Disc Herniation
Disc Bulge
&
Chiropractic

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The Difference Between a Disc Herniation and a Disc Bulge

> Back pain is one of the most common symptoms reported by the majority of the population, often as a result of a variety of injuries or conditions. Almost everyone has felt this type of pain and discomfort at some point in their lifetimes and for those suffering from the painful symptoms, performing normal, daily activities can become difficult and impairing. If the individual is experiencing constant, worsening back pain, however, the source of their symptoms could be more serious, such as a disc herniation or disc bulge.

The spine is a complex structure consisting of many vertebrae which are stacked upon one another and each of these bones are separated by spinal discs. The vertebral disc in the spine primarily function as a shock absorber between the adjacent vertebrae. Spinal discs also act as ligaments to hold the vertebrae of the spine together and as cartilaginous joints which allow for slight mobility in the spine.

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Each disc is composed of two parts: the annulus fibrosus, a tough, circular outer portion which surrounds the inner core, and the nucleus pulposus, the soft, inner core consisting of a loose network of fibers. The structure of a healthy, vertebral disc is compared to that of a jelly doughnut. The complex composition of each disc evenly distributes the force and pressure which is applied on the spine. At birth, approximately 80 percent of the discs are composed of water and these must be well hydrated to function properly. However, as people age, the structures of the spine, including the discs, go through a natural process of degeneration which is generally the leading cause for disc complications.

Herniated Disc Vs Bulging Disc

As individual's age, the spinal discs begin to dehydrate and become stiffer and fragile, causing the disc to be less able to adjust to compression and stress. While this is a normal process, the stage may be painful for some individuals and can ultimately cause a disc herniation, disc bulge and other issues within the discs of the spine.

A disc herniation is identified when the nucleus in the center of the disc pushes or protrudes partially or completely through the annulus and squeezes out of the disc. A disc herniation or a disc protrusion are two words used to describe the same condition. When a disc herniates, the contents may spread out to the spinal cord and spinal nerves, often compressing these structures and causing a variety of symptoms. The impingement of the nerves can irritate the nerves surrounding the disc herniation, causing swelling and pain. In addition, when a vertebral disc protrudes through the annulus, the chemicals found within the disc's gel-like nucleus can cause irritation and swelling as well.

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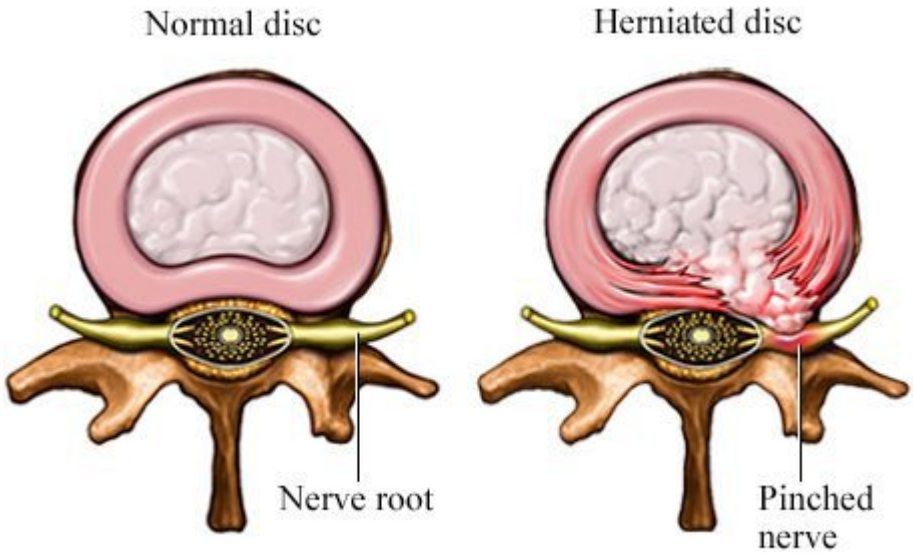

A disc bulge is characterized by a deformation of the annulus where the disc is not necessarily herniated. When a disc bulges or prolapses outward, the nucleus presses against the wall of the disc but the material is still contained within the disc without squeezing through the annulus.

Additionally, a disc bulge can cause just as much complications as a disc herniation where the vertebral disc may still push against the spinal canal and its other structures while not breaking the disc open. The disc remains intact except a small bubble pops out attached to the disc.

Disc Herniation and Disc Bulge Symptoms

A disc herniation or a disc bulge generally develops along the lumbar spine or lower back, although these can also occur in the neck, or cervical spine. Many individuals can have spinal and disc complications without being aware of them as sometimes, no symptoms may be present when there are disc issues. In most cases, the disc itself is not the source of the pain but a nerve compression or impingement caused by a herniated or bulging disc can develop the variety of symptoms.

If the disc complication is located along the individual's lower back, the pain and discomfort can usually be felt in the buttocks, thigh and calf. This can also involve part of the foot. If the individual's disc complications are located in the region of the cervical spine, the symptoms of pain can be experienced along the shoulder and arm. The pain and discomfort associated with a pinched nerve caused by a disc herniation or disc bulge can usually worsen with certain movements of the spine.

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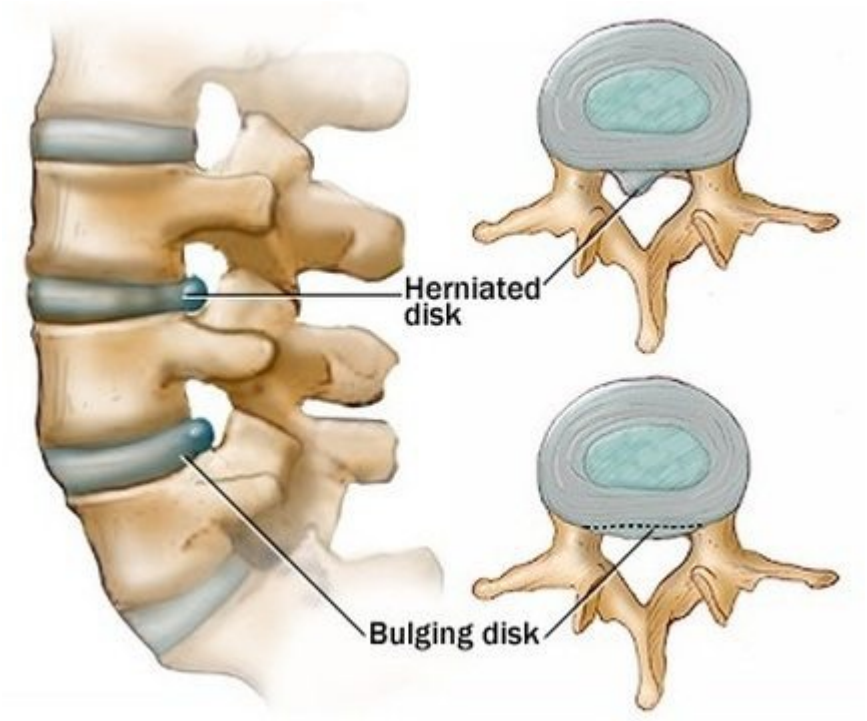
Because these disc complications compress the nerves of the spine, many individual's affected by the conditions report feeling numbness and tingling sensations in the region of the body where the affected nerves are located. Ultimately, when an individual is experiencing symptoms of sciatica, it's recommended to properly diagnose the source of the pain and discomfort as these can also occur if there's a presence of a disc herniation or a disc bulge which may be compressing the nerves along the lower back.

Furthermore, the muscles and other tissues surrounding the area of the disc herniation or disc bulge can also be affected by the impingement of the nerves in the region, leading to muscle weakness. Depending on the affected muscles, individual's affected by the conditions may stumble constantly or their ability to lift and hold items may become impaired.



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Causes for Disc Complications

A disc herniation or a bulging disc can develop as a result of the spine's natural degeneration with age, in rare cases, lifting large, heavy objects can lead to spinal complications as well as twisting and turning while lifting, Additionally, trauma from an injury, such as a fall or a blow to the back, can rarely cause a disc herniation or a disc bulge.

Albeit the process of aging and the normal course of degeneration the spine and the rest of the body undergoes is unavoidable, a disc herniation or a disc bulge can, in many cases, be prevented with several simple steps to reduce the risk of a spinal issue. Exercising regularly and maintaining a healthy weight can both slow the degeneration of the discs by adding strength to the muscles to help stabilize the spine while avoiding excessive strain on the back. Also, maintaining a proper posture and avoiding heavy lifting can relieve the back of any unnecessary stress to ultimately avoid damaging or injuring the complex structures of the spine. Chiropractic care can also help maintain the overall health of the spine. Through the use of spinal adjustments and manual manipulations, a chiropractor can correct a spinal misalignment, restoring the original structure of the spine and reducing symptoms as well as preventing spinal complications due to spinal degeneration.

For more information, please feel free to ask Dr. Jimenez or contact us at

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Lumbar Disc Herniation, Massage and Chiropractic

> Among the young college athletes and professional athletes alike, low back pain is considered to be one of the most common complaints, estimated to affect more than 30 percent of athletes at least once in their career. A wide number of back injuries can affect the athlete, including muscle spasms and stress fractures, spondylosis, spondylolisthesis, disc degeneration, facet joint arthropathy and disc issues, such as lumbar disc herniation.

Lumbar disc herniation is a well-known type of injury which often causes impairing low back pain, however, it can also compress the nerve roots in the area and generate radicular pain and other symptoms along the lower extremities, such as altered sensations and muscle weakness. Furthermore, this type of injury will not only affect the athlete's ability to perform during their specific sport or physical activity, it may also become chronic and affect the athlete in the future.

Lumbar Disc Herniation, Massage and Chiropractic

Conservative treatments are frequently utilized when managing lumbar disc herniation in athletes, although surgical options may be considered if the injury is too severe. Many elite athletes often request faster recovery methods for their type of injuries and symptoms in order to minimize their time spent away from training and competition. As a result, a wide number of athletes will seek surgical alternatives earlier than recommended, provided they meet the criteria for lumbar spine surgery. The most popular surgical procedure for athletes with a low back disc herniation is the lumbar disc microdiscectomy.

Anatomy & Biomechanics of the Lumbar Spine

The intervertebral discs of the lumbar spine perform an essential biomechanical role within the spine. These function to provide mobility between the segments of the spine while distributing compressive, shear and torsional forces. These discs are made up of a thick, outer ring of fibrous cartilage, known as the annulus fibrosis, which surround the gelatinous core of the disc, known as the nucleus pulposus, which is contained within the cartilage end plates.

Each intervertebral disc consists of cells and substances, such as collagen, proteoglycans and scattered fibrochondrocytic cells, which function to absorb and conduct increased forces from body weight and muscle activity. In order to effectively perform its function, the disc depends immensely on the structural condition of the annulus fibrosis, nucleus pulposus and the vertebral end plate. If the disc is healthy, it will evenly spread the forces being applied against the spine. However, disc degeneration caused by cell degradation, loss of hydration or disc collapse, can decrease the disc's ability to withstand external forces and these will no longer be absorbed and conducted evenly across the spinal structures.

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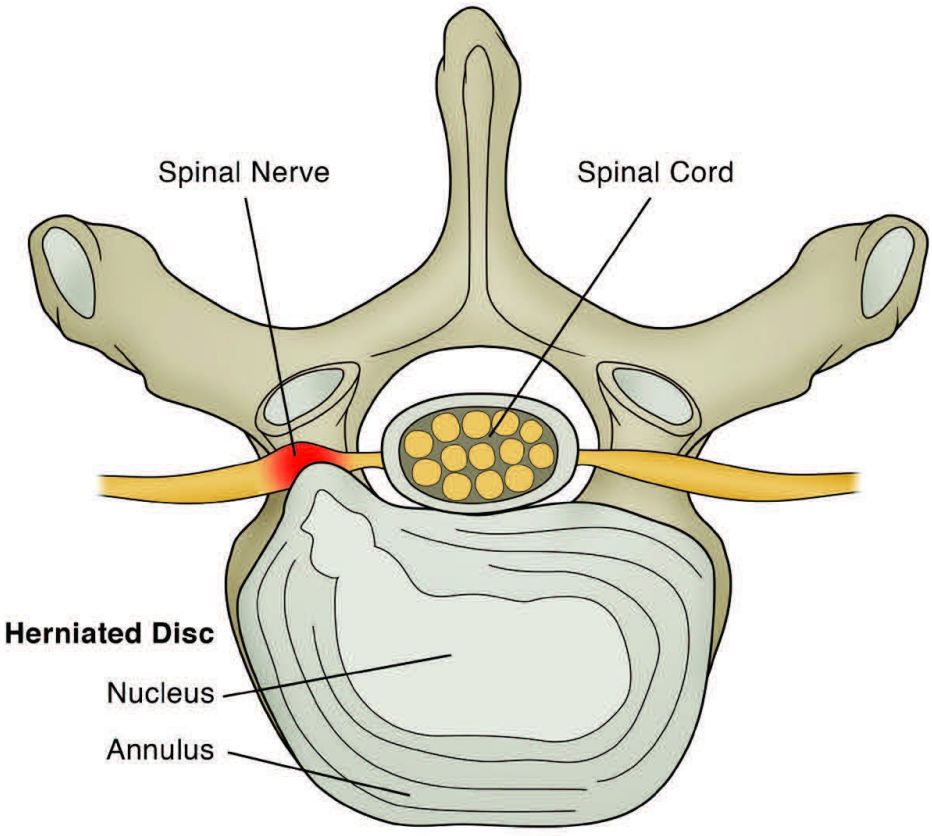
Tears in the annulus fibrosis of the disc along with extrinsic loads may ultimately cause the disc to herniate. Alternatively, applying a large, biomechanical force against a normal disc, such as a heavy compression on the spine due to a fall on the tailbone or strong muscle contraction from heavy weight lifting, can also damage the healthy structures of the disc and cause a rupture.

Disc herniation is characterized when the nucleus pulposus, the soft, jelly-like material in the center of a disc, pushes through a tear in the annulus fibrosis, the fibrous exterior of the disc. If the protrusion does not compress the nerve roots that travel along the spine, the individual may only experience back pain. But, if the herniated disc pushes against the lumbar nerve roots or other structures within the lower back, the individual may experience radicular pain along with neurological symptoms, such as numbness and paresthesia.



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The pain and other symptoms associated with lumbar radiculopathy occurs due to a combination of nerve root ischemia from compression and due to inflammation caused by the chemicals released from a ruptured disc. During a herniation, the nucleus pulposus places unnecessary pressure against the weakened areas of the annulus, protruding through these weakened sites in the outer structure of the disc, ultimately forming a herniation. It's important to note that when a lumbar disc herniation occurs, in a majority of cases, some form of disc degeneration may have existed before.

The Process of Lumbar Disc Herniation

Unlike other musculoskeletal tissues of the body, intervertebral discs generally degenerate sooner than other structures. Some studies have shown adolescents between the ages of 11 to 16 with signs of degeneration. As people age, the discs will naturally degenerate further. In a research study conducted using normal, healthy subjects between the ages of 21 to 30, more than one third of the individuals presented degenerated discs.

While the spinal discs may be at risk of injury in practically all fundamental planes of motion, these are often more susceptible to damage or injury during constant and repetitive flexion or hyperflexion along with lateral bending or rotation. Trauma from an injury caused by an excessive axial compression can also harm the internal structure of the discs. This can commonly result after the individual has suffered a fall or due to strong muscular forces being placed against the spine during specific activities, such as heavy weight lifting.

Lumbar Disc Herniation, Massage and Chiropractic

When it comes to athletes, they are frequently exposed to conditions of higher loading. A herniated disc can be categorized according to its location: central, posterolateral, foraminal or far lateral. Herniation varieties can also be classified as: protrusion, extrusion or sequestered fragment. Finally, disc herniation may be identified according to the level where they occurred on the spine. Most develop along the lumbar spine, often affecting the lumbar nerve roots which may lead to symptoms of sciatica. Upper lever herniated discs are rare, but when they do occur along with radiculopathy, they generally affect the femoral nerve.

Disc Herniation in Athletes

Athletes who participate in sports or physical activities which utilized combined trunk flexion and rotation have an increased chance of experiencing herniated discs. Individuals between 20 to 35 years of age are the most common group to herniate a disc, most likely as a result of the nature of the nucleus pulposis and due to behavior. This age group is most likely to be involved in sports which require higher loads of flexion and rotation or they may practice improper postures and positions when carrying weight.

The sports most at risk of disc herniation include: hockey, wrestling, football, swimming, basketball, golf, tennis, weight lifting, rowing and throwing activities, because these sports involve either high loads or high exposure to combined flexion and rotation mechanisms. Additionally, athletes who engage in more intense, continuous training routines appear to be at an increased risk of developing spinal injuries or conditions, similar to those involved in impact sports.

Signs and Symptoms Indicating Discectomy

An athlete is generally driven by motivation and goals when they choose to undergo surgery to treat a lumbar disc herniation. Rather than waiting for the symptoms to decrease over a period of rehabilitation, athletes prefer a relatively simple microdiscectomy.

A conservative period of management for symptoms of a lumbar herniated disc may involve: medication therapy, epidural injections, relative rest and trunk muscle rehabilitation, acupuncture and chiropractic care with massage. However, athletes who experience low back pain with pain radiating down one or both legs, neurological signs and symptoms, mild weakness of distal muscles, such as extensor hallucis longus, peroneals, tibialis anterior and soleus and those who demonstrated positive on the straight leg raise test, may meet the criteria to follow through with a surgical intervention for their lumbar herniated disc.

Generally, elite athletes have a shorter time span in which to allow conservative rehabilitation to be effective. For a majority of the population, medical practitioners often prescribe a minimum 6-week conservative period of treatment with a review at 6 weeks to decide whether they should extend the rehabilitation or to seek treatment from a specialist. This particular healthcare professional may then offer other alternative interventions to treat the issue.

For athletes, however, these time frames are compressed. Epidural injections are often offered to athletes to assess the issue quicker, and if there are no results within a determined period, an immediate lumbar spine microdiscectomy may follow.

Imaging

Magnetic resonance imaging, or MRI, are considered to be the preferred method for identifying lumbar disc herniation, as these are also very sensitive when detecting nerve root impingements. Because abnormal MRI scans can occur in otherwise asymptomatic individuals, it's essential to establish a clinical correlation of symptoms before any surgical considerations. Additionally, individuals may present clinical signs and symptoms suggesting the presence of a lumbar herniated disc but they may lack sufficient evidence on MRI to meet the criteria to follow through with surgical interventions. Accordingly, it's been proposed that a volumetric analysis of a lumbar herniated disc on MRI may be potentially valuable for assessing an individual's and athlete's suitability to receive surgery.

MRI Lumbar Spine Disc Herniation

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Chiropractic and Massage

Fortunately, before considering surgical intervention, although more time and patience may be required, there are several effective, alternative treatment options that can help reduce and eliminate the symptoms associated with a lumbar herniated disc. Chiropractic is a healthcare profession that focuses on injuries and conditions of the musculoskeletal system and the nervous system as well as the effects of these on general health. Chiropractic care emphasizes the treatment of the body as a whole rather than focusing on a single injury or condition. Through the use of spinal adjustments and manual manipulations, two of the most common techniques used in chiropractic, a chiropractor can carefully re-align the spine, helping to restore and reduce the pain and swelling caused by a lumbar herniated disc.

Along with a combination of massage, chiropractic care can ultimately help rehabilitate an injured athlete or individual. A massage, best referred to as myofascial release, is a hands-on technique that involves applying gentle, sustained pressure into the myofascial connective tissue restrictions, to eliminate pain and restore function. Massage can increase blood flow, which delivers more oxygen and nutrients to the muscles surrounding the affected region of the spine. The increased blood flow may also help carry away unnecessary substances which may have accumulated through time. Chiropractic care and massage are safe and effective treatments that can help rehabilitate athletes with lumbar disc herniation without side effects.

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Sourced from: www.elpasochiropractorblog.com

For more information, please feel free to ask Dr. Jimenez or contact us at

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My name is Dr.Alex Jimenez D.C.,C.C.S.T, a clinical pain doctor who uses cutting-edge therapies and functional rehabilitation procedures focused on total health, strength training and complete conditioning. We specialize in restoring normal body functions after neck, back, spinal and soft tissue injuries. We take a global physiological treatment approach in order to regain total functional health.

We also use Advanced Chiropractic Techniques, Specialized Diet Plans, Agility Training, Cross-Fit and the PUSH-Rx Rehabilitation System to treat patients suffering from various injuries and health problems.

We have been blessed to perfect our methods with thousand of El Pasoans over the last 26 years. This has allowed us to create fitness and better functional bodies through the researched methods and total programs offered. These programs are natural, and use the body's own ability to achieve goals of improvement, rather than introducing harmful chemicals, controversial hormone replacement, surgery, or addictive drugs. We want you to live a life that is fulfilled with more energy, positive attitude, better sleep, less pain, proper body weight and educated on how to maintain this way of life.

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As an extension to dynamic rehabilitation, we also offer our patients and athletes a diverse portfolio of strength equipment, high performance exercises and advanced agility options. We are very proud to have teamed up with the cities premier therapist and trainers in order to provide high level competitive athletes the option to push themselves to their highest abilities within our facility.

Remember, you are in control of your life. Take control, learn how improve your health for yourself and your loved ones.

With a bit of work, we can achieve optimal health together.

Its all about: LIVING, LOVING & MATTERING!

God Bless

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