

# Disclaimer

This movie is an educational resource only and should not be used to make a decision on **Spinal Stenosis Surgical**. All decisions about surgery must be made in conjunction with your surgeon or a licensed healthcare provider.



# MULTIMEDIA HEALTH EDUCATION MANUAL TABLE OF CONTENTS

Sections
1. Overview
2. Causes
3. Signs and Symptoms
4. Diagnosis
5. Treatment
6. Surgery

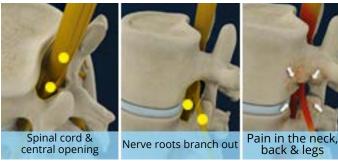


### **Overview**

Spinal stenosis is the narrowing of the spinal canal or neural foramina. Each bone in the vertebral column has a central opening through which the spinal cord passes, and other openings called neural foramina through which nerve roots branch out. When these openings narrow down, pressure is exerted on the nerves producing pain in the neck, back and legs.

Spinal stenosis most commonly occurs in people over 50 years of age, but can also be seen in young people who have a narrow spinal canal or have had injury to the spine.

(Refer figure. 1)



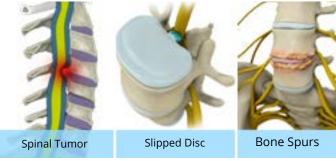
(Figure.1)

### **Causes**

Spinal stenosis can occur when the disc spaces which are 80% water, dry out. This can lead to inflammation which can exert pressure on the nerve. The main causes include

- Herniation of the discs that cushion bones in the vertebral column
- Slipped disc
- Arthritis
- · Bone spur or outgrowth of bone
- . Thickening of surrounding ligaments
- Tumor
- Infection
- Abnormal curvature of spine from scoliosis
- Spinal injury

• Birth defects, Paget's disease and achondroplasia, which are characterized by abnormal spinal growth (*Refer figure. 2*)



(Figure.2)

# Signs & Symptoms

Stenosis may or may not show any symptoms. If symptoms occur, they manifest gradually in the body parts that are supplied from the affected nerve.

#### Symptoms include

- Neck or back pain
- Pain, numbness, cramping or weakness in the arms or legs
- . Pain extending down the leg
- Foot problems

Some of these symptoms may aggravate while standing or walking. In severe cases, you may experience poor balance, or inability to control urine or function. (Refer figure. 3)



Neck and Back Pain

(Figure.3)

# **Diagnosis**

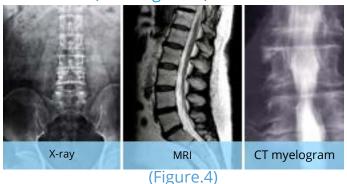
Your doctor may diagnose stenosis following a physical examination to localize the compressed nerve and the region of pain, and



to determine sensation, muscle strength and reflexes.

#### Imaging tests may be ordered including

- X-ray to rule out other related disorders with similar symptoms
- Magnetic resonance imaging (MRI) to detect any damage to the discs and ligaments, & for presence of tumors and pressure on the nerves
- CT myelogram to view the size and shape of the spinal cord, bone spurs, herniated discs, and tumors (Refer figure. 4)



# **Treatment**

doctor may suggest conservative treatment including

- Anti-inflammatory, muscle relaxant, antidepressant, or anti-seizure drugs
- Physical therapy
- Massage therapy
- Acupuncture
- Cold packs and heat therapy
- Steroid injections

If these first-line therapies do not help alleviate symptoms, surgery is recommended.

(Refer figure. 5)

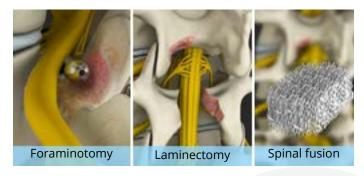


### (Figure.4) Surgery

Your surgeon may recommend for aminotomy, laminectomy, or spinal fusion to alleviate pain due to stenosis. Surgery will be carried out under general anesthesia.

In foraminotomy, your surgeon makes an incision in your back, and separates the underlying layer of muscles and ligaments. Then, the neural foramina is widened by cutting or shaving off some of the bone. In addition, other parts such as the lamina, the bone that forms a crest-like structure, may also be removed by a process called laminectomy. After this, your surgeon may perform spinal fusion to ensure that the spinal column is stable after surgery.

After this, your surgeon may perform spinal fusion to ensure that the spinal column is stable after surgery. In the spinal fusion procedure, your surgeon uses bone graft taken from another part of the body or a synthetic bone substitute to join two or more vertebral bones together with rods, cages or screws so that there is no movement between them. The muscles and ligaments are put back into place and the incision is sutured. (Refer figure. 6)



(Figure.6)



## **SUMMARY**

Constriction of the spinal canal in spinal stenosis causes pinching of the spinal nerves, which occurs as a result of spinal wear and tear due to aging. It leads to pain, which can make standing, walking, and other activities difficult to perform. Considerable relief from pain and other symptoms can be achieved through either conservative treatment, or surgery.





#### **Spinal Stenosis Surgical** Multimedia Health Education

	YC	OUR SURGERY DATE
	RE	AD YOUR BOOK AND MATERIAL
	VI	EW YOUR VIDEO /CD / DVD / WEBSITE
	PR	RE - HABILITATION
	AF	RRANGE FOR BLOOD
	M	EDICAL CHECK UP
	A	OVANCE MEDICAL DIRECTIVE
	PR	RE - ADMISSION TESTING
	FA	MILY SUPPORT REVIEW
Physician's Name :	Pa	tient's Name :
Physician's Signature:	Pa	tient's Signature:
Date:	Da	nte: