

Laminectomy

A laminectomy is a surgical incision (cut) into the vertebra (backbone) to obtain access to the spinal cord. The operation is performed to remove tumours or herniated intervertebral discs, or to relieve pressure on a spinal nerve. However, this operation isn't always successful, which means the symptoms could remain. Sometimes, the operation isn't expected to relieve symptoms, but is performed to prevent the area from deteriorating any further. In this case, your original symptoms will probably remain, but not get any worse.

Herniated intervertebral disc

One of the most common reasons for laminectomy is a prolapsed or herniated intervertebral disc. If the herniated disc is in the lumbar region, this can cause sharp and continuing back pain, a weakening of the muscles in the leg, and some loss of sensation in the leg and foot. It may also be difficult to raise your leg when it is held in a straight position. A herniated disc in the neck region can cause symptoms including pain, numbness and weakness in the arm. A herniated disc may be triggered by, for example, twisting your back while lifting something heavy. The surgeon will attempt to relieve the pressure on nerves and nerve roots by removing the pulpy material that is protruding from the disc.

Medical issues to consider

Tests are usually performed prior to surgery to aid diagnosis. These tests may include:

- Spinal x-ray
- Myelogram
- Computed tomography (CT) scan
- Magnetic resonance imaging (MRI) scan.

Your surgeon should explain the nature of your operation, the reasons for it, the outcome and the possible risks involved. They should be able to tell you the approximate length of stay in hospital that will be required and the number of weeks you will need to recuperate before returning to work. Your anaesthetist will visit you to see how suitable you are for surgery. Laboratory tests, including blood and urine samples, are taken before the operation.

Operation procedure

You will have 'nil by mouth' (nothing to eat) for a number of hours prior to surgery, and an enema to empty your bowel. A pre-medication injection is usually given to make you drowsy and dry up some internal secretions.

Laminectomy is usually performed under general anaesthetic. You are placed face-down on the operating table. The exact procedure depends on the location of the herniated disc. (For example, if the disc is located in your neck, your head is clamped to prevent movement.) The skin is marked for incision. The surgeon first cuts through the skin. The muscle is then cut, peeled back from the vertebrae and held in place with special instruments called retractors. The lamina, which is between the bony projection of the vertebrae (the 'points' you can feel with your fingers) and the transverse process or 'wing', is either removed or drilled with small holes. What happens next depends on the problem. For example, the surgeon may then trim the protruding bits of a herniated disc. Once the surgery is completed, the lamina is placed back into position, and the muscle and skin are sutured (sewn) closed.

Immediately after the operation

After the operation, you can expect:

- Routine post-operative observations will be taken and charted, including temperature and blood pressure.
- Your wound is checked for redness, swelling and signs of infection.
- Muscle spasms are quite common following laminectomy. Pain relief is ordered and given regularly.

- Note is made of your ability to pass urine, as sometimes this may be affected immediately following surgery.
- You may have intravenous fluids for a few days, which may include an antibiotic.
- Initially, two people have to help you to roll over in bed. You are taught the proper method of rolling your body in order to maintain proper body alignment. This is most important for the first 48 hours or so.
- You are assisted out of bed after a few days. Your physiotherapist gives you specific instructions on how to get out of bed properly in order to avoid stress and strain on your wound site.
- You are encouraged to walk, stand and sit for short periods. You are taught how to prevent twisting, flexing or hyperextending your back while moving around.

Possible complications

Some of the possible complications of laminectomy include:

- Infection of the wound
- Blood clots in the legs
- Splitting open of the wound (wound dehiscence)
- Injury to the spinal cord
- Paraplegia or quadriplegia (depending on the site and severity of the spinal cord injury).

Taking care of yourself at home

Be guided by your doctor, but general suggestions include:

- Continue to take your medications as ordered, especially the full course of antibiotics.
- If the operation was performed on your neck, you will need to wear a collar for about six weeks.
- Try to rest as much as possible for at least two weeks.
- Avoid activities that strain the spine – such as sitting or standing for too long, flexing your spine, bending at the waist, climbing too many stairs or going for long trips in the car.
- Avoid wearing high-heeled shoes.
- Sleep on a firm mattress.
- Continue with any exercises you were shown in hospital.
- Beware of heavy lifting for a long period.
- After two weeks at home, try to have a 10 minute walk each day, unless advised otherwise by your doctor.
- Report to your doctor any signs of infection, such as wound redness or drainage, elevated temperature or persistent headaches.

Long term outlook

A regular exercise program following surgery is most important to increase your spinal muscle strength and flexibility, and to protect against future injury. Occasionally, the operation doesn't work and the original symptoms remain. At other times, the operation isn't expected to relieve symptoms, but is performed to prevent the area from deteriorating further. In this case, your original symptoms will probably remain, but not get any worse. Make sure to discuss your concerns and expectations with your doctor.

Other forms of treatment

Even with signs of spinal nerve pressure, such as sciatica, recovery without any treatment may occur. Alternative treatment to surgery isn't always possible, but generally should be tried first. This may include:

- Stabilisation exercises
- Stretching and strengthening exercises
- Training on how to safely use the back (such as proper lifting techniques)
- Chiropractic
- Osteopathy
- Switching to ergonomic furniture.

Discectomy without laminectomy may also be an option, and this can often be done as day surgery using arthroscopic microscopic discectomy.

Where to get help

- Your doctor
- Neurosurgeon.

Things to remember

- A laminectomy is a surgical incision into the backbone to obtain access to the spinal cord.
- One of the most common reasons for laminectomy is a prolapsed or herniated intervertebral disc.
- Occasionally, the operation doesn't work and the original symptoms remain.
- dAt other times, the operation isn't expected to relieve symptoms, but is performed to prevent the area from deteriorating further.

This page has been produced in consultation with, and approved by:

Better Health Channel

Copyright © 1999/2009 State of Victoria. Reproduced from the Better Health Channel (www.betterhealth.vic.gov.au) at no cost with permission of the Victorian Minister for Health. Unauthorised reproduction and other uses comprised in the copyright are prohibited without permission.

- This Better Health Channel fact sheet has passed through a rigorous approval process. For the latest updates and more information visit www.betterhealth.vic.gov.au.