

Lumbar laminectomy

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Overview

Lumbar laminectomy is a surgical procedure designed to relieve pressure and pain caused by compression of the nerves in the lower back (spinal stenosis).

Spinal stenosis is a disorder in which the spinal canal narrows, leading to back, buttock and/or leg pain, commonly referred to as **sciatica**. Patients may also experience numbness, tingling or weakness in the legs.

In cases where the spinal alignment is abnormal or when additional bone must be resected in order to treat the stenosis adequately, a spinal fusion may be required to stabilize the spine.

Who performs the procedure?

Lumbar laminectomy is best performed by a **fellowship-trained spine surgeon**. Ask your surgeon about their training, especially if your case is complex or you have had previous spinal surgery.

What to expect before the procedure:

- In the weeks prior to your surgery, **pre-operative testing** will be conducted either by your primary care physician or the pre-admission testing department of the hospital.
- One week prior to surgery, you will need to **stop taking aspirin, NSAIDs** or other medications that thin your blood and may increase bleeding.
- If you smoke, it is important you stop well before surgery and **avoid smoking** for a period of at least 6 months afterwards, as this will impede proper healing.
- You will be given instructions and supplies to **cleanse** the back of your spinal area the day prior to your procedure.
- You are to have **nothing to eat or drink after midnight** on the night before.

What to expect during the procedure:

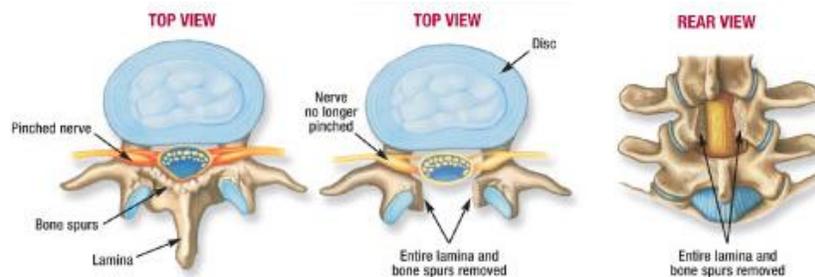
- Just before the procedure begins you will have an intravenous (IV) line started so you can receive fluids and medications to make you relaxed and sleepy. The procedure is performed under **general anesthesia** (you are asleep). Medications will be given through the IV to put you to sleep and a tube is inserted in your throat to supplement your breathing. **IV antibiotics** are administered and monitors are placed to check your heart, blood pressure, and oxygen level. A Foley catheter may be inserted into the bladder.
- The actual procedure typically lasts **about 1 hour**, depending on the specifics of the case. This is what happens once the procedure begins:

1. Surgical approach

- You are positioned face down (prone) on a specialized, cushioned operating table.
- The lower back area is cleansed with a special solution to kill the germs on the skin.
- A midline skin incision is made directly overlying the affected area, and the spine is exposed just enough to treat the problem level(s).

2. Decompression

- The section of bone that covers the back of the spine, called the lamina, is removed to relieve the nerve compression. Part or all of the lamina may be removed, depending on the specifics of your case.
- Microsurgical instruments are then used to remove disc fragments, facet cysts, overgrown ligaments and/or bone spurs, thus increasing space and relieving the compression of the spinal nerves.



3. Closure

- A drain may be placed, and the incision is then closed.
- A small dressing is applied over the incision and you are then taken to the recovery area.

What to expect after the procedure:

- Patients are typically in the hospital for **1-2 nights**.
- In the recovery area, you will be observed until you recover from the anesthesia, then transferred to the floor.
- You will be encouraged to get out of bed and move around as soon as you are able to. A back brace may be prescribed.
- Pain pills on an empty stomach may result in nausea, so initially IV pain medications are self-administered through a PCA, or **patient-controlled analgesia**.
- IV fluids will be continued until you can drink fluids well by mouth.
- Once you are able to drink normally, your diet will be advanced to your **normal diet** and you will be switched to pain pills.
- **Physical therapy and occupational therapy** will see you prior to your discharge from the hospital to make sure you are comfortable performing activities of daily living.

Recovery and rehabilitation at home:

- Keep in mind, everybody is different, and therefore the amount of time it takes to return to normal activities is different for each individual.
- Discomfort should decrease a little each day. Most patients are able to return to most activities by **4 - 6 weeks**, although complete recovery time may take between 6 and 12 weeks. You will not be able to drive a car for about 4 - 6 weeks, depending on the specifics of your case.
- Restrictions such as avoiding heavy lifting and bending at the waist are maintained for 4-6 weeks.
- Signs of infection such as **swelling, redness, draining, or fever > 101.5°F** should be brought to your surgeon's attention immediately.
- It is important to keep your incision **dry** for a period of 2 weeks to give your incision time to seal. You may sponge bath during this period.
- You will be seen in the office at **2 weeks**, then at regular intervals thereafter

What are the expected outcomes?

Following lumbar laminectomy, approximately **70% to 80%** of patients will have significant improvement in pain and function (ability to perform normal daily activities). Laminectomy, it should be noted, is not nearly as reliable for relief of lower back pain.

It should also be noted that symptoms such as numbness and weakness may persist if permanent damage has occurred to the nerves. We have all seen that when heavy furniture is removed off a carpet, the carpet may remain indented. This is analogous to pressure on a badly compressed nerve. Even after the nerve pressure is surgically relieved, permanent injury may have already occurred within the nerve.

What are the possible risks?

In skilled hands, a lumbar laminectomy is a very safe procedure. However, no surgery is without possible risks. These risks can be minimized by choosing an experienced surgeon to perform your procedure, and by adhering to your surgeon's instructions before and after your procedure. General complications of any surgery include infection (**1%**), blood clots, and reactions to anesthesia. Specific complications related to lumbar laminectomy may include but are not limited to:

- **Persistent nerve pain.** The primary cause for persistent nerve pain following spinal surgery is an inadequate decompression. This complication can be avoided by seeking out an experienced, fellowship-trained spine surgeon
- **Nerve root injury (1 in 1,000) or bowel/bladder incontinence (1 in 10,000).** Paralysis would be extremely unusual since the spinal cord stops at about the T12 or L1 level, and surgery is usually done well below this level.
- **Cerebrospinal fluid leak (1% to 3%).** If the dural sac is breached, a cerebrospinal fluid leak may be encountered but does not change the outcome of the surgery. Generally a patient needs to lie down for about 24 - 48 hours to allow the leak to seal.
- **Postoperative instability at the operated level (5 to 10% of cases).** This may occur if too much bone is resected during the surgery or if there is an unrecognized misalignment of the bones. Choosing an experienced spine surgeon will help minimize this risk.