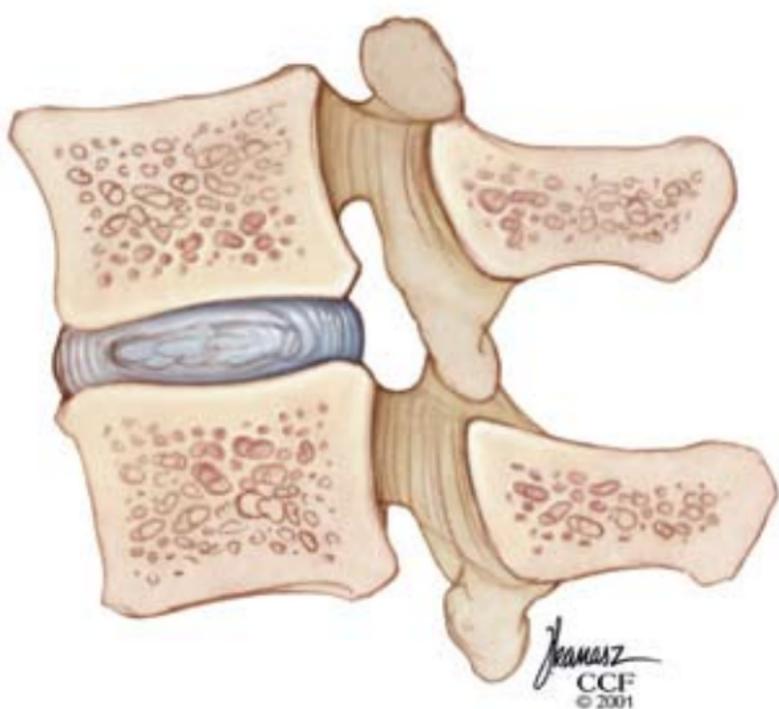


# Herniated Cervical Disc

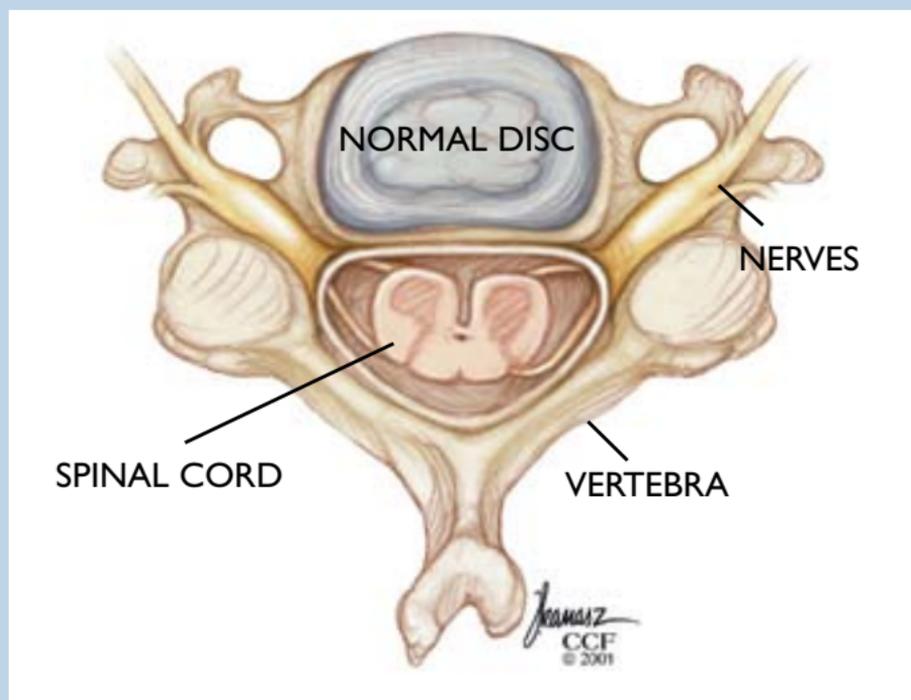


**North American Spine Society  
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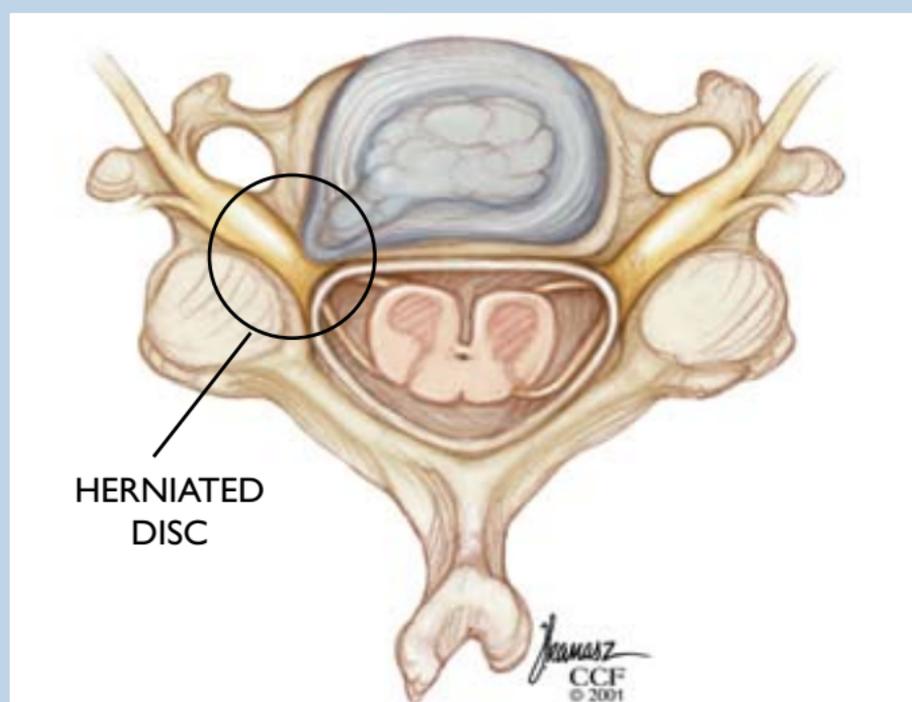
# What Is a Herniated Disc?

The backbone, or spine, is composed of a series of connected bones called “vertebrae.” The vertebrae surround the spinal cord and protect it from damage. Nerves branch off the spinal cord and travel to the rest of the body, allowing for communication between the brain and the body. The brain can send a message down the spinal cord and out through the nerves to make the muscles move. The nerves also send information such as pain and temperature from the body back to the brain.

The vertebrae are connected by a disc and two small joints called “facet” joints. The disc, which is made up of strong connective tissues which hold one vertebra to the next, acts as a cushion or shock absorber between the vertebrae. The disc and facet joints allow for movements of the vertebrae and therefore let you bend and rotate your neck and back.



The disc is made of a tough outer layer called the “annulus fibrosus” and a gel-like center called the “nucleus pulposus.” As you get older, the center of the disc may start to lose water content, making the disc less effective as a cushion. As a disc deteriorates, the outer layer can also tear. This can allow displacement of the disc’s center (called a herniated or ruptured disc) through a crack in the outer layer, into the space occupied by the nerves and spinal cord. The herniated disc can then press on the nerves and cause pain, numbness, tingling or weakness in the shoulders or arms. Your doctor may test for changes in the reflexes, sensation and strength in your arms caused by the herniated cervical disc. Rarely, the herniated disc may put pressure on the spinal cord, causing problems in the legs as well.





## How Is it Diagnosed?

A thorough clinical evaluation to determine the character and location of the pain plus an examination of the neck and careful assessment of any weakness, loss of sensation or abnormal reflexes can often diagnose and locate a disc herniation.

The doctor's diagnosis can be confirmed by X-ray studies, CT scans or MRIs. The X-ray image can show bone spurs and narrowing of the disc space as the spine ages and deteriorates, but cannot show a disc herniation or nerves in the spine. The CT and MRI scans provide more detailed pictures of all the spinal elements (vertebrae, discs, spinal cord and nerves) and can identify most disc herniations.

Additionally, electrical (nerve conduction) studies may be performed to look for signs or evidence of nerve damage that can result from a disc herniation.



## What Treatments Are Available?

Many patients with symptoms of a herniated cervical disc will improve without any treatment.

For patients that continue to have pain, there are a number of other options. There are many medications that can help decrease the pain associated with cervical disc herniation.

Many patients will improve with nonsurgical treatment or “conservative care.”

Your doctor may prescribe nonsurgical treatments including a short period of rest, a neck collar, antiinflammatory medications to reduce the swelling, analgesic drugs to control the pain, physical therapy, exercise or epidural steroid injection therapy. The goals of nonsurgical treatment are to reduce the irritation of the nerve from the herniated disc material, relieve pain, and improve the physical condition of the patient. This can be accomplished in the majority of herniated disc patients with an organized care program that often combines a number of treatment methods.

Ask your doctor whether you should continue to work while you are being treated.



## Nonsurgical Treatment

After the onset of pain from a herniated cervical disc, a short (1-2 days) period of rest may be beneficial. After this short period of rest it is important to begin moving again to prevent stiff joints or weak muscles. Your doctor, with the help of a nurse or physical therapist, may also begin education and training on specific exercises to strengthen your neck. These exercises may be performed at home or you may visit a physical therapist for a more specific program to meet your needs and abilities. It is important to perform the exercises as described by the doctor or physical therapist.

Your doctor or physical therapist may also use traction, electric stimulation, hot packs, cold packs and manual (“hands on”) therapy to reduce your pain, inflammation and muscle spasm.



## Medication and Pain Management

Medications used to control pain are called analgesics. Most pain can be treated with nonprescription medications such as aspirin, ibuprofen, naproxen or acetaminophen. Sometimes your doctor will prescribe **muscle relaxants**. If you have severe persistent pain, your doctor might prescribe **narcotics** for a short time. However, you want to take only the medication you need because taking more doesn't help you recover faster, might cause unwanted side effects (such as constipation and drowsiness) and can result in dependency. All medication should be taken only as directed.

Make sure you tell your doctor about any kind of medication you are taking—even over-the-counter drugs—and if he/she prescribes pain medication, let him/her know how it is working for you. Also, be sure to notify your doctor of any allergic reactions to medication you have ever experienced.

**Nonsteroidal antiinflammatory medications (NSAIDs)** are analgesics and are also used to reduce swelling and inflammation that occur as a result of disc herniation. These include aspirin, ibuprofen, naproxen and a variety of prescription drugs. If your doctor gives you antiinflammatory medications, you should watch for side effects like stomach upset or bleeding. Chronic use of prescription or over-the-counter NSAIDs should be monitored by your physician for the development of any potential problems. *(For more information, see the NASS patient education brochure on NSAIDs.)*



# Medication and Pain Management

*Continued...*

**Corticosteroid medications**—either orally or by injection are sometimes prescribed for more severe arm and neck pain because of their very powerful antiinflammatory effect. Corticosteroids, like NSAIDs, can have side effects. Risks and benefits of this medication should be discussed with your physician.

**Epidural injections** or “blocks” may be recommended if you have severe arm pain. These are injections of corticosteroid into the epidural space (the area around the spinal nerves), performed by a doctor with special training in this technique. The initial injection may be followed by one or two more injections at a later date. This should be done as part of a comprehensive rehabilitation and treatment program. The purpose of the injection is to reduce inflammation of the nerve and the disc.

**Trigger point injections** are injections of local anesthetics (sometimes combined with corticosteroids) directly into painful soft tissue or muscles along the spine. While occasionally useful for pain control, trigger point injections do not help heal a herniated cervical disc.



# Surgical Treatment

For patients whose pain does not improve with the previous treatments, surgery may be necessary. The goal of surgery is to remove the portion of the disc that is pushing on the nerve. This is done by a procedure called a discectomy.

Depending on the location of the herniated disc, the surgeon may make an incision either in the front or back of your neck to reach the spine. The technical decision of whether to perform the operation from the front of the neck (anterior approach) or the back of the neck (posterior approach) is influenced by many factors including the exact location of the disc herniation and the experience and preference of the surgeon. With either approach, the disc material is removed from the nerve, usually with good results.

Because removal of the herniated disc fragment from the front removes most of the disc in addition to the herniated portion, fusion is often recommended and performed at the same time. *(Please see the North American Spine Society patient education brochure on Spinal Fusion Surgery.)*

## What Can I Expect After Surgery?

Many patients are able to go home within a short period of time—sometimes as little as 24 hours after surgery. After surgery, your doctor will give you instructions on when you can resume your normal daily activities.

A thorough postoperative rehabilitation program is advisable to help you resume the activities of daily living. Most patients will benefit from a postoperative exercise program or supervised physical therapy after surgery. You should ask your doctor about exercises to help with recovery.

Surgery is very effective in reducing the pain in the arms and shoulders caused by a herniated cervical disc. However, some neck pain may persist.

Most patients respond well to discectomy; however, as with any surgery, there are some risks involved. These include bleeding, infection and injury to the nerves or spinal cord. It is also possible that pain will not improve following surgery or that symptoms may return. In about 3-5% of patients, the disc will rupture again and cause symptoms at a later time.



FOR MORE INFORMATION,  
PLEASE CONTACT:

NORTH AMERICAN SPINE SOCIETY  
7075 VETERANS BOULEVARD  
BURR RIDGE, IL 60527  
PHONE (866) 960-NASS (6277)  
FAX (630) 230-3700

VISIT US ON THE INTERNET AT:  
[WWW.KNOWYOURBACK.ORG](http://WWW.KNOWYOURBACK.ORG)



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### DISCLAIMER

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