



What else can be done?

Physical therapy is important to help decrease pain and prevent a recurrence. A detailed physical therapy program will be developed to treat your problem. Your doctor may use deep heat, electrical stimulation, aquatic therapy and exercise equipment as part of your rehabilitation.

How is it diagnosed?

Special tests to help confirm your diagnosis, rule out other problems and pinpoint the source of your spine pain.

- **X-rays** show the general condition of your vertebrae (bones) and are very helpful in determining the cause of pain. Although x-rays cannot reveal a ruptured disc, for instance, they may reveal a narrowed disc space, which can be an indication of trouble in that area of the spine.
- **MRIs** (Magnetic Resonance Imaging) and CTs (Computerized Tomography) produce detailed computer images of soft tissues and bones. MRIs are especially beneficial for the study of soft tissue abnormalities such as disc degeneration, protrusion or rupture. CT scans give a cross-section view of the spine and can show a bulging or ruptured disc.
- **EMGs** (Electromyography) measure the electrical activity of your muscles' contractions. They detect nerve or muscle irritation and bone.
- **Bone scans** can reveal abnormal bone activity.



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Disc Problems



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What is a disc?

Your spine is made up of interlocking stacks of bone called vertebrae. Between each pair of vertebrae is a disc, which cushions the bones so they will not grind together. Like any cushion, the disc has a soft interior and a firm covering. The soft interior is a jellylike pad called the nucleus.

What does each disc do?

Each disc absorbs shock as you move, by compressing and deforming, much like the shock absorbers on a car. Discs allow your vertebrae to rock back and forth, giving you the flexibility to bend and move.

What is a herniated disc?

During heavy lifting, bending or twisting, the tough outer ring of the disc is subject to great stress as it fights to hold the soft jellylike pad within it. If the stress is greater than the strength of the outer ring, a tear results. A disc bulge occurs when a small tear allows the nucleus to bulge into the outer ring. Larger tears allow the jellylike pad to escape, resulting in a condition called a herniated or protruded disc.

A herniated disc is also known as a "slipped" disc. Both a disc bulge and a herniated disc may cause severe pain. If sensitive nerves near the disc are compressed or inflamed, pain may also be felt in the buttocks, hip or leg.

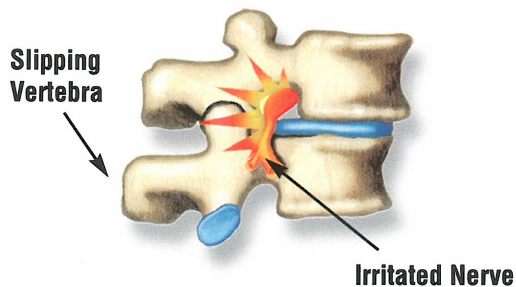
What are other disc problems?

As a consequence of aging, the water content in the disc progressively diminishes. As the disc dries out, it loses its ability to absorb shocks.

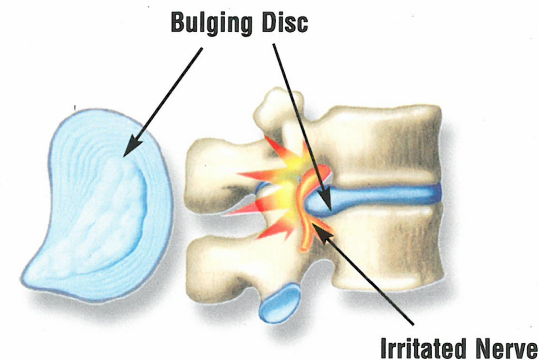
This causes the shocks to be transmitted to ligaments and surrounding tissues which then may also be injured. Dehydrated discs do not generally become herniated.

What can a back specialist do for you?

It is important to diagnose the specific problems in your back so that precise treatment can be prescribed. To do this, your doctor may order special tests to help determine to what extent the disc is causing your pain, and the exact location of the problem disc. Special scans, such as CT or MRI, are used to visualize discs because x-rays do not show discs. Other tests, such as Electromyogram (EMG) and nerve conduction studies, will help show if the disc is actually pinching a nerve.



After years of giving good service, the vertebrae can wear down and discs begin to flatten. Arthritis spurs may form, irritating the nerve root and causing pain.



Wear and tear on your back can cause discs to flatten and "bulge" out, pinching nerves and causing pain.

What can be done for pain?

In many cases, conservative care can be effective. Your doctor may initially prescribe medications to ease pain and inflammation. An Epidural Steroid Injection (ESI) may be helpful for disc problems.

What is an ESI?

ESI is a procedure in which a cortisone-like drug is placed into the space around spinal nerves. These cortisone compounds are potent anti-inflammatory agents that deliver medication directly to the inflamed area.

While the effects of the injection tend to be temporary (one week to one year), an ESI can be beneficial in providing relief for patients during an episode of severe back pain and allows patients to progress in rehabilitation.

A local anesthetic is used to numb the area and there should be relatively little discomfort. An ESI is performed by your doctor in about the same time it takes for a routine office visit.