piedmont orthopaedic associates

Lumbar Disc Herniation

What is a disc herniation?
The lumbar spine corresponds to spine in the "small of the back." It is made of five separate vertebrae, which are each separated by a cushion called a disc. This cushion is made of a soft spongy material that is contained within a very tough fibrous outer layer. A disc herniation is when the tough outer layer develops a weak spot and allows the inner spongy tissue to leak out. The disc material typically leaks against a spinal nerve, causing both a chemical irritation and direct pressure on the nerve. The nerves in the lumbar spine travel to various places in the buttocks and legs. Thus, the irritation of one of these nerves is the source of the patient's leg pain, called sciatica.

What causes disc herniations?
About 2% of the general population will have a symptomatic lumbar disc herniation. They can occur in at any time in any walk of life. In fact, patients will often state they "just woke up and could not get out of bed" without any prior injury. Despite this, there are certain factors associated with disc herniations. These include: males, age between 30-50 years, heavy and improper lifting techniques, stressful occupations, and cigarette smoking.

What are the symptoms?
Disc herniations can occur in the absence of an injury, and in the absence of back pain. The symptoms in some patients may include only leg pain or weakness. The symptoms often, but not always, include some component of back pain. Patients often report having moderate levels of back pain prior to the onset of the leg pain. This may correspond to the degeneration of the outer layer of the disc before the extrusion of the inner disc material. Once the nerve becomes irritated the symptoms typically radiate down into the buttocks and into the legs. The specific location of leg pain depends on which nerve is irritated. There will also often be weakness of one of the muscles in the leg or ankle, again depending on which nerve is involved. Patients often report pain with almost any position and have much difficulty finding a comfortable position.

What is the prognosis?
The natural history of lumbar disc herniations is that 60-70% of the patients will have resolution of most of their symptoms within eight to12 weeks using conservative treatments only. This is because the human body sends cells to the site of the herniation that are capable of removing some of the material and inflammation.

What treatments are available?
Typically a short (one to three day) period of bed rest is appropriate after the onset of the symptoms. The use of anti-inflammatory medications may helpful. For severe symptoms a short course of narcotics or muscle relaxants may be used. However, there is no role for prolonged usage of these medications for disc herniations. Physical therapy is often prescribed initially, which may improve lumbar range of motion and strength. However, a home exercise program may be sufficient. Chiropractic care may help ease symptoms in some patients. A series of oral steroids or epidural steroid injections into the spine may calm the inflammation of the nerves and give temporary relief of the buttock and leg symptoms.

When should I consider consulting a spine surgeon?
Only about 30% of patients with a disc herniation and sciatica will need a spine operation. Typically an observation period of four-six weeks is given before surgery is suggested. The exception to this is loss of bowel or bladder function, major muscle weakness, and excruciating uncontrollable pain. These scenarios may benefit from earlier surgical intervention. Despite the typical four-six week observation period, a persistently

symptomatic patient should not wait more than 12 weeks to consult with a surgeon, because the window of opportunity for benefit from surgery begins to narrow.