenosis, but less successful in relieving pain that’s primarily in the back.\(^1\)

See which parts of the spine may be removed during a laminectomy.

**How a Decompressive Lumbar Laminectomy Works**
Decompressive lumbar laminectomy removes vertebral bone and ligaments that are compressing the spinal cord or nerve root. Removing this bone and tissue opens up the area and gives the nerve roots more space.

**About the Laminectomy Surgery**
Decompressive lumbar laminectomy is generally done when symptoms of lumbar spinal stenosis become severe.
The surgery involves several steps:
- General anesthesia is administered.
- A 2- to 5-inch incision is made in the back.
- The surgeon first removes one or more of the spinous processes, which are the bumps you feel as you run your hand up your back.
- The surgeon then removes the lamina from the vertebrae—hence the term "laminectomy," or lamina removal.
- The laminae, which cover the nerve roots and spinal cord, form the roof of the spinal canal. The laminae also give support and protection to the spinal cord.
- Other small joints, called facet joints, may be trimmed.
- Any bone fragments are removed.
- If herniated disc tissue is also impinging on the nerve root, that disc tissue (but not the entire disc) is removed.
- The surgeon ensures that the nerve roots can move freely without being pinched.
- At some hospitals or surgery centers a laminectomy can be done as a less invasive surgery. In some cases only part of the lamina must be removed to relieve the pressure on the nerves. This procedure is called a laminotomy.

**Recovery After Laminectomy Surgery**
After the surgery you may be up after one day and remain in the hospital for up to three days.\(^2\) You may need to take pain medications for two to four weeks. For about six weeks, your doctor will restrict certain activities like significant bending, twisting, and lifting so that you can fully recover.

Patients who have had a laminectomy typically require 6 months to recover before they can perform physical activities without limitations.\(^2\)

**Outcomes of Decompressive Lumbar Laminectomy**
The majority of people feel pain relief as a result of having a laminectomy. But symptoms can recur.
Below are the results of one study:

89% of the patients had a successful outcome, but they found that symptoms did worsen with time.³

At the time of follow up (range: 2.8–6.8 years), 57% of the patients had successful results.³

Reoperation rates were reported to be between 10 to 23% over a period of 7 to 10 years of follow-up.³,⁴,⁵,⁶

**Risks and Complications of Decompressive Lumbar Laminectomy**

Potential risks and complications from decompressive laminectomy include the following:

- Reactions to anesthesia
- Myocardial infarction
- Infection
- Blood vessel damage/bleeding
- Deep vein thrombosis
- Hematoma
- Pneumonia
- Neurological system compromise
- Stroke; nerve injury or spinal cord damage
- Paralysis; thrombus formation
- Wound dehiscence or delayed healing
- Pain/discomfort at the operative site
- Death

Medication or additional surgery may be necessary to correct some of these potential adverse events.

**Facetectomy and Foraminotomy**

Facetectomy and foraminotomy are two other types of decompressive surgery used to treat the symptoms of lumbar spinal stenosis. They are similar to a laminectomy.

**Facetectomy**—Involves removal of the facet joints. The facet joints are the small stabilizing joints found in pairs at the back of each vertebra that link the vertebrae together. The facet joints can become inflamed due to injury or arthritis, and this can cause lumbar spinal stenosis and nerve root compression.

**Foraminotomy**—Widens the foramen in the spine. Foramina are the small spaces in the vertebrae where nerve roots exit the spinal cord. When a nerve is compressed in this area, a foraminotomy can relieve the compression.

During a foraminotomy some bone is cut or shaved away from the foramen, enlarging the space. Other small pieces of bone or bone spurs may be removed if needed. If herniated disc tissue is also crowding the nerve root, the tissue (but not the entire disc) is removed.

**Learn more:**

- [Less Invasive Procedures for Treating Lumbar Spinal Stenosis Symptoms](#)
- [Seminars About Treatment for Lumbar Spinal Stenosis Symptoms](#)

**References:**


Ciol MA, Deyo RA, Kreuter W, Bigos SJ. Characteristics in Medicare beneficiaries associated with reoperation
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