

A Patient / Family Informed Consent Guide to

Laminoplasty

Prepared by Department of Neurosurgery

Updated December 2007



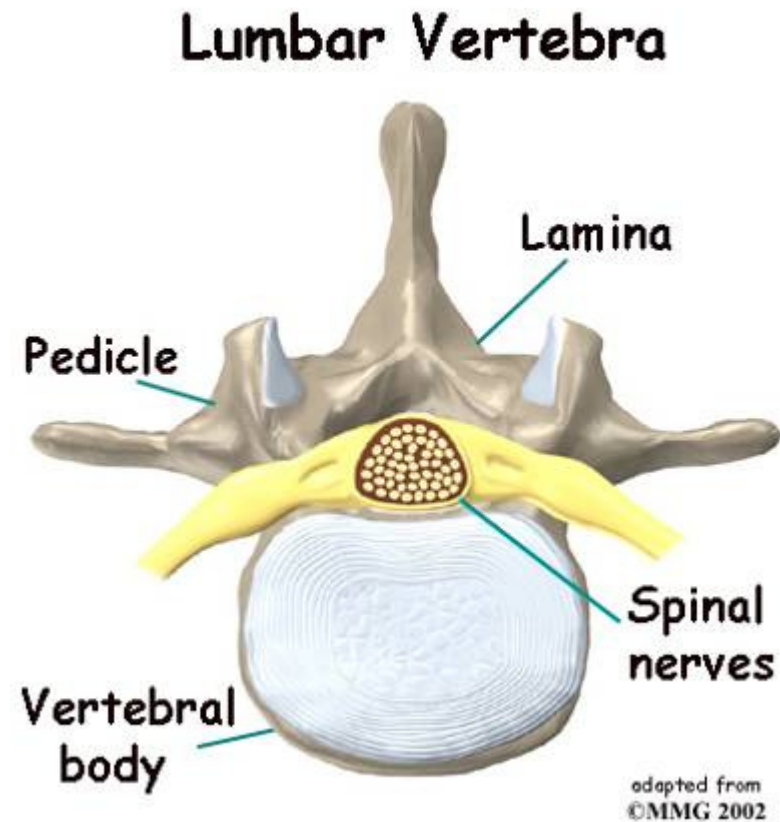
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Spinal Vertebra

- Each spinal vertebra is formed by a round block of bone, called a *vertebral body*, and a *bony arch* attached to the back of each vertebral body
- The bony arch has two parts (a) two *pedicle bones* and two *lamina bones*
- When the vertebrae are stacked on top of each other, they form a hollow tube that surrounds the spinal cord and nerves. The laminae provide a protective roof over these



Spinal Degeneration

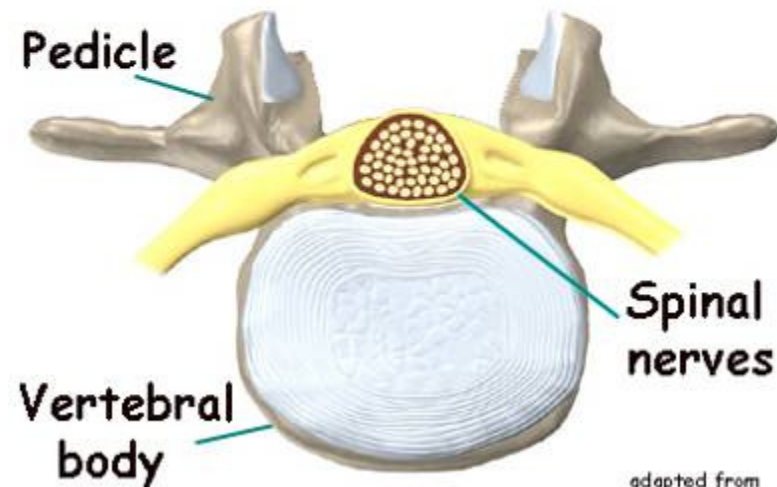
- Due to wear and tear over the years, parts of the spine and soft tissues (ligaments) may thicken and compress the nerves within the spinal canal. This condition is called spinal stenosis
- Degeneration also causes bone spurs to develop. When these spurs press into the spinal canal, they may compress the nerves



Laminectomy

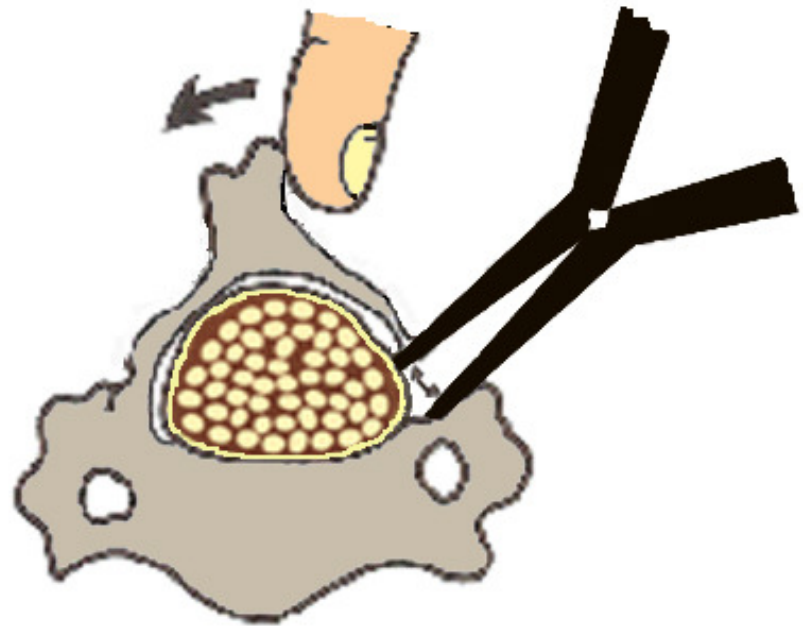
- During *laminectomy*, the *spinous process* and the *lamina* on both sides of the spinous process are removed. This enlarges the spinal canal and takes pressure off the spinal nerves
- This procedure is more suitable for patients with rigid spines

Lumbar Vertebra
after lamectomy



Laminectomy

- In *laminoplasty*, the laminae are reattached to preserve lumbar stability
- This procedure is done for younger patients with a supple spine



Pre-operative Work Up

- The decision to proceed with surgery must be made jointly by you and your surgeon
- Before the operation, you may have to undergo some blood tests and x-rays
- Depending on your medical problems if any (Diabetes Mellitus, Hypertension, Ischemic heart disease.etc) and neurologic presentation, the pros and cons of surgery will be discussed by your surgeon



What is Laminoplasty?

- For patients with narrow spinal canals in their necks, this procedure immediately relieves pressure by creating more space for the spinal cord and roots
- The technique is often referred to as an "open door laminoplasty," because the back of the vertebrae is made to swing open like a door



Why do I Need This Procedure?

- To relieve the narrowing of spinal canals over multiple levels, due to thickening of spinal ligaments, bony outgrowths, and calcifications compressing the spinal cord, resulting in numbness, pain and weakness of limbs, as well as difficulty in walking



Operation Procedure

- An incision is made on the back of the neck
- A groove is cut down one side of the cervical vertebrae creating a hinge
- The other side of the vertebrae is cut all the way through
- The tips of the spinous processes are removed to create room for the bones to pull open like a door



Operation

- The back of each vertebrae is bent open like a door on its hinge, taking pressure off the spinal cord and nerve roots
- Small wedges made of bone are placed in the opened space of the door



Operation

- The door of the vertebrae swings shut, and the wedges stop it from closing all the way
- On top of that, small metal plates can be used to stabilize the ‘door’
- The spinal cord and the nerve roots rest comfortably behind the door



After Surgery

- After the operation, you will be brought to the recovery room and subsequently to the general ward for observation
- A neck collar may be worn for one month after surgery
- Your stay in hospital will be about 1 week. Stitches can be removed in OPD on the 10th post-operative day
- An appointment at the Neuroscience Clinic will be arranged for you to see your doctor after discharge from hospital.

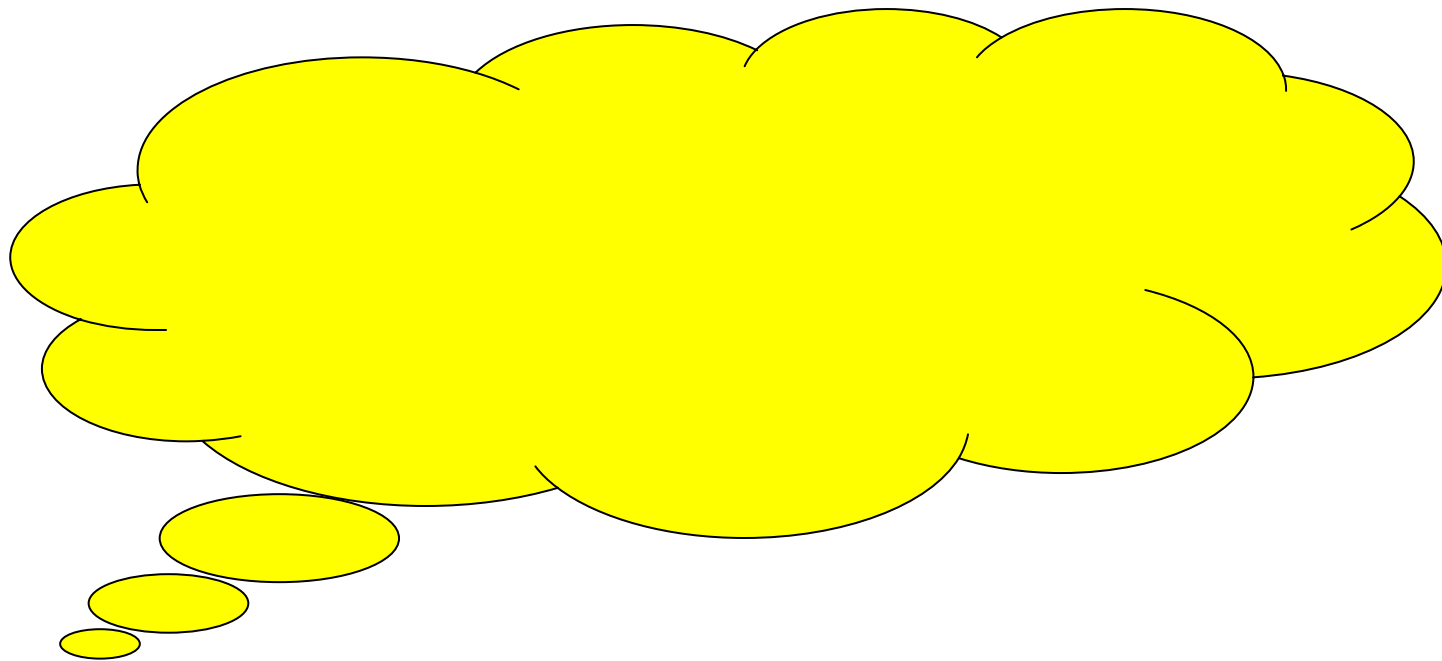


What are the Risks of the Procedure/Surgery?

- **During surgery:** General anaesthetic risks
- **Early:** Wound infection, hoarseness of voice, bleeding, and weakness of limbs
- **Late:** Infections of implants, neck stiffness and rarely displacement of implant or instability of the spine



Do You Have Any Questions?



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