



## Tests and Procedures

# Laminectomy

By Mayo Clinic Staff

Laminectomy is surgery that creates space by removing the lamina — the back part of the vertebra that covers your spinal canal. Also known as decompression surgery, laminectomy enlarges your spinal canal to relieve pressure on the spinal cord or nerves.

This pressure is most commonly caused by bony overgrowths within the spinal canal, which can occur in people who have arthritis in their spines.

Laminectomy is generally used only when more-conservative treatments — such as medication, physical therapy or injections — have failed to relieve symptoms. Laminectomy may also be recommended if symptoms are severe or worsening dramatically.

Bony overgrowths within the spinal canal can narrow the space available in your spinal cord and nerves. This pressure can cause pain, weakness or numbness that can radiate down your arms or legs. Laminectomy is usually better at relieving these types of radiating symptoms than it is at relieving actual back pain.

Your doctor may recommend laminectomy if:

- Conservative treatment, such as medication or physical therapy, fails to improve your symptoms
- You have muscle weakness or numbness that makes standing or walking difficult
- You experience loss of bowel or bladder control

In some cases, laminectomy may be necessary as part of surgery to treat a herniated spinal disk. Your surgeon may need to remove part of the lamina to gain access to the damaged disk.

Laminectomy is generally a safe procedure. But as with any surgery, laminectomy carries a risk of complications.

Potential complications include:

- Bleeding
- Infection
- Blood clots
- Nerve injury
- Spinal fluid leak

You'll need to avoid eating and drinking for a certain amount of time before surgery. Your doctor will give you specific instructions about the types of medications you should and shouldn't take before your surgery.

Surgeons usually perform laminectomy using general anesthesia, so you're unconscious during the procedure. The surgical team monitors your heart rate, blood pressure and blood oxygen throughout the procedure with a blood pressure cuff on your arm and heart-monitor leads attached to your chest. After you're unconscious:

- The surgeon makes an incision in your back over the affected vertebrae and moves the muscles away from your spine as needed. Small instruments are used to remove the appropriate lamina.
- If laminectomy is being performed as part of surgical treatment for a herniated disk, the surgeon also removes the herniated portion of the disk and any pieces that have broken loose (discectomy).
- If one of your vertebrae has slipped over another or if you have curvature of the spine, spinal fusion may be necessary to stabilize your spine. During spinal fusion, the surgeon permanently connects two or more of your vertebrae together using bone grafts and, if necessary, metal rods and screws.
- Depending on your condition and individual needs, the surgeon may use a minimally invasive incision and a special surgical microscope to perform the operation. The incision is closed using staples or stitches.

## After laminectomy

After surgery, you're moved to a recovery room where the health care team watches for complications from the surgery and anesthesia. You may also be asked to move your arms and legs. Your doctor may prescribe medication to relieve pain at the incision site.

You might go home the same day as the surgery, although in some cases you may need a short hospital stay. Your doctor may recommend physical therapy after a laminectomy to improve your strength and flexibility.

Limit activities that involve lifting, bending and stooping for several months after laminectomy. Depending on the amount of lifting, walking and sitting your job involves, you may be able to return to work within a few weeks.

If you also had spinal fusion, your recovery time may be longer. In some cases after laminectomy and spinal fusion, it may be six months before you can return to your normal activities.

Most people report measurable improvement in their symptoms after laminectomy, but the benefit may lessen over time as the spine continues to age or if there is a recurrence of arthritis. Laminectomy is more likely to improve leg pain caused by a compressed nerve than back pain. Because laminectomy can't stop the buildup from osteoarthritis that caused the nerve compression in the first place from happening again, symptoms may come back over time.

## References

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