Many lower back problems, especially those associated with pain down the back of the leg, are the result of an intervertebral disc involvement.

Pain down the back of the leg caused by an intervertebral disc may be due to irritation of the sciatic nerve, a condition called sciatica. Not all pain down the leg is from an intervertebral disc. The nerve receptors in the ligaments and other structures of the lower back can be irritated and cause referred pain down the leg. The doctor’s examination can differentiate this.

The intervertebral discs are pads between the vertebrae of the spine. The disc is composed of two sections. The outer portion of the disc is a fibrous ring called the annulus fibrosis. Contained within the annulus fibrosis is a jelly-like substance called the nucleus pulposus. It has a high fluid content, and its containment by the annulus fibrosis gives the disc a hydraulic action. The fluidity of the disc allows motion between the vertebrae. As we bend sideways, the fluid shifts its position, giving the disc an opportunity to squeeze down on one side while opening somewhat on the other. This also acts as a shock absorber during everyday activities such as walking, running, and jumping.

Disc problems are sometimes loosely called a “slipped disc” or “disc out of place.” These terms are incorrect because a disc does not “slip” or, as a unit, “go out of place.” There are three basic intervertebral disc involvements. The methods of treatment for these vary, as does the outlook for improvement.

Degenerated Intervertebral Disc

The intervertebral disc may degenerate over a period of time. It may be an injury that leads to direct damage to the disc or causes the spine to function abnormally.

Degenerated Intervertebral Disc

Note the breaks in continuity of the annulus fibrosis fibers.
**Protruded Intervertebral Disc**

This type of disc problem occurs when the outer containing ring of the intervertebral disc, the annulus fibrosis, bulges and may protrude into the nerve area. A disc protrusion can develop as the result of injury, or it can develop — sometimes quite easily — because of annulus fibrosis weakness. If the disc impinges on a nerve it can cause pain in the leg or arm and severe back or neck pain, depending on the location of the involvement.

In most cases this disc problem responds quite well to conservative applied kinesiology care. After regaining disc integrity, it is very important to follow through with a muscular and structural balancing program to help keep the condition from recurring. If a nutritional deficiency is contributing to the disc problem, it must also be corrected.

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**Ruptured or Herniated Intervertebral Disc**

The terms “ruptured” and “herniated” are often used interchangeably. The important thing is that you understand the mechanics of what happens to the disc in this condition. Rather than having just a bulge on the disc’s outer containing ring there is a complete tear; the jelly-like substance in the center of the disc oozes out into the nerve area, encroaching on the nerve. The difference between a ruptured intervertebral disc and a protruded one is similar to the difference between a bulge on a tire and a frank blowout. Once the annulus fibrosis is completely ruptured, surgery may be required. Getting the jelly-like nucleus pulposus back inside the disc is like getting toothpaste back into the tube after it has been squeezed into the bathroom sink.

In this condition the news is both good and bad. The good news is that a frank herniated disc is not as common as a protruded one. It usually results from severe injury, or repeated protruded intervertebral disc problems causing many fibers in the annulus fibrosis to tear. The bad news is that it is very difficult to determine if surgery is needed unless the condition is advanced.

There are many standard diagnostic procedures available to doctors to help make this differentiation; however, they are usually not conclusive in predicting the type of treatment needed. A panel of orthopedic and neurologic tests is the starting point for examination. A doctor using applied kinesiology has additional functional tests that help indicate the prognosis for conservative treatment.

Magnetic resonance imaging (MRI) is a useful tool to evaluate the disc, but here, too, the results of the test may not be conclusive. Protruded and herniated discs have been found in people who have no symptoms.

The best form of treatment can be determined when combining the results of examination. There are some findings that immediately direct the form of treatment needed, such as a person’s inability to urinate or have a bowel movement. This is an emergency situation that must be treated immediately, usually by surgery.

It is often of value to use a therapeutic trial of conservative treatment when an individual has either a protruded or a ruptured disc. If the disc is protruded, the doctor’s objective tests will show improvement within a relatively short time, and the symptomatic picture will improve. Conservative treatment may not provide any improvement in the tests or in the symptoms when a frank rupture is present; in fact, the condition may worsen during the conservative treatment. During the treatment period it may be necessary for the patient to have complete bed rest, along with other orthopedic measures.

The key factor in the care of any disc problem — whether it is degeneration, disc protrusion, or herniation — is to follow through with the recommended rebuilding period. This will help to either retard or halt the condition’s progress, or prevent it from returning if complete correction is possible.

To avoid intervertebral disc problems, it is best to use a preventive health program. Have your spine and its associated structures examined periodically to help prevent the condition from developing. All too often, by the time help is sought for a disc condition, it has already progressed beyond the point where it might have been conservatively treated and returned to normal.