

Common Disorder of the Cervical Spine

Cervical Stenosis:

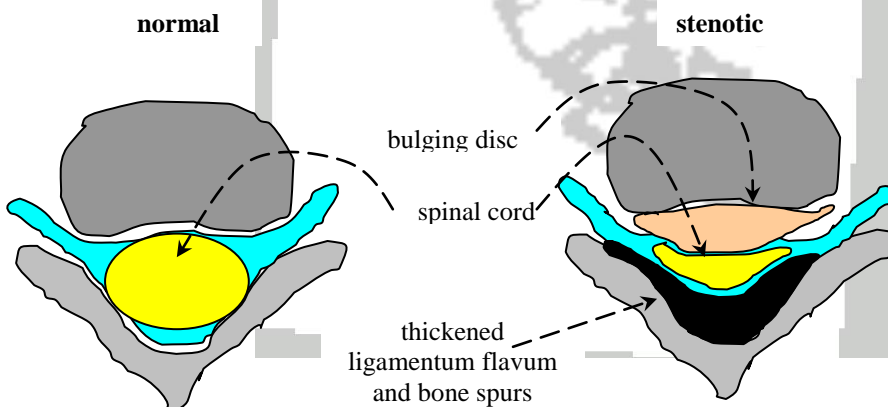
This condition results from aging changes of the cervical spine. Bone spurs from collapsed and hardened discs cause pressure on the spinal cord. Commonly the patients complain of diffuse weakness of arms, clumsiness in their hands such as inability to button a shirt, sew or even deterioration in their handwriting. These problems occur as a result of loss of fine motor control of their hands. This is an example of **myelopathy**.

Patients present with walking difficulties, such as a wide based or staggering gait. Their reflexes are more brisk than normal. Additionally, abnormal reflexes occur. Patients notice a sudden, stepwise decline in their function rather than a gradual deterioration. The primary cause is the compression of the **spinal cord** that is more sensitive to pressure changes than a spinal nerve. The spinal cord is extremely delicate and the functional decline may not necessarily return despite treatment.

Treatment:

As long as symptoms are minimal, cervical stenosis can be followed clinically. However, when the compression of the spinal cord is so severe that **myelopathy** is present, then an appropriate management is necessary. Myelopathy is one of the few serious problems that must be addressed surgically in order to prevent further decline in the use of arms and legs and the potential loss of control of bowel or bladder functions.

Typically the pressure on the spinal cord is relieved from the front of the spine. A piece of cadaver bone or patient's own pelvic bone replaces the offending disc(s) and or vertebra. A metal plate and screws (**instrumentation**) are typically used to secure the inserted bone. Occasionally, the pressure also must be removed from the back of the neck followed by additional plates and screws application. These seemingly aggressive surgeries are performed in order to bring about optimum support of the neck and to avoid rigid external supports such as a halo vest.



Commonly asked questions about Spine Surgery

Who is a “Spine Surgeon”?

A spine surgeon is a physician who dedicates himself in the complete care of all aspects of spinal disorders. They include trauma, infection, tumor, and degenerative conditions such as arthritis and disc herniation. In the past, both orthopaedic surgeons and neurosurgeons would participate in one particular aspect of spinal surgery. Due to overwhelming amount of research and development accomplished in the field during the past 20 years, subspecialty training was created for those surgeons whose sole commitment is strictly to spine surgery. This requires additional fellowship training in a major university hospital where a wide variety and complex procedures are performed. For a patient, it would be in one’s best interest to seek out a fellowship trained spine surgeon.

Can you be paralyzed from spinal surgery?

Many patients have come to me stating that a surgeon told them that they would be paralyzed unless they had immediate surgery. This is almost never the case. A complete paralysis as in not being able to use arms and legs can only occur in complex cervical (neck) surgery. A paralysis in legs only can happen with surgery at the level of the thoracic spine (upper back) and not in the lumbar spine (lower back). Most spinal surgeries are commonly done in the lumbar spine. At that level, it is virtually impossible to become paralyzed, lose bowel or bladder control or become wheel chair bound. At worst, one may experience a numbness or weakness in a leg, an ankle or a foot.

Paralysis generally does not occur even if one has an extremely large disc herniation or very tight spinal canal. If one already has severe weakness, disturbance in bowel or bladder, then these symptoms may persist even despite surgery. Unless one is already partially paralyzed, almost all spinal surgery can be done electively, not emergently.

How do I know if I should have a spine surgery?

There are only a few true indications that require surgery. The only true indications are intractable pain and diminished quality of life or global neurological deterioration. Pain can be constant or intermittent yet severe. In order to avoid pain, some patients no longer pursue activities that they enjoy, such as traveling, golf, or even simply shopping in a mall. Working people find it hard to work their normal schedule. Sleep disturbance can be another reason. Only the patient can determine when the problem is severe enough.

A spine surgeon’s responsibility is to educate, reassure and inform the patient to make the right decision. Unless the patient is already having severe neurologic problems, such as weakness, bowel or bladder disturbance, surgery can be postponed indefinitely.

MRI's, CAT scans, and X-rays are only tools to identify problems. They are not the only criteria used to determine the surgical indication.

How successful is spine surgery?

Even though every spine surgeon strives to accomplish the best outcome, not every surgery is successful. Depending on the surgery, 85% to 90% success rate is common. Even in the best of hands, complications do occur. Rather than focusing on what can go wrong, emphasis should be on what is done to prevent complications and to manage them appropriately. This can only come from experience and knowledge in the field of spine surgery. Many patients have heard horror stories with poor outcomes. Although they can occur, they are infrequent. If complications were to occur all the time, then patients would never benefit from any spinal surgery.

In Florida, there are many elderly patients who have spinal problems that may require surgery. The outcome of the procedure depends not only on the surgery itself, but the overall medical condition of the patient and the medical treatment obtained before, during and after hospitalization.

About the author and the illustrator

Don K. Moore, M.D. is a graduate of the **University of Michigan Medical School**. He completed his orthopaedic surgical training at the **University of South Florida** and **University of Michigan**. Dr. Moore pursued subspecialty training in orthopaedic trauma at **Kantonsspital Chur** in Switzerland under the guidance of **Professor Thomas Rüdi**. He completed a fellowship in Spine Surgery at the **University of Wisconsin** in Madison.

Dr. Moore specializes in both surgical and non-surgical aspects of the **cervical** (neck), **thoracic** (upper back) and **lumbar** (lower back) spinal disorders. They include disc herniation, sciatica, spinal stenosis, arthritis, scoliosis, spinal cord and nerve problems, tumors, infections, and fractures. During his fellowship training, he has worked with the world-renown **Dr. Thomas Zdeblick** at the University of Wisconsin (**website = www.spine.surgery.wisc.edu**). Dr. Moore was involved in numerous clinical, biological and animal research projects. From this experience, Dr. Moore offers the advantages of the latest advancements in spinal surgery to this community.

Dr. Moore has presented before the prestigious **Cervical Spine Research Society** and **North American Spine Society** meetings for his own research and development in the field of spine disorders. He is also a member of the **North American Spine Society**. He is board certified in **American Board of Orthopaedic Surgery** and has taken this board examination as an orthopaedic surgeon who mainly performs spinal surgeries. Dr. Moore **only performs spine surgeries** in his elective practice. He

provides general orthopaedic care for emergency room patients and his established patients who request his services.

Author's Comment

From my interaction with patients, it became evident that the concept of spinal disorders and the treatments can often be complex and challenging to understand. There are several spinal disorders that are fairly common to majority of the patients. Although I explain these matters as best I can during each office visit, it is frequently too much information within a too little time for a patient. To make these explanations as simple as possible and for the patients to remember them after they leave my office, it was necessary to put these explanations into words. This 8th edition spine handout is written to help patients understand technical terms, concepts and treatment options for common degenerative disorders of the spine. Frequent updates are done in an effort to improve the content. Your input is always appreciated. I hope that you will find the information helpful in understanding the information discussed in the office as well in explaining it to others.

Don K. Moore, MD

The power of the Internet

It is simply amazing how the Internet has changed our lives. This is particularly true in information gathering. You too can put the power of Internet to use by logging onto helpful websites to enhance your knowledge regarding spinal disorders. Recommended sites are www.spine-health.com, www.spine.org (North American Spine Society), www.back.com, www.aaos.org (American Academy of Orthopaedic Surgeons), www.iscoliosis.com, www.necksurgery.com, and www.understandspinesurgery.com. These sites explain many of the concepts that are mentioned in this booklet to a greater detail. If you do not have an Internet access, then you should be able to go to a public library and access the Internet with some help from your librarian. If you are a hardcore scientific journal reader and know how to use a Medline search, www.ncbi.nlm.nih.gov/pubmed will help you. You can also link to this site through www.aaos.org. Finally, to look up your favorite Florida Orthopaedic Specialists physicians, log onto www.floridaorthospec.com.

For the latest treatment of the vertebral compression fracture, log onto www.kyphon.com

For the latest treatment of the vertebral compression fracture, log onto www.sfmt.com or www.kyphon.com/sfmt/press/patient.html