

My tribute to Dr. Bailey From author of SYT™

James F Jaeger

My [X-ray shows](#) a 7 mil. displacement of the lower L4 - L5 vertebra column.

I had to quit HS football when this condition was first diagnosed. It also gave me a physical deferment during Vietnam era 1970. Later, when my L4 - L5 vertebra shifted further, it caused such severe sciatic pain down left leg day and night, that I elected to have minor back-decompression surgery. These nerves called the **sciatic nerves** are the brain's main connection to use + control of our lower torso and legs.

In 1997 this neurosurgeon Dr. Greg Bailey, performed the basic procedure called **micro-decompression** to remove bone spurs and vertebra materials rubbing against the nerves coming out of my spinal cord in the lower **L4-L5** vertebra back region.

For over 15 years now, I have been able to play golf, snow ski, etc. - **JF Jaeger**

Gregory J. Bailey - M.D., Ph.D., F.A.C.S.



<http://www.mbri.net>
phone: 314.543.5999
toll free: 888.805.3930
email: mbri@mbri.net

Specialty: Neurosurgery

Date & Place of Birth:

December 31, 1948
Salt Lake City, UT

Medical School:

St. George University - 1982

Residency:

Saint Louis Univ. Hospitals
Neurological Surgery - 1989

Fellowship:

University of Zurich
Zurich, Switzerland
Faculty Neurosurgeon - 1989

Dr. Gregory J. Bailey received his undergraduate degree from the Univ. of Utah. He received medical training at the University of Zurich and St. George University, and then completed internship and neurosurgical-microsurgical residency at Saint Louis MO University Hospitals while concurrently completing Ph.D. in Anatomy. During his research period **he developed the world's first advanced 3-dimensional video system for microsurgical imaging.**

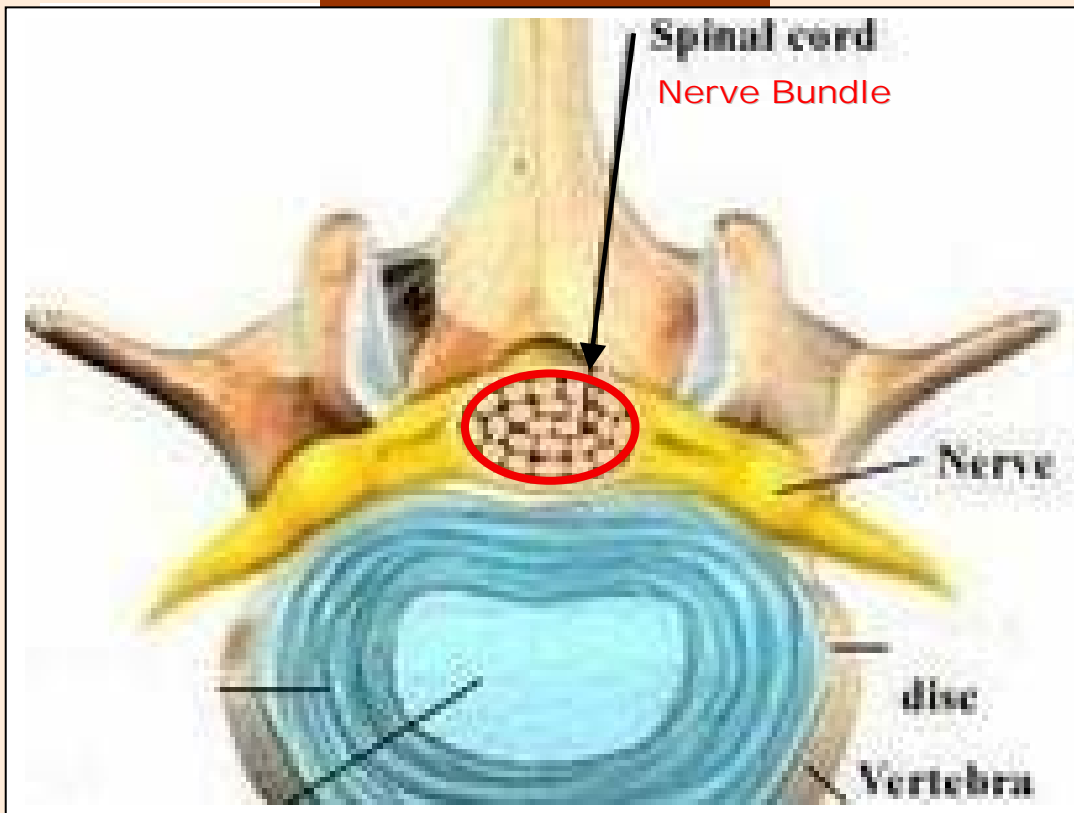
Dr. Greg Bailey has been director and lecturer at numerous microsurgical courses. He has published articles on **microsurgery** and completed the first 3-dimensional atlas on **micro-neurosurgery**. He is Board Certified by the American Board of Neurological Surgery and is a Fellow of the American College of Surgeons. His special interests include spinal surgery, skull base and neuro-vascular surgery. He is father of ten children and active in his church as a minister.

Below: What I learned about Bulging Disc and Herniated Disc

The following illustrations provide a simple visual presentation of a more common human back disc disorder called a **bulging disk** or **herniated disk**. The inter-vertebral disks are cartilage disks that separate and cushion the bone (vertebra etc). These structures protect the spinal column. A **herniated disc** occurs when the disc cartilage material is squeezed and forced out thru the disc membrane wall it dies – and occupies spinal cord cavity space. Most ruptured disks occur in the lower back, but the bones of the upper back are also vulnerable. Depending on severity, doctors may prescribe painkillers, bed rest, and sometimes surgery to treat herniated disks.

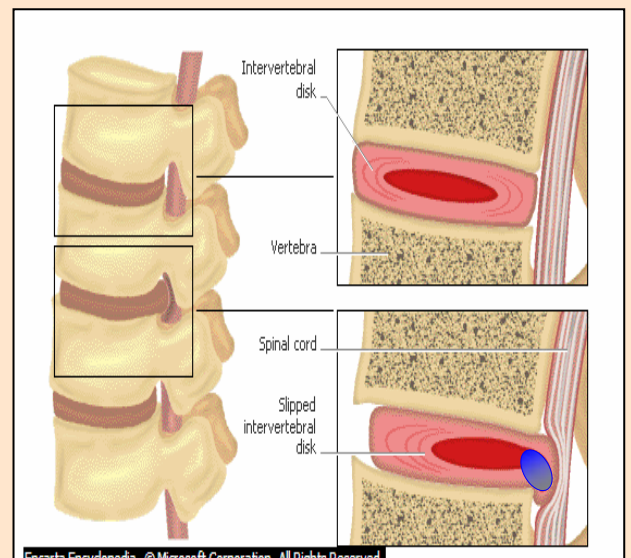
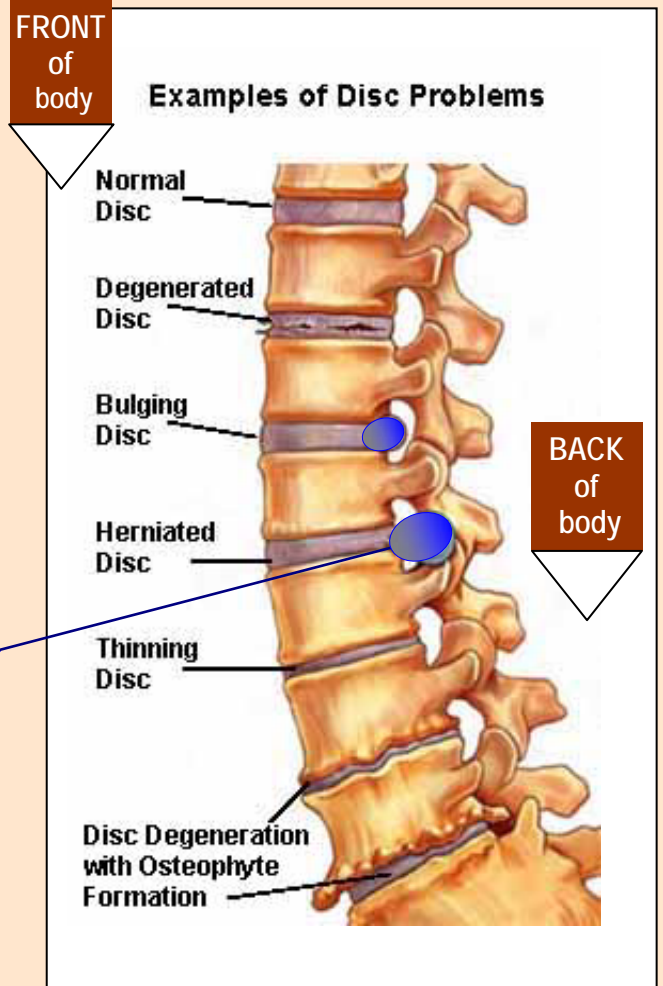
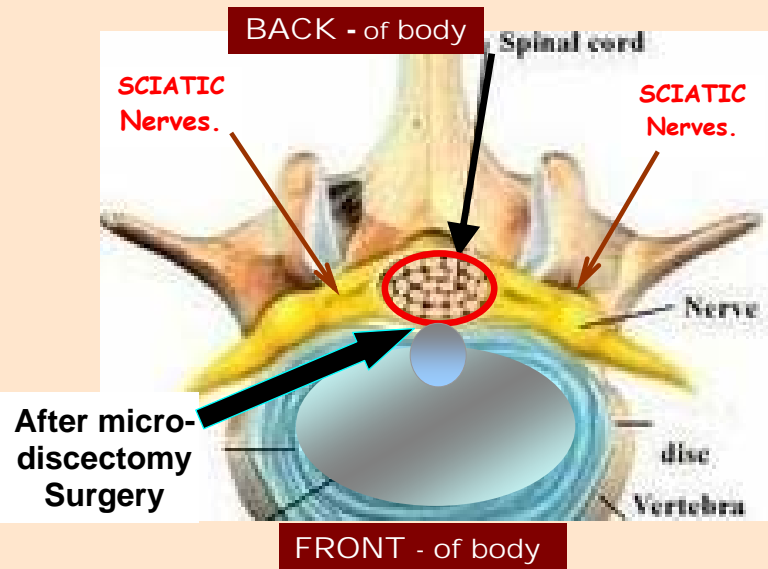
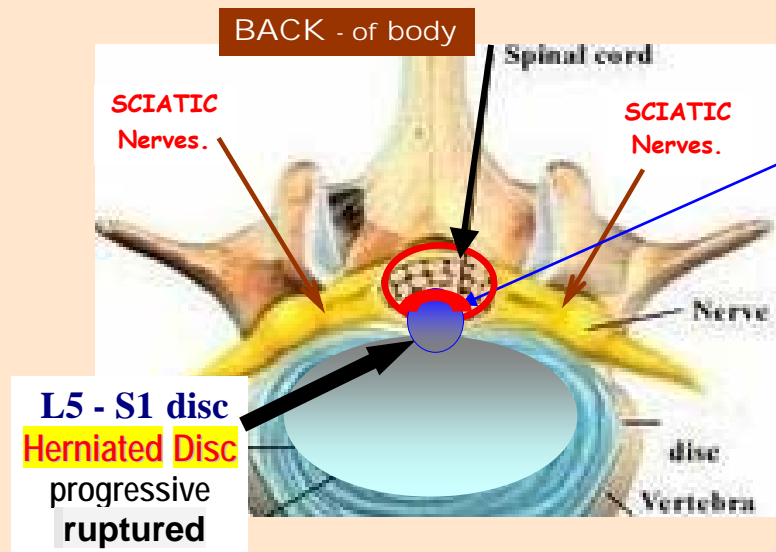
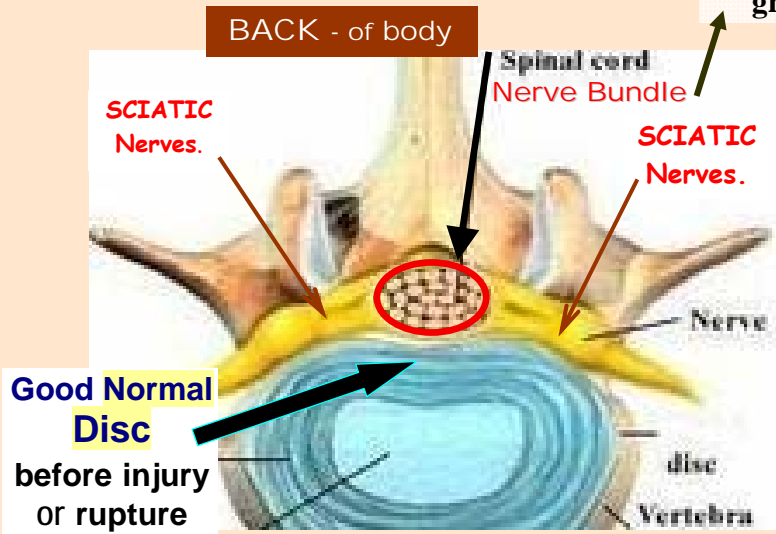


BACK SIDE - of body



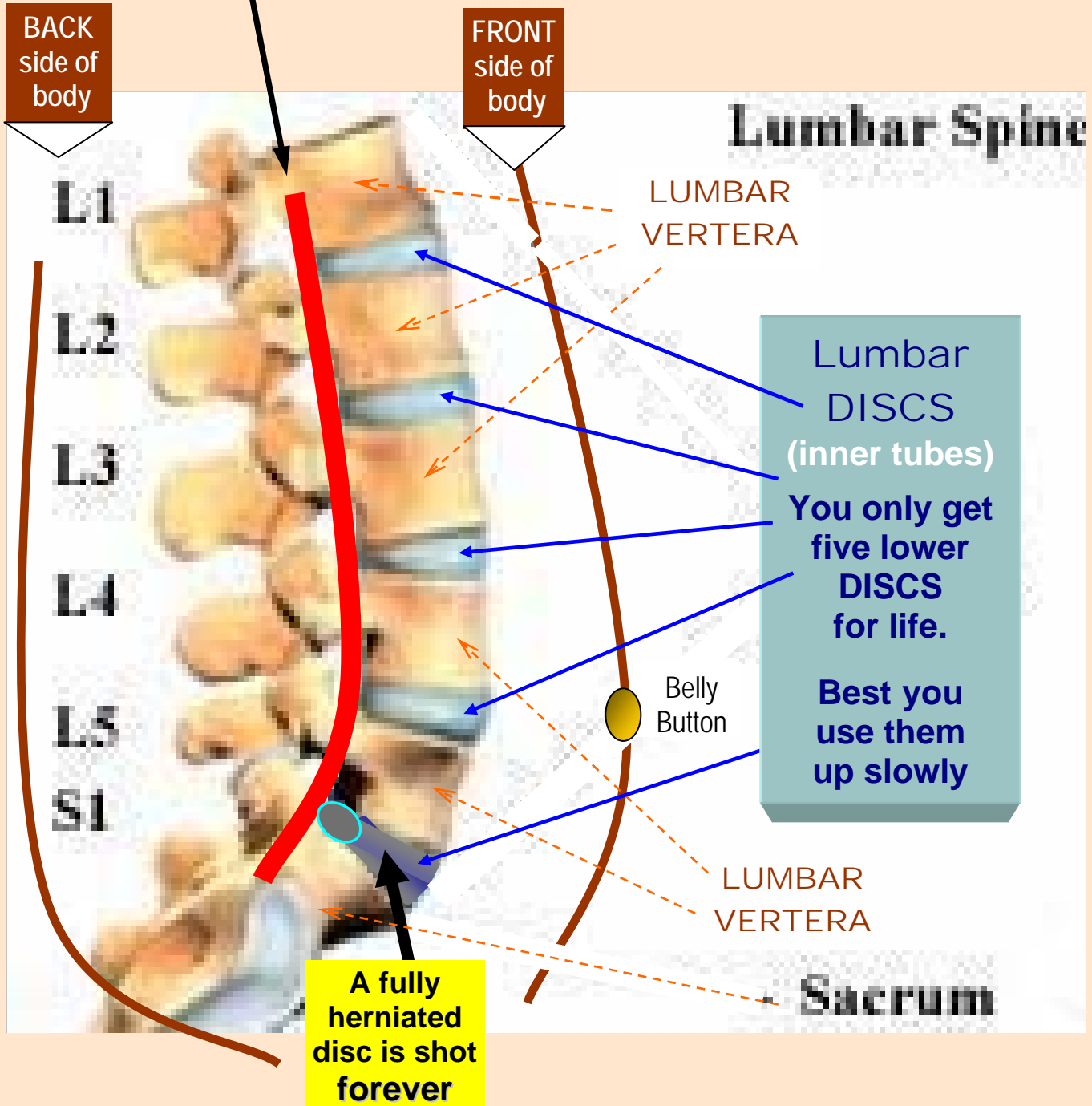
FRONT SIDE - of body

Nerves going to your legs, feet, butt, groin, bladder, bowels, genitals, etc.

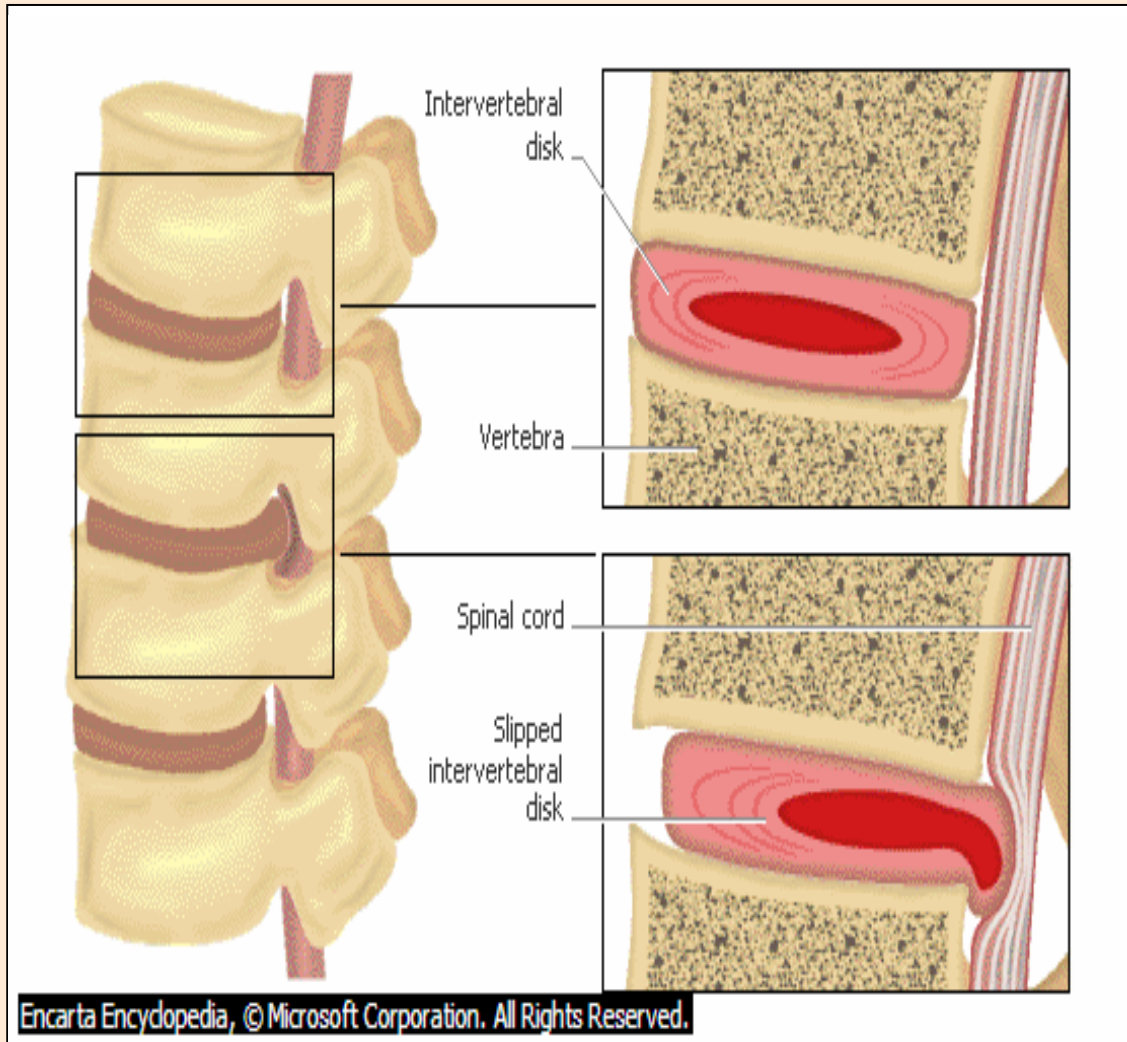


Spinal cord

You only get **one spinal cord**. This CORD carries all the signals between your brain and all body regions **neck, shoulders, arms, torso, hips, legs, feet, bladder, bowel control, etc...**



BACK Right-Side View FRONT



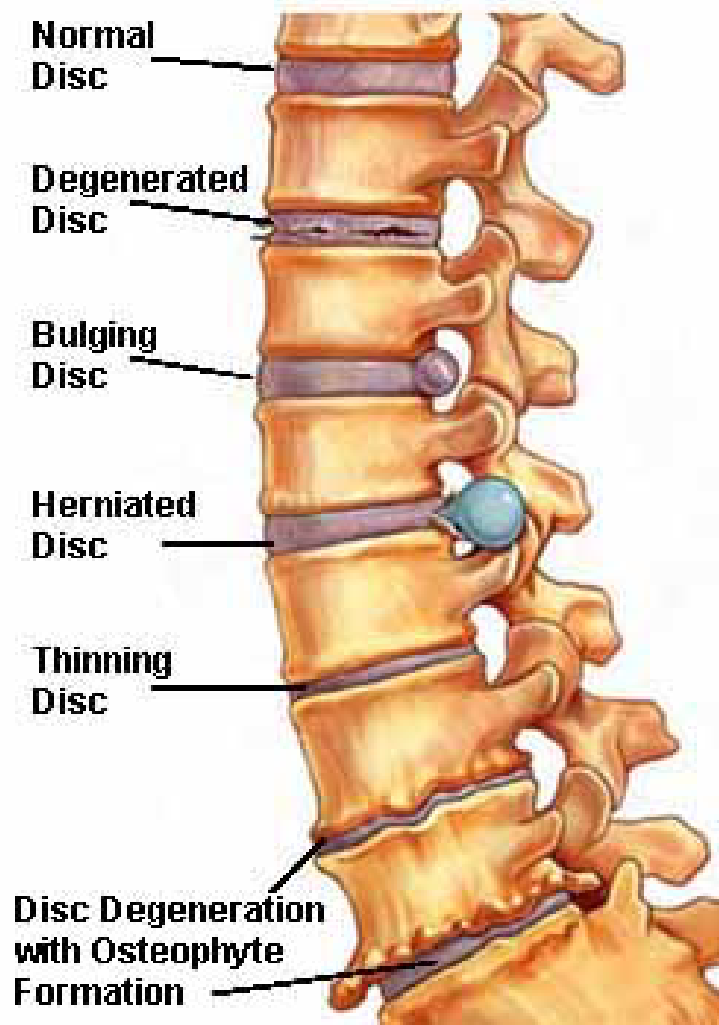
Fri, 28 Jul 2006 15:10:56 -0700 (PDT)

"James Jaeger" <jamesfjaeger@yahoo.com>

Kevin Jaeger spinal surgery progress + Dad's illustrated notes
mbri@mbri.net

Patient doing fine. Surgery was at 2:45 PM Released last night, walked 1/4 mile block this AM, 1/2 block late AM, more later today. Doctor's nurse told me he had one of the most significant herniated discs she has ever seen in a young healthy person ... obviously has high tolerance for pain. Maybe, it is a very good thing we did not wait too long.... after the MRI results came back.

Examples of Disc Problems



There are many types of back and neck disorders that affect the majority of the population in the United States. Injury, aging, general health, and lifestyle may influence the development of some conditions. Most spinal disorders are known to result from soft tissue injury, structural injury, and degenerative, or congenital conditions. Disorders Affecting Intervertebral Discs Herniated and Bulging Discs In lay terms, a slipped disc can mean a ruptured disc or [herniated disc](#) (her-knee-ate-ed). Although the term slipped disc is used, discs do not slip. Each intervertebral disc is sandwiched between two vertebrae supported by a system of ligaments that help hold the spinal package together. Degenerative Disorders

Disc disorders are contained or non-contained. A bulging disc is an example of a contained disc disorder. A Bulging disc has not broken open; the nucleus pulposus (new-klee-us pul-poe-sis) remains contained within the annulus fibrosus (an-you-lus fye-bro-sis). A bulging disc could be compared to a volcano prior to eruption and may be a precursor to herniation. The disc may protrude into the spinal canal without breaking open. The gel-like interior (nucleus pulposus) does not leak out. The disc remains intact except a small bubble pops out attached to the disc. A non-contained disc is one that has either partially or completely broken open; a herniated or ruptured disc. To illustrate imagine a tube (annulus fibrosus) of toothpaste placed under pressure.

The pressure causes the toothpaste within the tube to move wherever it can. If any part of the tube is weak toothpaste may leak out. When a disc herniates the contents may spread out to the spinal cord and nerves. The disc material has little space to go ---into the area occupied by the spinal canal and nerve roots. Returning to the leaky tube of toothpaste, the disc's gel-like nucleus contains a chemical that irritates the nerves causing them to swell. After the chemical agent has done its job, the remnants of the chemical remain and continue to press on the irritated and swollen nerves. To complicate matters, sometimes fragments from the annulus (tire-like outer disc wall) break away from the parent disc and drift into the spinal canal. **These free fragments may travel in the spinal canal.** Depending on the type of injury and the condition of the discs, more than one disc may herniate, rupture, or bulge. Sometimes injury causes a combination of disc disorders. This article is an excerpt from a book titled Save Your Aching Back and Neck, A Patient's Guide (Second Edition,

[Stewart G. Eidelson, M.D.](#) SpineUniverse Founder, Orthopaedic Surgeon Asst. Professor -UNIV. of Miami at FAU Orthopaedic Surgery Associates Boca Raton, FL, USA

HOW ABOUT LASER TREATMENT FOR A HERNIATED OR BULGING DISC ?

The so called laser surgery produces a lot of heat which damages the nerve.

The procedure described is to heat up the disc within the disc space and hope that the extruded disc material moves back away from the canal. The more material in the canal, the less effective this procedure is and it is also not a stereo view through the endoscope.

Dr. Gregory Bailey

Approximately 90% of disc herniations will occur at L4- L5 (lumbar segments 4 and 5) or L5- S1 (lumbar segment 5 and sacral segment 1), which causes pain in the L5 nerve or S1 nerve, respectively. A herniated disc pressing on the nerves in the spine can also cause weakness of the leg. The group of muscles that are weak depends on which nerve is being impinged. A herniated disc in the lumbar region may also cause back pain, although back pain alone (without leg pain) can have many causes other than a herniated disc. The pain from a herniated disc is usually worse when you're active and gets better when you're resting. Coughing, sneezing, sitting, driving and bending forward may make the pain worse. The pain gets worse when you make these movements because they put more pressure on the nerve.

The spine is made up of a series of connected bones called "vertebrae". The disc is a combination of strong connective tissues that hold one vertebra to the next, and acts as a cushion between the vertebrae. The disc is made of a tough outer layer called the "annulus fibrosus" and a gel-like center called the "nucleus pulposus." As you get older, the center of the disc may start to lose water content, making the disc less effective as a cushion. This may cause a displacement of the disc's center (called a herniated disc or ruptured disc) through a crack in the outer layer. This can occur in the neck (cervical region) or the back (lumbar region) and the mid back (thoracic spine).

Abstract:

This study investigated electromyographic (EMG) activity as a marker of nerve root irritation

during two different surgical procedures for lumbar disc herniation. Mechanically elicited EMG activity was recorded during the dynamic stages of surgery in muscle groups innervated by lumbar nerve roots. Confirmation of surgical activity was correlated with activity of the electromyogram. Fifteen patients with lumbar disc herniations were treated via an **endoscopic medial approach**, and 15 patients via the **open microscopic surgical technique**.

Results indicated that the endoscopic technique was superior to the open surgical technique produced less irritation of the nerve root. Significantly less mechanically elicited activity was recorded during both the approach and the root mobilization. The study showed that microendoscopic discectomy allows a smaller incision and less tissue trauma with comparable visualization of the nerve structures than does open surgery.

Physical Therapy

Treatment for chronic spinal pain offered by physical therapists is individually tailored and based upon a multifaceted subjective and physical evaluation. Short- and long-term goals are incorporated in designing a plan of care. Among other things, treatment may include: Patient education about symptom management through specific exercise techniques and principles, postural alignment, proper body mechanics, breath control and awareness, and interpretation of symptom response to exercise and activity. Guidance in performing and progressing exercise and activity, geared toward an independent home program. Various manual therapy approaches, ultrasound, electrical stimulation, heat, cryotherapy and others, for facilitating active symptom management.

Yoga “Hatha” Yoga is the most common form of yoga practiced in the West. Yoga works to integrate the mind, body and spirit, incorporating ethical disciplines, physical postures, gestures, breathing exercises and meditation. The benefits of Hatha yoga include:

Relaxation. Yoga releases muscle tension, diminishes sympathetic nervous system activity and calms the emotions.

Concentration. Practice of focused movement, body and breath awareness and balancing postures promotes attention and concentration.

Toning. Holding yoga postures involves co-contraction of muscles, promoting joint stability, and enhances the function of internal organs.

Healing. Yoga increases circulation to the glands, organs and endocrine system to stimulate metabolism, healing and elimination of toxins from the body.

Flexibility. Yoga postures incorporate active stretching to enhance the length of muscle and to increase circulation to the tendons.

Energy. Slow, controlled movements with deep breathing increase energy while relaxing the body and counteracting fatigue. Positive thinking and behavior. Practicing yogic philosophies and exercises facilitates an internal locus of control, positively and productively directing one's thoughts and energies.

Pilates Developed more than 90 years ago by Joseph H. Pilates, this unique system of stretching and strengthening exercises called matwork (exercises done on the floor). Pilates also involves exercises performed using specialized equipment that both supports and challenges various movements. Benefits of Pilates include:

Mind/body connection. Pilates unites body and mind with focused movement and breathing, as well as body awareness, during exercises. Visual imagery. Imagery is used to engage mind and body, and to facilitate balanced, coordinated muscle reaction.

Posture and body mechanics. Method exercises encourage good posture and body mechanics in daily function.

Core stability. Exercises are designed to activate deep muscles in the body, creating a strong core (“the powerhouse”) that aids efficient functional movement.

Flexibility. Visualization facilitates active inhibition of muscles being elongated during exercises.

Reduction of stress and fatigue. Focused breathing and efficiency of movement and alignment diminish sympathetic overdrive and improve circulation for increased oxygenation to tissues.

Self-determination. Understanding and following Pilates method philosophy leads to a sense of achievement and control over one's physical and mental well-being.

Music Therapy This nonverbal means of expression helps decrease anxiety and tension and reduce pain.

Art Therapy Creating art and reflecting on the final product and process increases awareness of self and others, helps people cope with symptoms, stress and traumatic experiences, and enhances cognitive abilities. Art therapy offers:

Self discovery - art therapy triggers an emotional release.

Personal fulfillment - creating art builds self-confidence.

- Empowerment - the process allows people to gain some sense of control.
- Relaxation and stress relief, particularly when combined with guided imagery.
- Symptom relief and physical rehabilitation –

patients cope with pain through the artistic expression of emotions.

Keywords:

Microendoscopic discectomy, Intraoperative EMG, Lumbar disc herniation

What is a Herniated Disc?

Herniate means to bulge or stick out. Discs are defined as the soft cushions between the bones of the spine. A [herniated disc](#) is a displaced fragment of nucleus that is pushed through a tear in the outer layer of the disc (annulus). Often when a disc is herniated, it is in the early stages of degeneration or in a declining phase from its normal state. Herniated discs are common in the lumbar spine, a part of the backbone that is between the bottom of the ribs and hips.

What Causes it?

Activity, stress or mechanical problems often cause herniated discs. A [herniated disc](#) may even be caused by a single excessive strain. The compression and sharp pain a person feels down the leg because of the slipped disk, is called [sciatica](#).

Treatment Options

Initial treatment for a [herniated disc](#) is conservative or non-operative, and usually involves resting the lower back area, maintaining a comfortable posture and allowing only minimal activity for a few days or up to several weeks. This resting period results in relief from any spinal nerve inflammation. Non-steroidal and anti-inflammatory medication such as Motrin, Advil or Nuprin, may be offered to patients. More activity is often permissible after the pain medication is taken for at least two days. In addition, physical therapy may be beneficial under the guidance of a physical therapist. Physical therapy remedies may include traction, ultrasound and electrical muscle stimulation. A main goal of treatment is to decrease the amount of muscle spasm a patient is experiencing. When pain is severe, difficult to cure through conservative treatment and involves nerve damage, a neurological surgeon may be called in to remove the disc material using procedures such as a discectomy (surgical removal of the disc) or laminotomy (surgical division of a vertebral lamina).

When the disc is removed, the pressure on the nerve should disappear, which may relieve pain and permanently restore any lost muscle function. After a laminotomy or discectomy, 80 to 85 percent of patients do extremely well and are able to return to normal everyday activities in about six weeks time. However, the majority of people who suffer from disc herniation, (90 percent), do not require surgical treatment.

Who Does it Affect? People who are 30 to 40 years of age are most commonly affected by [herniated discs](#). Research shows that a predisposition for slipped discs may occur in families, often affecting several members.

Recovery Period

Most people suffering from a [herniated disc](#) can recover in about four weeks, or sometimes longer. If patients experience numbness or pain after four to six weeks, it makes sense to consult their doctor. Surgery may be needed to relieve the pain. The average length of hospital stay was one night.

CONCLUSIONS Endoscopic transpedicular thoracic discectomy was found to be a minimally invasive and effective surgical treatment.

SYT™ GOLF
Author's Back X-ray

[Click here for X-ray](#)

Rotate for power

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around the imaginary

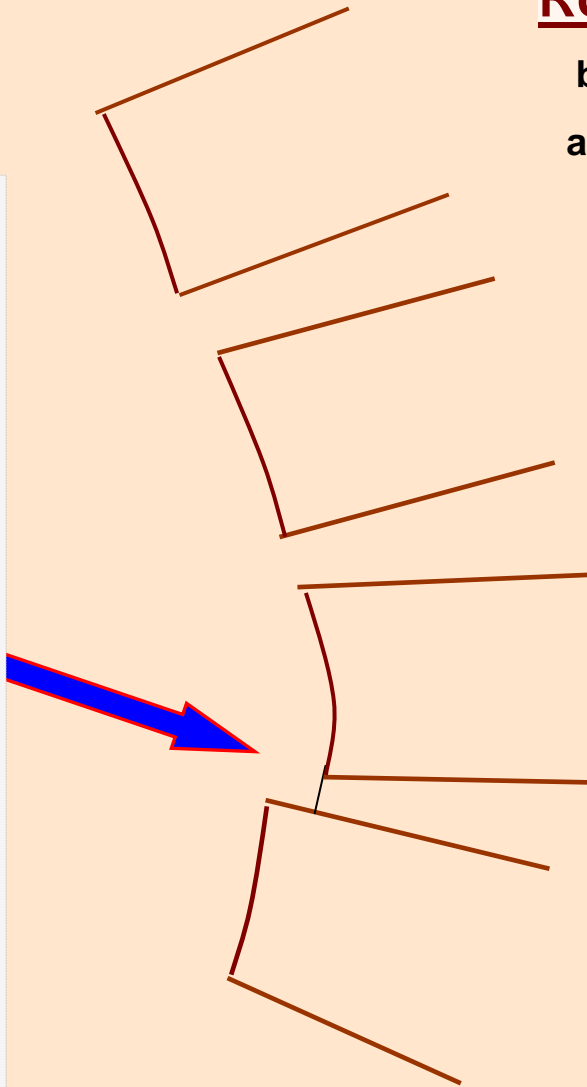
Rotation Line.

This x-ray shows a 7 mil. displacement of my lower L4-L5 [vertebra column](#).

I initially sustained this injury playing HS school football. For years, I just experienced annoying lower back pain, but was able to play many sports including: tennis, golf, and snow ski.

Later, when my L4-L5 vertebra shifted further, it began causing severe sciatic pain down my left leg. I did elect to have a minor back decompression surgery which greatly helped, but it did not totally eliminate the problem. I can still play golf and snow ski, but can not play tennis, or walk on hard surfaces for more than 30 minutes.

There is a more complex surgical procedure -that would bolt (**not fusion**) my L4 - L5 vertebra together, but I have held off on doing this one.



Over time, I discovered the simpler and sound my golf swing, the better my back felt whether practicing on driving range or playing a round of golf. A bio-mechanically sound fluid golf swing actually helps exercise my lower back in a very positive way.

Gregory J. Bailey -M.D

See [Golf Biomechanics "the inverted C position"?](#)