Kinetx Rehab

Kinetx Rehab provides short term, effective, individualized treatment of injury as well as an array of services designed to assist employers in creating a safe workplace.

We believe in sport, work, avocation specific treatment, "hands on" programs, and active patient participation. Our outstanding outcomes are a result of this approach.

This brochure is one in a series designed to provide patients with information regarding their specific injury.

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Therapy Solutions for Sports and Industry

A Guide to Low Back Pain

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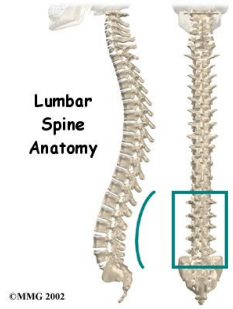
Why does my back hurt?



Nearly 80% of those of us who live on this planet will experience low back pain at some point in our lives. What is more, if you have experienced it once, you will have it again. It is one of the most frequent reasons that patients see a physician. The good news is that 90% of those who experience it for the first time will get better in two to six weeks, and only rarely do people with low back pain develop chronic problems. Patients also have much they can do to ease the symptoms and prevent their reoccurance.

Basic Anatomy

The human spine is composed of 24 individual vertebrae which stack together to provide upright support. The normal spine is designed to have three curves, noticeable from a side view. At the neck, the cervical spine curves slightly inward. The mid back, or thoracic spine curves out, and at the low back, the lumbar spine curves slightly inward again. The lumbar spine is composed of five vertebrae, referred to as L1 through L5. The last vertebrae connects to the sacrum, or tailbone. The spinal cord runs through the center of the vertebra down to L2, after which it becomes a complex of nerves called the cauda equine. From each of the vertebral levels of the spine, nerve roots exit that go to the trunk and limbs. Between each vertebrae is a cushion and shock absorber called the **intervertebral disc**.

The disc itself is composed of two parts, the nucleus and the annular ligament . The nucleus is soft and spongy and provides the shock absorbtion, while the ligament holds this material intact.

The lumbar spine is supported by ligaments and muscles, some thin such as the erector spinae group, others much stronger, such as latissimus dorsi and the abdominals. They coordinate with each other to hold the spine steady during motion.

What Causes Low Back Pain?

There are many reasons your back hurts, and it is sometimes difficult to diagnose exactly, but there are many common causes. The majority of back problems are a result of wear and tear and may be referred to as **degenerative disc disease**. Our discs age just like the rest of the body. First, the disc becomes dehydrated, then thick and fibrous, and loses it's ability to absorb shock or act as a spacer. Then, routine stress forms small tears in the annulus, the disc compresses further and the bones of the spine compress, sometimes impinging on the nerves which exit at each level. Patients begin to feel pain in the low back, which may increase after lifting or sitting too long. This may occur and abate through several episodes until pain moves into the buttocks or thighs, and the patient seeks medical attention.

Neurogenic vs. Mechanical Pain

Mechanical pain is caused purely by wear and tear and from the degeneration of the discs. As the vertebral space narrows, the facet joints may become inflamed. This pain is usually felt in the low back, but may go into

the buttocks or thighs. It does not usually produce weakness in the muscles or numbness in the leg or foot and generally gets worse after activity.

Neurogenic pain is a result of pinching of the spinal nerves and can be the result of **disc bulge** or **herniation**. The nerve pressure causes symptoms in the area to which the nerve travels rather than the low back and may produce weakness or numbness is the legs.

Diagnosis

Your physician will determine the cause of your problem through a medical history, and may use x-ray, MRI, CT Scans, or EMG (electromyogram) to determine the source.

Treatment

Many options are available, including rest, medications, physical therapy aimed at relieving pain, improving motion and improving healthy posture, and injections into the joint affected. Surgery is only employed as a last resort, unless there is loss of bowel and bladder function or rapid muscle weakness.

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