

AN EBOOK BY
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ACHIEVE
BRAIN & SPINE

7 MYTHS OF SPINE SURGERY



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FRONT COVER

In Greek Mythology, Atlas was a Titan condemned to hold up the Earth/Heavens for all eternity. This visualization led to naming the first cervical vertebrae the Atlas, as it holds up the skull/brain above it.

Introduction

The medical world can often seem overwhelming, and perhaps no aspect more so than the realm of neurological surgery. When confronted with disorders of the brain and spine, stakes are high. An individual's entire quality of life may rely on a few critical decisions in treatment strategy. However, after seeking advice from the Internet, friends, and even healthcare professionals, we may still be left with fear and confusion regarding, "What is the RIGHT thing to do?"

In this eBook, we attempt to dispel common myths associated with spine surgery in hopes of bringing some clarity to your options and alleviate some anxiety associated with your decision.

Our team of Neurosurgical Experts are ready to help you
Achieve the best outcomes possible.

MYTH #1:

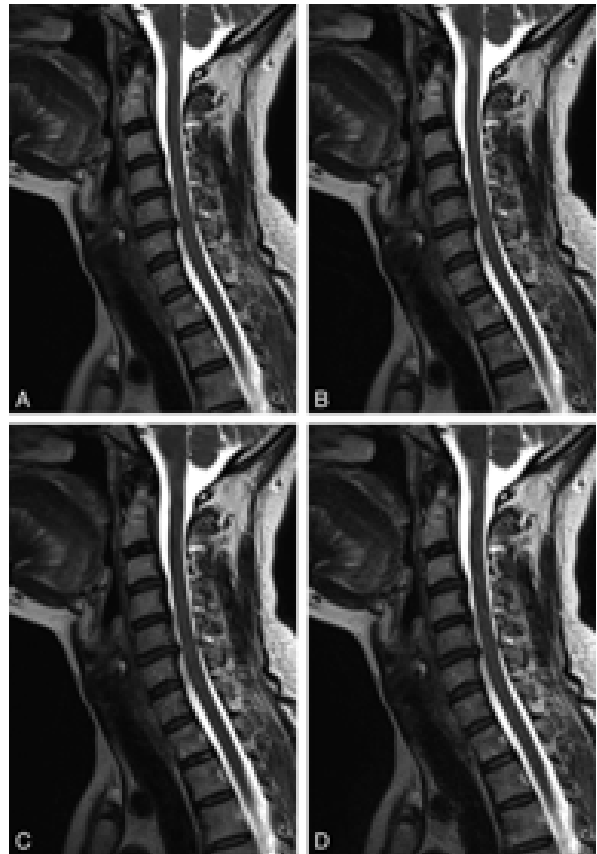
I am going to be paralyzed unless surgery is done immediately.

This is most often in the setting of a person who has neck problems where a cervical spine disk is pushing against the spinal cord.

The short answer is that becoming paralyzed is an extremely unlikely event as most spinal conditions have been slowly progressive over years.

In order to understand this further, we need to know a little about the anatomy. Normally, the brain controls our motor and sensory function in the arms and legs by sending the signals through the spinal cord. There are nerves that leave the spine at each level (there are seven neck vertebrae numbered C1-7 and disks from C2 to C7).

Normally, there is no pressure on the spinal cord or nerves. When people have a pinched nerve, they get symptoms referable to that nerve's function or distribution. For instance, the C6 nerve being damaged classically will affect the bicep strength and also the hand sensation in the thumb and index finger. This is called cervical radiculopathy when a nerve is compressed from foraminal stenosis or a disk herniation. The foramen is the channel where the nerve exits and stenosis is when there is narrowing of a channel. Unless someone has loss of strength that is sudden or is significantly impairing their function, disk herniations causing isolated nerve



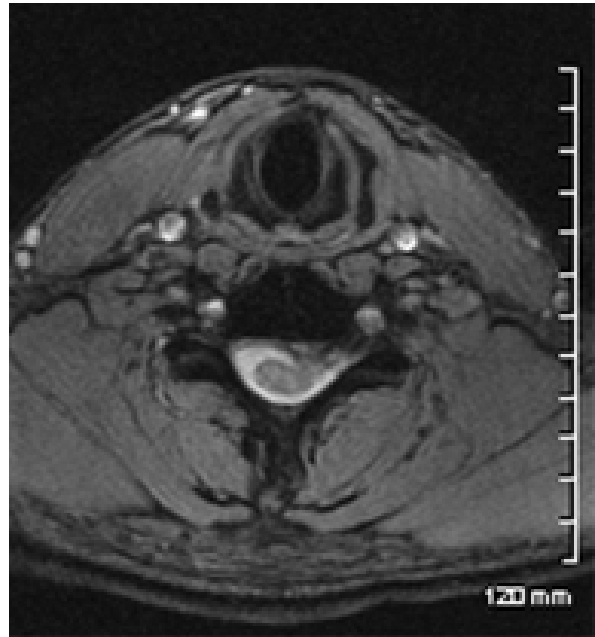
compression will often resolve over time and in about 80% of cases, the patient will not need surgery. Treatments are often directed to stretching, therapy, injections of steroids and consideration for surgery if there is no response to these more conservative treatment.

Should the disk herniation or spinal canal stenosis be damaging the spinal cord, there is

concern that the patient could have permanent loss of function below the level of compression. This would be true in the setting of someone having spinal cord compression and swelling of the spinal cord. Also, there would be concern if someone had a fall or an accident and already had compression of the spinal canal. The whiplash movement could cause a sudden worsening and damage to their function. In these situations, the surgeon would diagnose the patient with cervical myelopathy and stenosis and recommend surgery more urgently or immediately.

A thorough evaluation and consultation with your Neurosurgeon would answer the question of whether you will be paralyzed if you do not have surgery. However, this is often said and seldom true.

At Achieve Brain and Spine, Dr. Deven Khosla and Dr. Daniel T. Nagasawa understand that the decision for surgery is serious and will recommend this option only when necessary.



MYTH #2:

I have bulging discs in my neck or low back and need fusion surgery.

“Bulging” or “herniated” discs are relatively common occurrences. A recent analysis of the literature found that nearly 30% of people in their 20s have some degree of disc protrusion, increasing to 43% of those who are 80 years of age. However, none of these individuals had any symptoms. Similarly, nearly 40% of people in their 20s have some evidence of disc degeneration, increasing to 96% of those in their 80s.^[1]

Just because you have “abnormal” MRI findings, it does not necessarily mean that you need surgery. The decision to pursue any surgical intervention for your spine should be made in careful collaboration with your surgeon after detailed discussions regarding your symptoms, physical exam, imaging findings, and goals for your overall quality of life. However, for those who have significant symptoms severely affecting their daily activities that correspond to an associated disc herniation, surgery may be necessary when conservative measures have been exhausted.

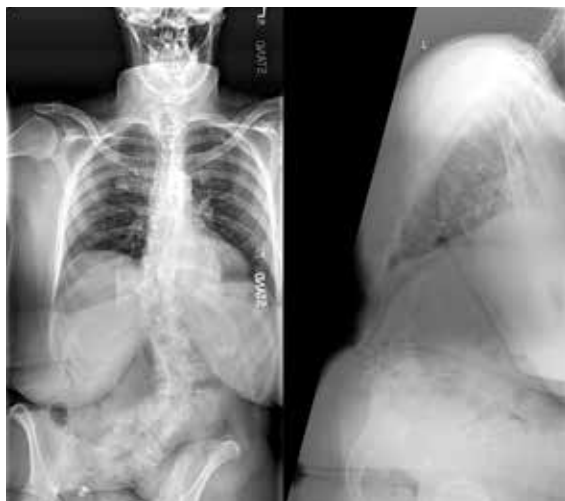
It is estimated that approximately 1-3% of the population are symptomatic from their lumbar (low back) disc herniation, with the greatest prevalence being among males aged 30-50. Those at increased risk include individuals who smoke, engage in weight-bearing sports, or are involved in activities with repeated lifting.^[2,3]



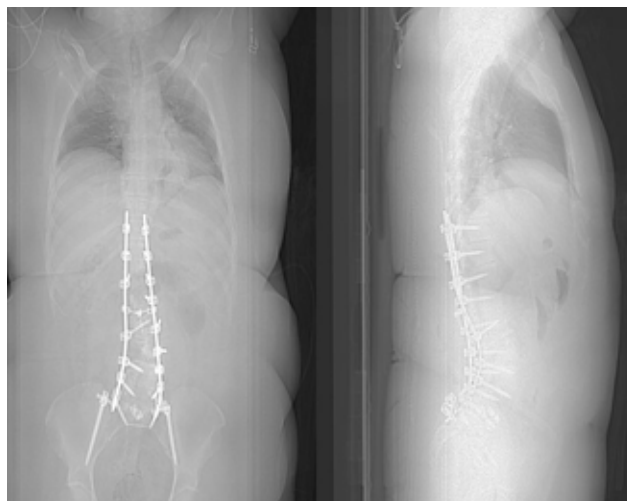
Despite overall rapidly increasing rates of spinal fusions, most cases of lumbar disc herniations can be treated with microdiscectomies alone (WITHOUT FUSION) in order to release the pressure on the nerves and relieve radicular (shooting leg) pain. During this procedure, a small portion of the bone is drilled and only the loose herniated disc is removed, thus reducing the compression on the affected nerve. A fusion procedure is typically reserved for deformity correction (scoliosis) or situations in which the



*L4/5 LUMBAR DISC HERNIATION



*SCOLIOSIS/DEFORMITY CORRECTION

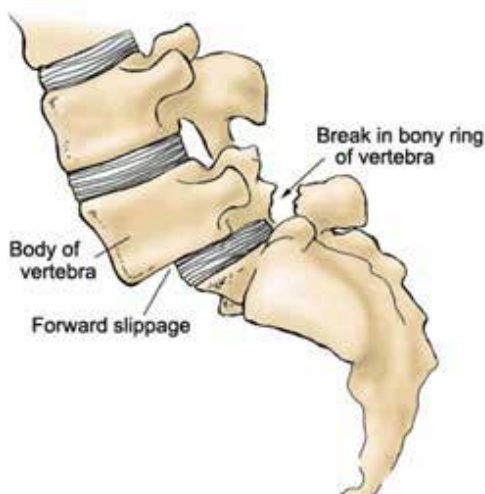


spine is determined to be mechanically “unstable,” requiring additional intervention to fix the improper alignment or abnormal movement.^[4]

For those who have a herniated disc in the cervical spine (neck) and have significant symptoms associated with it, a fusion MAY be necessary depending upon the patient presentation and anatomy. The most common procedures to address a herniated disc of the cervical spine include: Anterior Cervical Discectomy and Fusion (ACDF; removing the disc herniation from the front of the neck and fusing the level above/below to stabilize the spine), Artificial Disc Re-

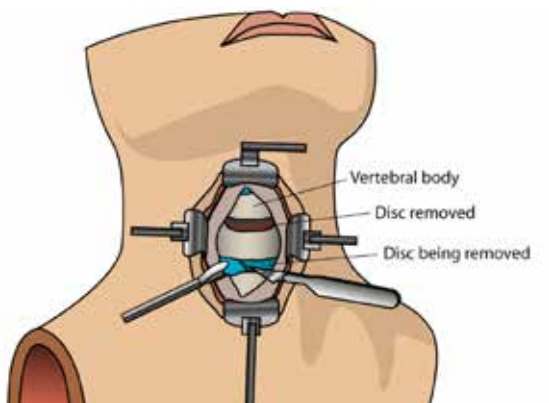
placement (ADR; removing the disc herniation from the front of the neck and replacing it with an artificial disc- NO FUSION),

Posterior Cervical Laminectomy (decompressing the spine from the back of the neck by drilling off some bone to release the pressure on the spinal cord/ nerves – NO FUSION), or Posterior Cervical Laminectomy with Fusion (same as the laminectomy, but adding a fusion of two or more levels to stabilize the spine). The decision on which procedure is right for you depends on a number of factors, and should be made after careful discussion with your surgeon.

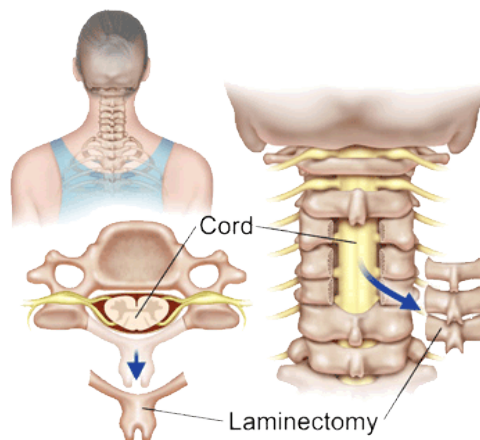


*FUSION FOR INSTABILITY/ SPONDYLOLISTHESIS





*ANTERIOR CERVICAL APPROACH



*POSTERIOR CERVICAL LAMINECTOMY



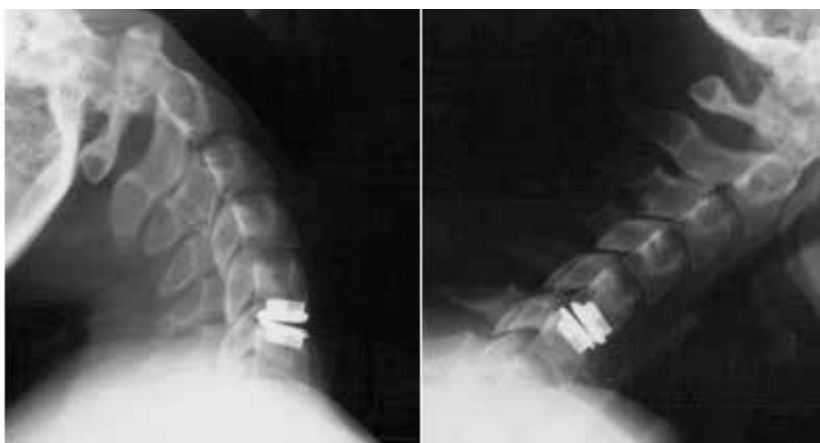
*ACDF



*POSTERIOR CERVICAL LAMINECTOMY/FUSION



*ADR



MYTH #3:

I will never be able to get back
to doing things I love.

When someone has a disease that strikes at the heart of their quality of life and even sitting, bending, standing and walking are tasks that become challenging or impossible, it can be life altering! As physicians, we do see how this can lead to feelings of depression and affect relationships at home and work. Inability to work creates financial stressors on people and we understand this vicious cycle needs to be broken.

For those who are athletes, often their identity and daily schedules revolve around their active lifestyle. Getting back to their sport is important and with the right guidance, it is the norm rather than the exception.

With or without surgery, the ability to help you get back to doing things you love to do and need to do exists. Recent advances in the field of Neurosurgery have been staggering. From minimally invasive techniques to correction of scoliosis to removal of cancerous tumors of the spine, the technology available has revolutionized how we do surgery. Techniques like artificial disk replacement allow for maintenance of movement where in the past the only option was fusion.

https://www.achievebrainandspine.com/spinal-treatment/total-disc-replacement/#vm_A_57a013f4



From the advanced imaging we use to visualize the nervous system and how it relates to the bony anatomy, Neurosurgeons can develop a plan to help the patient. We have a unique understanding of the nervous system and correlate the neurological symptoms and examination findings with the imaging prior to making any recommendations. Utilization of a team approach with physical therapists, pain and rehabilitation specialists, and collaboration with regenerative medicine providers is employed to maximize the chance of avoiding surgery.

At Achieve Brain and Spine, we start by listening to the patient and understanding how their life has changed and help patients achieve maximal recovery, often regaining neurological function that would have been not possible in years past.

MYTH #4:

I am too old for surgery or I am too young for surgery.

While no one typically wants to have surgery, there comes a time when a threshold is surpassed and quality of life is simply too unbearable to continue without it. Yet how should age play a factor in your decision?

In the United States, there are more than 45 million people over the age of 65. By 2030, 20% of our population (72 million) is anticipated to be over 65 years old.^[5] A recent analysis from England found that nearly 23% of their population aged 75 years or older were undergoing surgical procedures, a 6% increase from 15 years prior.^[6] As our global population ages, so too will their need for surgical interventions to be conducted in a safe manner. However, age itself is an inadequate measurement of a patient's health or ability to tolerate a surgical procedure; not all patients with the same age have the same risks. Instead, "frailty" has been suggested as a better predictor for post-operative complications.

One model describes frailty in terms of body mass, strength, endurance, balance, walking performance, and activity level. Another assessment describes an accumulation of deficits: medical issues, physical/cognitive impairments, psychological and social risk factors, and common geriatric syndromes.^[7]

Regardless of your age, a critical aspect of your decision to proceed with surgery should be adequate preoperative work-up and optimization of any medical conditions you may have. This will allow you to gain an accurate understanding of your peri-operative risks associated with the procedure (e.g., heart attack, stroke, blood clots, etc.) and make a truly informed decision as to whether or not you would like to proceed. For patients with a strong surgical indication who are young and healthy, this may be the best time to have surgery, as you may never be more able to tolerate an operation than the present.

MYTH #5:

Spine surgery is never successful.

Sometimes surgery is not successful and as with any surgery, complications are possible. When that happens, people have issues with prolonged recovery and sometimes have trouble with healing properly.

More importantly, expectations from surgery are important to discuss with the doctor. Physicians and patients have to spend time with one another and discuss all aspects of their recovery as well as risks from surgery.

If expectations of the patient are not realistic or not discussed with the surgeon, then they will often feel that surgery was not successful. Communication is so important in getting this right and cannot be over emphasized.

With realistic expectations and a shared decision-making model that includes the patient, family and physician, there is every reason to expect a successful surgery.

Patient reviews and stories highlight our ability to partner in your care and guide you through this challenging time.

Please visit this page for these stories:

<https://www.achievebrainandspine.com/about/patient-stories/>

MYTH #6:

Surgery is my only option.



*EPIDURAL STEROID INJECTIONS

SURGERY IS NEVER THE ONLY OPTION!

While there are many circumstances where surgery can be the best option, patients should never be pressured or obligated to feel as if they have no choice on how their health is managed. Know that you ALWAYS have options, with conservative management at one end of the spectrum and potentially surgery at the other. Examples of conservative management may include medications (opiates, anti-inflammatory medications, oral steroids, muscle relaxants, “nerve medications,” etc.), physical therapy, acupuncture, chiropractic interventions, yoga, pilates, aquatherapy, injections (epidural, facet, trigger-point, sacroiliac joint, etc.), bracing, radiofrequency ablation, and many others.^[8]

For those with a lumbar (low back) disc herniation and associated radicular (shooting

leg) pain, the vast majority (70-90%) are able to improve within a year seeking conservative management alone. This alleviation of symptoms is a result of reabsorption/regression of the herniated disc with time. Trials suggest that regardless of treatment strategy (surgery or conservative), most patients improve; although, surgical patients simply improve faster.^[2, 8, 9] However, for those that have exhausted conservative management and are still in severe pain affecting their quality of life, surgery may be a stronger consideration. Other strong indications for more urgent surgery would be new onset weakness, bowel or bladder incontinence, or peri-anal/genital numbness. Yet no matter what the situation, know that you, the patient, always have options.

MYTH #7:

I will be disabled from spine surgery
and will be in bed for months recovering.

This could not be further from the truth. We usually encourage early mobilization on the same day after surgery. Advances implemented such as the ERAS (Enhanced Recover After Surgery) protocol help patients spend minimal time in the hospital.

In fact, some surgeries are done in an outpatient setting and patients can expect to resume a relatively normal lifestyle within 2-8 weeks depending on the type of surgery and the demands on their bodies from work. Individual factors are also important and the patient's weight, tobacco/nicotine use, and medical history (especially diabetes and hypertension) are variables that can affect the speed of recovery and length of stay in the hospital.

We want to achieve the best possible outcome from your particular surgery and with our extensive experience, scientific knowledge, and access to the latest technology, it is our expectation that you will be independent and feeling the positive effects of surgery.

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Conclusion

We hope that you were able to gain some valuable insight regarding spine disorders and common management strategies to treat them. We understand that spine disease can be an extremely painful, debilitating condition requiring urgent attention. As such, we are available to see you as quickly as possible to help guide you along your journey to recovery. We promise to treat each patient with dignity and respect, to educate you about the disease process and progression, and listen to your story so that together, we can Achieve the best quality of life possible for you via conservative or surgical interventions.



Deven Khosla, MD, Deven Khosla, MD, Board Certified Neurosurgeon has an extraordinary level of experience in spinal surgery and neurosurgery. He is the founder of Achieve Brain and Spine and has been taking care of patients since 2001. He is part of the local community is committed to help people of all walks of life in an inclusive, welcoming environment. From minimally invasive procedures such as artificial disk replacement to complex spine deformity corrections to brain tumor surgery, Dr. Khosla's care for his patients is his primary focus.



Daniel T. Nagasawa, MD, Fellowship Trained Spinal Neurosurgeon who did his residency training at world-renowned UCLA, and completed specialization fellowship in Advanced Techniques for Complex Spinal Surgery at Kaiser LAMC. He credits love for his family as the core of his strength, and treats every patient the same as he would any of them. Dr. Nagasawa is the co-founder of Achieve Brain & Spine.

Schedule a Consultation

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INSURANCE & FINANCING All insurance policies are accepted at Achieve Brain & Spine Santa Monica, Culver City and Los Angeles, and we offer our patients financing options. Please call today to learn more about our advanced, cutting-edge treatments, and to arrange an in-person consultation. Our friendly, helpful staff can assist you with questions about insurance or financing.



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