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Spinal discs are cushion pads located between the vertebrae. Without these “shock absorbers,” the bones in the spine would grind against one another. The discs protect the spine by absorbing the impact of trauma and body weight. The intervertebral discs give the spine flexibility and make movements such as twisting and bending possible.

Herniated discs, also known as a "slipped disc" or "ruptured disc", are typically caused by overuse injuries or trauma to the spine; however, disc conditions can also develop as a result of the normal aging process. Herniated disc can occur anywhere along the spine, but most often affects the lower back in the bottom two discs of the lumbar spine just below the waist.

There are fibers on the outside of each disc that attach the disc to adjacent vertebrae and hold the disc in place. A herniated disc occurs when the outer layer tears or ruptures and the gel-like center leaks into the spinal canal. The spinal canal has just enough space to house the spinal cord and spinal fluid. When a disc herniates into the spinal canal, it causes compression of the nerves or spinal cord resulting in thigh and leg pain. In addition, the gel-like substance inside the disc releases chemical irritants that contribute to nerve inflammation and pain. Alterations in sensation and weakness sometimes occur.

Pain from a herniated disc can be mild or severe depending on the location and size of the prolapsed disc. Pain is typically felt on one side of the body either the right or left thigh and leg.

Herniated disc can manifest itself with a range of symptoms, including:

* Dull ache to severe pain
* Numbness, tingling, burning
* Muscle weakness, spasm, altered reflexes
* Loss of bowel or bladder control (These symptoms constitute a medical emergency. If they occur, seek medical attention immediately).

MRI or CT myelogram is performed to show the herniated disc and the nerve compression.



**Non-surgical management:** 80% of patients with disc herniation will improve without surgery. The goals of nonsurgical treatment are to reduce the nerve irritation and to improve the physical condition of the patient.

* Bed rest for a few days
* Avoid heavy lifting
* Physical therapy and home exercise program including stretching to improve the flexibility of the trunk muscles. Other non-aerobic exercises may help to improve muscular endurance, coordination and strength. Exercise also helps to combat anxiety and depression which help coping with pain
* A spine brace for a short period to reduce the loads (weight) on the lumbar spine
* Over the counter muscle relaxant and anti-inflammatory medications are analgesics used to reduce swelling and inflammation that occur as a result of disc herniation. These include aspirin and ibuprofen
* Short course of oral corticosteroid medication for more severe leg pain because of their very powerful anti-inflammatory effect
* Spine injections: Epidural injections, or selective nerve root block may be recommended for severe leg pain

**Surgical management of degenerative disc disease:** The goal of surgery is to make the herniated disc stop pressing on and irritating the nerves, causing symptoms of pain and weakness. The most common procedure is called a microdiscectomy in which the herniated disc and any loose pieces are removed until they are no longer pressing on the nerve. This is done with the help of the surgical microscope. In order to see the disc clearly, sometimes it is necessary to remove a small portion of the lamina, the bone behind the disc.

**Emergency surgery for herniated disc:** Very rarely, a large disc herniation may press on the nerves which control the bladder and bowel, causing loss of bladder or bowel control. This is usually accompanied by numbness and tingling in the groin or genital area. It is one of the few indications that you need surgery immediately for a herniated lumbar disc to relieve the pressure on the nerve to avoid permanent problems.

**Postoperative management:** Most patients will not have complications after microdiscectomy, but possible complications include infection, tears of the protective lining of the spinal nerve roots (dura mater) or injury to the nerve and it is also possible that the disc will rupture again and cause pain recurrence.

Most patients go home within 24 hours after surgery, often later the same day. For first three weeks after surgery you should avoid driving, prolonged sitting, and bending forward. Heavy lifting should be avoided for 6 weeks after surgery. Some patients will benefit from physical therapy starting six weeks after surgery.