## The Spine Hospital

Columbia Neurosurgeons

A Comprehensive Approach to Total Spine Care

**REVIEWED** By Chris Tighe at 1:34 pm, Jan 26, 2017

## Microdiscectomy



Lumbar Spine Vertebrae with Intervertebral Discs (view from side)

When the findings on physical examination correlate with the radiographic imaging and the patient has failed nonoperative therapy, surgery may be considered an appropriate treatment alternative. The procedure to relieve the pressure on a spinal nerve resulting from a herniated lumbar disc is referred to as a Microdiscectomy. There are several options available that provide access to the herniated disc fragment that vary in the degree of muscle dissection. Typically the more muscle dissection performed; the more post-operative discomfort the patient will experience. Minimally invasive techniques allow access to the herniated disc fragment with a minimal amount of muscle and soft tissue disruption.

Once the spine is exposed a small amount of bone is removed to provide an opening into the spinal canal. The nerves are gently dissected to expose and visualize the diseased disc. Depending on the extent of disc herniation, the extruded fragments are freed from the surrounding tissues and removed, alleviating the pressure on the adjacent nerves. The objective is not to remove the entire disc, only the herniated portions that are compressing the exiting spinal nerve. Removal of the entire disc would lead to a mechanically unstable environment and lead to the development of mechanical low back pain. As with any operative procedure there are risks associated with a microdiscectomy; however these risks are minimal.

In uncomplicated cases the patient is encouraged to ambulate on the same day or day after surgery. An overnight stay in the hospital is often all that is required. Patients are instructed to limit activities to walking for the first several weeks, afterwards a gradual increase in activities is allowed. Formal physical therapy may be necessary depending on the severity of p-operative neurological complaints, however it is rarely required.

Extrusion of an intervertebral disc can cause compression of a spinal nerve leading to pain, sensory changes, or weakness of an extremity. When nonoperative measures fail to alleviate symptoms, surgical intervention may be indicated. The surgical technique is known as a microdiscectomy which involves removal of the extruded disc fragment thereby relieving the pressure on the involved nerve.

## **Surgical Procedure**

The procedure is typically performed under general anesthesia. In order to access the spine, a channel is created through the muscles of the back using a minimally invasive approach. A series of tubes of increasing diameter are passed through the muscle and positioned over the herniated disc fragment. A window into the spinal canal is created by removing a small portion of bone. The inflamed nerve is identified and, utilizing microsurgical technique, the extruded fragment of disc is dissected free and removed, releasing the compressed nerve. The incision is typically closed with one to two absorbable sutures and dressed with a band-aid sized dressing.

## **Course of Treatment**

Patients are usually discharged on the day of surgery or the next morning. Patients are encouraged to advance their activities as they are able to tolerate. If necessary, physical therapy for lower back strengthening and range of motion is usually started following the first follow-up visit, four to six weeks after surgery. These innovative techniques minimize the extent of tissue disruption, reduce post-operative pain and discomfort, and significantly reduce the recuperation time.

Copyright ©2017 Columbia University Department of Neurological Surgery 710 W 168th St, New York, NY 10032 Phone (212) 305-1115