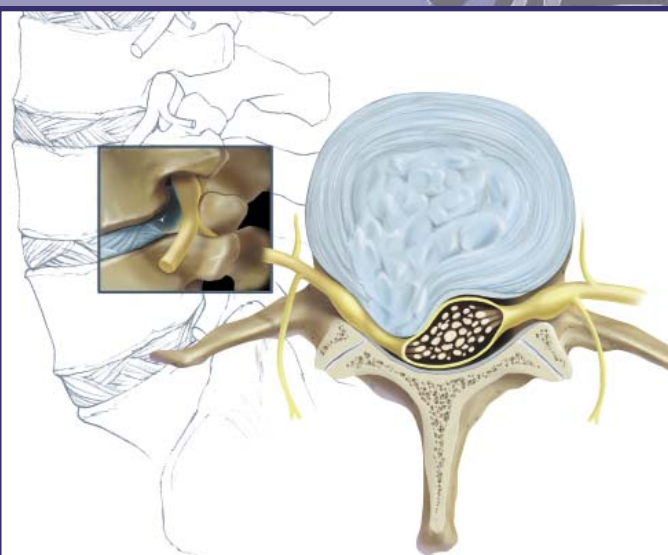


# OPEN DISCECTOMY



NORTH AMERICAN  
SPINE SOCIETY  
PUBLIC EDUCATION  
SERIES

## WHAT IS OPEN DISCECTOMY?

Open discectomy is the most common surgical treatment for ruptured or herniated discs of the lumbar spine. Vertebral discs are the cushioning and connecting materials that lie between the bones of the spine, called “vertebrae.” When the outer wall of a disc, called the annulus fibrosus, becomes weakened through age or injury, it may tear allowing the soft inner part of the disc, the nucleus pulposus, to bulge out. This is called disc herniation, disc prolapse, or a slipped or bulging disc. Once the inner disc material extends out past the regular margin of the outer disc wall, it can press against very sensitive nerve tissue in the spine. The “bulging” disc can compress or even damage the nerve tissue, and this can cause weakness, tingling, or pain in the back area and into one or both legs. Open discectomy uses surgery to remove part of the damaged disc and thus relieve the pressure on the nerve tissue and alleviate the pain.

The surgery involves a small incision in the skin over the spine, the removal of some ligament and bone material and the removal of some of the disc material.

Open discectomy has been performed and improved over the course of the past 60 years. Over time, the procedure has been refined and augmented by improved diagnostic tools—such as magnetic resonance imaging (MRI) and computerized tomography (CT) scans—which have allowed physicians to gain a better understanding of which patients will have the best results from the surgery.

## WHO NEEDS OPEN DISCECTOMY?

All patients with herniated discs are not candidates for the open discectomy procedure. Most people may find pain relief in conservative treatments such as rest, physical therapy, anti-inflammatory medications and epidural injections. However, sometimes the pain does not respond to these therapies and may require a more aggressive intervention.

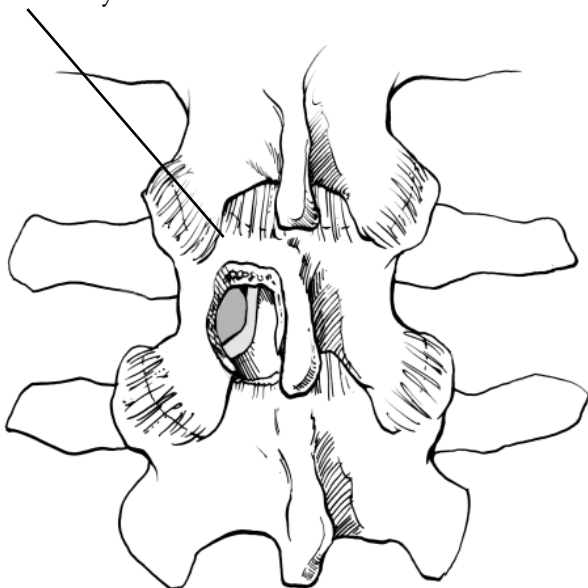
If back and leg pain does not respond to conservative treatment and continues for four to six weeks or longer, the physician may prescribe diagnostic tests, such as X-rays, MRI or a CT scan, to verify the source of the pain and extent of any injury. If a diagnosis of herniated disc is confirmed, open discectomy may be recommended.

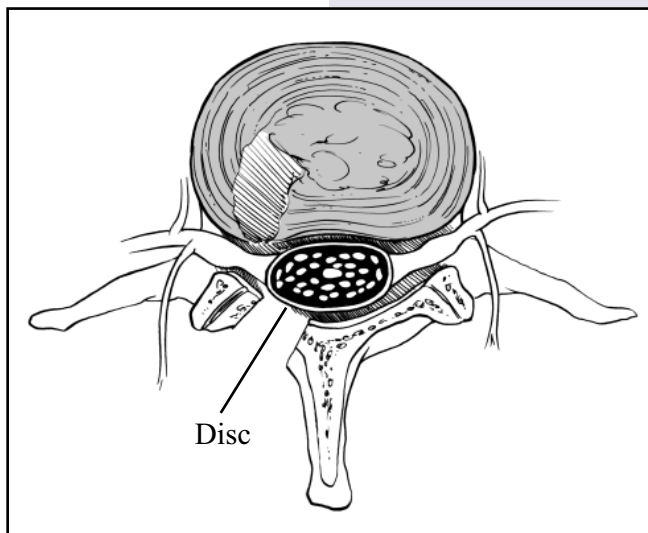
Currently, spine surgery is undergoing a revolution in the way certain surgeries are performed. Discectomies can now be performed arthroscopically, that is through a smaller incision using specialized tools under local anesthesia. In some simpler cases this type of surgery may be recommended, however open discectomy is still considered the “gold standard” by the spine community for surgical treatment of herniated discs that are causing severe pain or weakness, if the bulge of the disc is extensive, or if pieces of the disc or surrounding bone have actually broken off. Open discectomy allows the surgeon the greatest ability to see and explore the surgical site.

## HOW IS OPEN DISCECTOMY PERFORMED?

Open discectomy is usually performed under general anesthesia (the patient is unconscious) and typically requires a one-day hospital stay. It is performed while the patient is lying face down or in a kneeling position. During the procedure, the surgeon will make an approximate one-inch incision in the skin over the affected area of the spine. Muscle tissue is removed from the bone above and below the affected disc and retractors hold the muscle and skin away from the surgical site so the surgeon has a clear view of the vertebrae and disc. In some cases bone and ligaments may have to be removed for the surgeon to be able to visualize and then gain access to the bulging disc without damaging the nerve tissue, this is called a laminectomy or laminotomy depending on how much bone is removed.

Bone may be removed to access the affected disc





Once the surgeon can visualize the vertebrae, disc and other surrounding structures, he or she will remove the section of the disc that is protruding from the disc wall and any other disc fragments that may have been expelled from the disc. This is often done under magnification. No material is used to replace the disc tissue that is removed. The incision is then closed with sutures and the patient is taken to a recovery room.

## WHAT HAPPENS AFTER SURGERY?

After surgery you may feel pain at the site of the incision, and the original pain may not be completely relieved immediately after surgery. Your doctor may prescribe pain medication to ease you through the immediate postoperative period. You will be instructed on deep breathing techniques and encouraged to cough in order to free your lungs of any fluid buildup that may occur due to the general anesthesia. It is recommended that, with supervision, you begin walking as soon as you are fully recovered from the anesthesia to aid your recovery.

Before you are discharged from the hospital, a physical therapist may visit with you to help you feel comfortable performing activities such as climbing stairs, sitting, and getting out of a car or bed. Once you are discharged from the hospital, your physician may prescribe a physical therapy regimen suited to your condition.

At home, you may have some minor restrictions such as not sitting for long periods of time, lifting objects more than five pounds, or excessive bending or stretching for the first four weeks after surgery. Also, you should not attempt to drive an automobile until you have been instructed to do so by your physician.

## WHAT ACTIVITIES CAN I DO AFTER SURGERY?

Walking is the first physical activity you can attempt—in fact it is widely encouraged. Walking will allow you to maintain mobility in your the spine as well as decrease the risk of scar tissue forming at the operative site. In a few weeks, you may be allowed to ride a bike or swim. Formal physical therapy may maximize your recovery.

Most people with jobs that are not physically challenging can return to work in two to four weeks or less. Those with jobs that require heavy lifting or operating heavy machinery that can cause intense vibration may need to wait at least six to eight weeks after surgery to return to work. Again, physical therapy may have a role in your recovery.

## ARE THERE POSSIBLE COMPLICATIONS?

Possible complications from open discectomy include bleeding, infection, spinal fluid leak, injury to the veins and arteries near the spine, or injury to the nerve tissue of the spine or its surrounding protective layer (the dura mater).

It is also possible for the same disc to be injured again after surgery, which is called recurrent disc herniation. Recurrent disc herniation has been shown to occur in approximately 5% to 10% of open discectomy cases.

All surgical procedures have the risk of complications and all risks should be discussed with your surgeon prior to undergoing any procedure. There are certain warning signs you should look for after surgery that may indicate a problem, such as excessive bleeding, redness or discharge from the incision, fever, weakness or numbing of the legs, or problems urinating. If you experience any worrisome symptoms, notify your physician at once.

## HOW SUCCESSFUL IS OPEN DISCECTOMY?

Medical studies have shown that good results are achieved in 80% to 90% of the cases treated with open discectomy. Studies have also shown that people with radicular pain, that is pain that runs down the legs, may have more pain relief than those who undergo open discectomy for low back pain.

To maximize effectiveness, open discectomy is reserved for people who are experiencing buttock and leg pain or weakness that is persistent, severe and/or disabling. If your back or leg pain is not at that level, open discectomy may not be advisable for you and you can possibly do as well with conservative treatment or less invasive therapies.

If you have back or leg pain or weakness, you should be sure to talk to your doctor about your pain and consider all options available prior to undergoing any type of surgical procedure.

A vertical graphic on the right side of the page, consisting of a series of stylized, overlapping shapes that resemble the vertebrae of a spine. The shapes are rendered in a light purple color with dark purple outlines, set against a darker purple background.

FOR MORE INFORMATION,  
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