

## **Anterior Cervical Discectomy**

### ***Cervical Radiculopathy***

Usually, when something hurts, you don't have to look far to find the source of the pain. But an injury near the root of a nerve could result in pain at the end of the nerve, where sensation is felt. For example, an injury to the vertebrae or disks in your neck (your cervical vertebrae) could result in pain, numbness or weakness in your shoulder, arm, wrist or hand. That's because the nerves that extend out from between the cervical vertebrae provide sensation and trigger movement in these areas, this condition is called cervical radiculopathy

#### **Causes of cervical radiculopathy**

Several conditions can put pressure on nerve roots in the neck. The most common causes for cervical radiculopathy are:

- Herniated cervical disk. In this situation, the outer layer (annulus) of the disk cracks and the gel-like center (nucleus) breaks through. This causes the disk to protrude, putting pressure on the nerve that exits the spinal column at that point.
- Spinal stenosis. Sometimes, the space in the center of the vertebrae narrows and squeezes the spinal column and nerve roots.
- Degenerative disk disease. As we age, the water content in our body cells diminishes and other chemical changes occur that can cause the disk to shrink. Without sufficient cushioning, the vertebrae may begin to press against each other, pinching the nerve, or to form bony spurs.

#### **Diagnosis and treatment**

Your physician will give you a careful examination and ask about your symptom history. You may be asked to extend and rotate your neck and/or arm to reproduce the pain symptoms. An X-ray will usually show any degenerative disk problems. Sometimes your physician may request an MRI (magnetic resonance image) or a CT scan (computed tomography) using a colored dye to outline the nerves. Initial treatment is usually conservative and aims to reduce the pain by easing the pressure on the nerves. The treatment consists of three parts: rest, medication and physical therapy.

- Rest. You may have to take it easy for a few days or wear a soft cervical collar to limit motion and relieve irritation on the nerves.
- Medication. Your doctor may prescribe a non-narcotic pain medicine and anti-inflammatory drugs to relieve any swelling.
- Physical therapy. After muscle spasms subside, your orthopaedic surgeon may prescribe a cervical traction device or other types of physical therapy such as heat or cold therapies, electrical stimulation, or isometric and

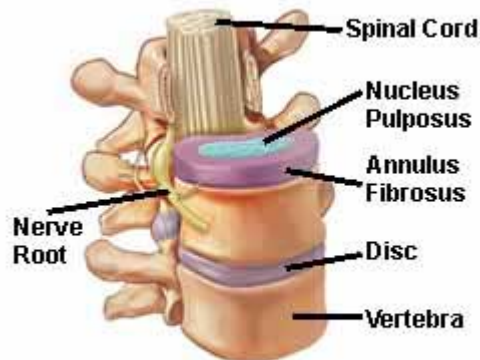
stretching exercises.

If conservative treatment doesn't relieve your pain over the course of 6 to 12 weeks, surgery may be an option. The surgical procedure will depend on the underlying condition. Your orthopaedic surgeon will discuss the options with you. In most cases, surgery not only relieves the pain, but also improves functioning and movement of the affected areas.

For some people with chronic neck pain or other disorders that affect the cervical spine, an anterior cervical discectomy may be needed. The following information discusses this common surgical procedure.

### **Cervical Pain**

Millions of people suffer from pain in their necks or arms. A common cause of cervical pain is a rupture or herniation of one or more of the cervical discs. This happens when the annulus of the disc tears and the soft nucleus squeezes out. As a result, pressure is placed on the nerve root or the spinal cord and causes pain in the neck, shoulders, arms and sometimes the hands. Cervical disc herniations can occur as a result of aging, wear and tear, or sudden stress like from an accident.



Most cases of cervical pain do not require surgery and are treated using non-surgical methods such as medications, physical therapy and/or bracing. However, if patients experience significant pain and weakness that does not improve, surgery may be necessary.

### **Surgical Technique**

An anterior cervical discectomy is the most common surgical procedure to treat damaged cervical discs. Its goal is to relieve pressure on the nerve roots or on the spinal cord by removing the ruptured disc. It is called anterior because the cervical spine is reached through a small incision in the front of the neck (anterior means front). During the surgery, the soft tissues of the neck are separated and the disc is removed. Sometimes the space between the vertebrae are left open. However, in order to maintain the normal height of the disc space, the surgeon may choose to fill the space with a bone graft.

A bone graft is a small piece of bone, either taken from the patient's body (usually from the pelvic

area) or from a bone bank. This piece of bone fills the disc space and ideally will join or fuse the vertebrae together. This is called fusion. It usually takes a few months for the vertebrae to completely fuse. In some cases, some instrumentation (such as plates or screws) may also be used to add stability to the spine.

### **After Surgery**

Patients will feel some pain after surgery, especially at the incision site. Pain medications are usually given to help control the pain. Upon a physician's direction, moist heat and frequent repositioning can also provide some relief. While tingling sensations or numbness is common, and should lessen over time, they should be reported to the doctor. Most patients are up and moving around within a few hours after surgery. In fact, this is encouraged in order to keep circulation normal and avoid blood clots.

However, most patients need to remain in the hospital, gradually increasing the amount of time they are up and walking, before they are discharged. Prior to discharge the doctor will provide the patient with careful directions about activities that can be pursued and activities to be avoided. Often patients are encouraged to maintain a daily low-impact exercise program. Walking, and slowly increasing the distance each day, is the best exercise after this type of surgery. Some discomfort is normal, but pain is a signal to slow down and rest.

Signs of infection like swelling, redness or draining at the incision site, and fever should be checked out by the surgeon immediately. Keep in mind, the amount of time it takes to return to normal activities is different for every patient. Discomfort should decrease a little each day. Increases in energy and activity are signs that recovery is going well. Maintaining a healthy attitude, a well-balanced diet, and getting plenty of rest are also great ways to speed up recovery.