

NeuroSpine's Greatest Strength is our Integrated Approach

The NeuroSpine Center of Wisconsin is recognized as among the best in spine and brain care in the Midwest and is acknowledged as the leader in neurospine care in the region.

With our unique integrated approach, surgeons and physiatrists work as a unified team, providing same-day coordinated consults. From diagnostic testing including X-ray, to physical therapy, to on-site MRI, to therapeutic injections, care remains patient-focused in a single convenient location.



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Back TO Life

Back to Life was developed specifically for chiropractors, worker's compensation case managers, physical therapists, occupational therapists, athletic trainers and personal trainers to provide a better understanding of **NeuroSpine's integrated approach** to back pain.

We want to hear from you! Is there a topic you want to see in "Back to Life"? Do you have questions about our services?

Would you like to refer a patient to one of our physicians? Call us at 920-882-8200 or 888-231-5236, or visit www.neurospinewi.com.

Be assured your patient will be referred back to you after we treat his/her condition.

Lumbar Disc Herniation

Understanding Lumbar Disc Herniation

As a disc degenerates, the inner core of the disc can extrude—or herniate—back into the spinal canal. The herniated disc material can irritate the nerve, which can cause pain to radiate down the path of the nerve—from the lower back through the buttocks and into the leg or even into the foot.

Spinal Disc Anatomy

Discs are positioned in between each vertebra (the bony building blocks of the spine) along the front of the spine. Each disc is composed of a tough outer ring and a soft inner core, which is the part that extrudes, or "herniates" out.

A disc herniation typically occurs toward the back of the spine where there is a thinner boundary in the outer ring. This weak spot in the disc can be directly under the nerve root.

Symptoms

A lumbar (lower back) herniated disc will typically cause one or a combination of the following symptoms:

- Dull or sharp pain that travels into the buttocks and back of the leg (sciatica)
- Numbness or tingling in different areas of the leg
- Muscle weakness in certain muscles of one or both legs
- Loss of some reflexes in the leg

Sitting or bending forward, and sneezing or coughing, will usually make the pain worse. If symptoms include any loss of bowel or bladder control, or there is progressive weakness in the legs, immediate medical attention should be sought.

The specific symptoms of a herniated disc depend primarily on the location and degree of the herniation. Approximately 90% of lumbar disc herniations will occur at the following segments of the lower spine:

- **L4-L5 herniation** (between lumbar segment 4 and 5)—Can cause weakness in extension of the big toe and potentially in the ankle (foot drop). Numbness and pain may be felt on the top of the foot, and the pain may also radiate into the buttocks.
- **L5-S1 herniation** (between lumbar segment 5 and sacral segment 1)—May cause loss of the ankle reflex and/or weakness with ankle push off (e.g. patients cannot do toe rises). Numbness and pain can radiate down to the sole or outside of the foot.

Chiropractic
Peter J. Schutte, DC
John D. Schutte, DC
Chris D. Resch, DC
Connon L. Pienczkowski, DC

Physical Therapy
Robert J. Daul, MPT
Brennan F. Hussey, PT
Ron S. Miller, PT
Jason G. Schomburg, MPT
Cindy J. Hillesheim, PT

Physical Medicine and Rehabilitation
John F. Revord, MD
J. Talbot Sellers, DO
Randall J. Schultz, MD
Richard A. Staehler, MD
Douglas J. Hendricks, MD

Orthopedic Spine Surgery
Peter F. Ullrich, Jr., MD
David C. Davitt, MD
Pamela E. Verkuilen, APNP
Jill J. Buchinger, RN, BSN, CCRN

Neurosurgery
Karl A. Greene, MD, PhD, FACS
Thomas M. Wascher, MD, FACS
David R. Bond, APNP, CNRN
Jill E. Coenen, RN, BSN, CST-FA

NeuroSpine Center of Wisconsin, S.C.
5320 West Michaels Drive
Appleton, WI 54913-8446
920-882-8200 or 888-231-5236
www.neurospinewi.com





Treatment Options for Lumbar Disc Herniation

Treatment for a lumbar disc herniation will largely depend on the length of time the patient has had his or her symptoms and the severity of the pain. For most patients, symptoms from a lumbar disc herniation will go away over time. While there are no hard and fast rules, this article reviews some general guidelines for non-surgical and surgical treatment options.

Generally, patients will start with 6 to 12 weeks of conservative (meaning non-surgical) treatment, unless their condition is an emergency situation (e.g. loss of bowel/bladder control or progressive weakness in the legs). Patients may need to try more than one type of treatment to discover what works well. Surgery may be considered if a course of conservative treatment does not provide pain relief, or if the pain is severe and the patient is having difficulty functioning.

Conservative (Non-Surgical) Treatments

There are a wide variety of conservative treatment options for patients to try. The primary goals of treatment are to provide pain relief and to allow the patient to return to a normal level of activity. If the symptoms start to abate within the six-week period, continued conservative treatment is warranted. Depending on the patient's clinical situation and physician's recommendations, one or several of the following non-surgical treatments may be considered:

- **Physical therapy, exercise and gentle stretching to help relieve pressure on the nerve root**
- **Ice and heat therapy for pain relief**
- **Manipulation (such as by a chiropractor, osteopath or appropriately trained physical therapist)**
- **Non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, naproxen or other pain relief**
- **Narcotic pain medications for pain relief**
- **Oral steroids or epidural steroid injections to decrease inflammation for pain relief**

It may be necessary for a patient to try more than one or a combination of the above treatments. The recommended length of conservative treatment for patients needs to be individualized. For those patients who are not in severe pain and can function well, a longer period of conservative treatment is reasonable. The vast majorities of people with lumbar disc herniation do not need surgery and will recover and return to their normal lifestyle within several weeks or months of conservative treatment.

Diagnosis

A detailed medical history and physical examination can usually differentiate a herniated disc from other possible causes of similar symptoms. An MRI scan is usually needed to confirm the diagnosis and understand the location and degree of the herniation, and additional diagnostic tests may be needed to rule out other possible causes of the symptoms.

An MRI scan that shows a herniated disc does not necessarily mean that the herniation is causing the pain, as many disc herniations do not actually cause any symptoms. Therefore, it is important to get a diagnosis from a doctor to correlate the patient's medical history and physical exam with the imaging test findings.

Surgery Treatments

The goal of surgery is to help alleviate the pain faster. If a patient has severe pain and is unable to function at a satisfactory level, surgery may be a reasonable option even before six weeks of symptoms. In recent years, the morbidity (or unwanted side effects, such as post-operative pain) of surgery for a lumbar herniated disc has decreased and the results have improved, so surgery is generally considered a very reasonable option for relieving pain and other neurological symptoms more quickly.



The most common surgery to treat a lumbar herniated disc is a microdiscectomy (microdecompression). This is a minimally invasive procedure (since the incision is small and muscles are moved rather than cut) to remove the herniated portion of the disc under the nerve root. By giving the nerve root more space, pressure is relieved and the nerve root can begin to heal. The microdiscectomy procedure is usually highly successful for relieving the leg pain (sciatica) caused by a herniated disc. Although the nerve root takes several weeks or months to fully heal, patients often feel immediate relief of their leg pain and usually have a minimal amount of discomfort following the surgery. Depending on the patient's clinical situation and the surgeon's preference, a lumbar laminectomy (open decompression), arthroscopic lumbar discectomy (endoscopic percutaneous discectomy) or microendoscopic surgery may also be considered.

Any patient who has progressive neurological deficits, or develops the sudden onset of bowel or bladder dysfunction, should have an immediate surgical evaluation, as these conditions may represent a surgical emergency. Fortunately, these conditions are rare.

