Cervical Disk Surgery

Relieving Symptoms with Decompression and Fusion
Do you suffer from nagging neck and arm pain or weakness caused by a disk problem in your upper (cervical) spine? Is a simple turn of your head painful or even impossible? If nonsurgical care hasn’t helped you, your surgeon may suggest cervical disk surgery.

CONSIDER CERVICAL DISK SURGERY

When Pain Takes Over Your Life

Any pain can be annoying. But ongoing pain or weakness in your neck or arm can restrict the use of your arm and hand. This can impair your ability to work. Even worse, you may have found that none of the treatments you’ve tried—rest, medication, physical therapy, injections—have relieved your symptoms. You may feel as though pain has taken over your life.

Cervical Disk Surgery May Help

Most cervical disk problems improve with nonsurgical care. But many people find relief from pain and weakness only after cervical disk surgery. During this surgery, your surgeon may be able to treat the problem causing your symptoms. Surgery has its limitations—it can’t remove all the effects of overuse or aging, and it does have risks. Yet, it may let you take control of your life again.
How has your cervical spine problem affected your life? Think about the following questions. This self-assessment may help you decide if the benefits of treating your neck problem outweigh the risks and inconvenience of surgery.

**Physical Effects**
Do you miss work because of your pain?
Does your neck pain shoot down your arm?
Does your arm or hand feel numb or weak?
Do you have headaches, or pain between your shoulder blades?

**Social Effects**
Are you unable to join in family activities because of your pain?
Does your pain force you to spend time alone, away from family and friends?
When you are with other people, do you find yourself distracted by your discomfort and unable to enjoy yourself?

**Emotional Effects**
Does your pain make you feel frustrated or depressed?
Are you afraid of losing your job due to too much time off?
Do you ever feel that other people think your pain isn’t real?
Do you feel that you have no control over your life?
Your neck needs to be strong to hold up your head, which may weigh 10 pounds or more. But injury, poor posture, wear and tear, and diseases such as arthritis can damage the structures of your cervical spine. Or you may have a family tendency to develop disk problems. Pain and weakness in your neck and arms may result.

A Healthy Cervical Spine

The upper spine is a flexible column made up of the cervical vertebrae. These seven bones are separated by spongy, shock-absorbing disks. The spinal cord runs through a large central opening (spinal canal) formed by the vertebrae. Nerves branching from the spinal cord travel to your arms and other parts of your body through small openings (foramina) between the vertebrae. As you grow older, it’s normal for your disks to wear out and harden. As a result, your neck may not be as flexible as it once was.

**Foramina** are openings between vertebrae.

**Nerves** exit on both sides of the vertebra through the foramina.

**The lamina** is the outer bony wall of the spinal canal.

**The disk** consists of a spongy center (nucleus) surrounded by a tougher outer ring (annulus).

**The spinal cord** travels through the spinal canal.
Your Problem Spine

One of the most common cervical spine problems is a damaged disk. A disk may be injured and bulge outward (herniation). The bulge may press on a nerve. Or it may wear out gradually (degeneration). A worn-out disk may become so flat that the vertebrae above and below it slip back and forth or almost touch. As disks wear out, abnormal bone growths (bone spurs) can form on the vertebrae and in the foramina, causing narrowing (stenosis).

With a herniated disk, the annulus tears or the nucleus pushes through the annulus. The herniated portion of the disk may press on a nearby nerve. This may cause neck or arm pain, or weakness in the arm.

In degenerative disk disease, the disks flatten over time. The surrounding vertebrae begin to touch, and the nerves may be pinched. Bone spurs may also form, further irritating the nerves.

In stenosis, bone spurs grow into the foramina and spinal canal, narrowing the openings. The nerves and spinal cord may be compressed, resulting in pain, weakness, numbness, and loss of coordination.

Arm pain and weakness may be caused by pressure on the nerves traveling from the cervical spine down the arm.
Before your doctor can design a treatment plan, your spine problem needs to be carefully evaluated. The more precise the diagnosis, the more targeted and successful your treatment can be. Your evaluation may include a medical history, physical exam, and diagnostic tests.

**Medical History**

Your doctor will ask about your symptoms, when you feel them, and what parts of your body are affected. To help assess how your neck problem is affecting your life, you may be asked about work and other activities. You may also be asked about any past and current medical problems.

**Physical Exam**

The physical exam allows the doctor to be sure that other problems aren’t causing your symptoms. Your doctor will examine your neck to find out how well you can move it and to see which movements cause symptoms. To find out if the cervical nerves are involved, your doctor will check the feeling and strength in your arms and hands. He or she will also test your reflexes.
Diagnostic Tests

You may have one or more tests to confirm the diagnosis and pinpoint the location of your spine problem:

- **X-rays** show the general condition of the vertebrae.
- **MRIs (magnetic resonance imaging)** produce images of disks, the spinal cord, and other soft tissue.
- **CT scans** show the bony vertebrae.
- **Myelograms** are special x-rays that use a contrast fluid to outline the nerves and spinal cord.
- **EMGs (electromyograms)** measure nerve function in your arm.

Your doctor may do other tests as well—blood tests to screen for arthritis, bone scans to check for cancer, and diskography, an x-ray test that may help find which disks are damaged.

Choosing Surgery

Based on your exam and test results, your doctor may first prescribe nonsurgical care. If this type of care doesn’t help, your doctor may suggest surgery. But the decision whether or not to have surgery is yours. Read on to learn more about the treatment choices.
Your doctor may recommend rest, medications, physical therapy, exercises, or injections. These nonsurgical treatments often relieve symptoms. If your symptoms persist, you and your doctor may decide that surgery is the best option for you.

**Relieving Your Symptoms**

Your doctor may recommend:

- **Medications** to reduce the pain and inflammation in your neck.

- **Epidural steroid injections** (injections into the spinal canal near the spinal cord). This may relieve severe pain and reduce inflammation.

- **Restricted activities** or bed rest to give your cervical spine a chance to heal.

- **A soft cervical collar** to wear for a couple of weeks. The collar helps support your head while keeping your cervical spine aligned.

- **Traction** two or more times a day for a couple of weeks. This may help relieve the pressure on the irritated nerves in your cervical spine.
Restoring Movement and Strength

To help you regain strength and movement in your neck, your doctor may prescribe physical therapy. A physical therapist may teach you special exercises to improve your neck’s strength and range of motion. Posture and movements that can affect your cervical spine may be evaluated and corrected. Therapies such as heat, massage, and traction may also help to relieve your symptoms.

Self-Care

You’ll take an active role in your therapy. To protect your neck from further injury:

• Follow any exercise program given to you by your doctor or physical therapist. This may include resistance and range-of-motion exercises.

• Practice good posture whether you’re sitting, standing, or moving.

• Have your workspace evaluated. Rearrange it as suggested. Using a telephone headset even at home may help you avoid painful positions.

• When lying on your back, support your neck with a special cervical pillow or a rolled-up towel.
YOUR ROLE BEFORE SURGERY

If you decide to have surgery, you can help make it a success. Be sure you know what to expect, and be prepared. Plan ahead for your surgery. Have realistic expectations about what surgery can do for you. And follow all of your surgeon’s instructions.

Planning Ahead

Having surgery can be stressful. But if you plan ahead, you can make your recovery easier. Talk to your surgeon about how much time you’ll need to be away from work. You may not be able to drive or do certain other activities for a few weeks after surgery. Make sure family or friends can help you with errands and household chores.

Having Realistic Expectations

What is a good surgical result for you? This surgery can help relieve neck and arm symptoms. But symptoms may not go away completely. Having realistic expectations may be the key to success. Before you have cervical disk surgery, learn what this procedure can and can’t do for your problem. Discuss your expectations with your surgeon.
If You Need a Bone Graft

Depending on the type of surgery, you may need a bone graft. The graft is a piece of bone that can be obtained from a bone bank (allograft) or from a bone in your own body (autograft), for example, your pelvic (hip) bone. Your surgeon will discuss these options with you.

Fitting a Brace

Depending on your problem, your surgeon may recommend a rigid brace, a soft cervical collar, or no brace at all. A brace can help protect your cervical spine while it’s healing by limiting its motion. The brace may be fitted before surgery or right afterward.

Before Surgery

To prepare for surgery:

• You may be told to stop taking certain medications, including herbal supplements and nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen.
• Your surgeon may instruct you to stop smoking.
• You will be told not to eat or drink anything after midnight the night before surgery.
• You will be asked to sign a surgery consent form.
• Your healthcare provider will discuss your options for anesthesia (medication to keep you asleep during surgery).

Risks and Complications

Your surgeon will discuss possible risks and complications of surgery, which include:

• Problems with swallowing
• Persistent hoarseness
• Side effects from anesthesia
• Failure of the graft to fuse
• Shifting or displacement of bone graft
• Damage to nearby structures
• Bleeding and possible need for transfusion
• Infection
• Spinal cord or nerve damage
During surgery, your surgeon may remove all or part of the disk (diskectomy). To reach the cervical spine, he or she may make an incision in the front (anterior) or the back (posterior) of your neck. With the anterior approach, the neck may be made more stable with a fusion (joining) of the vertebrae. With the posterior approach, bone may be removed to enable your surgeon to reach the disk.

**Through the Front: Anterior Approach**

Your surgeon will make a horizontal or vertical incision (about 1 to 3 inches long) on either side of your neck. To reach the disk, soft tissue is moved aside. All or part of the disk that is irritating the nerve is then removed. Your surgeon may remove bone spurs. The vertebrae may then be prepared for a fusion.

**Through the Back: Posterior Approach**

Your surgeon will make an incision (about 2 to 4 inches long) in the middle of the back of your neck. Then he or she may remove bone to reach the problem area. The surgeon then removes the damaged portion of the disk.
Adding Stability: Fusion
After removing a disk from the front, your surgeon may fuse the vertebrae above and below it. This limits movement, helping to relieve pressure and pain. First, the surgeon enlarges the space between the vertebrae. The surgeon then “plugs” the space with a cylinder- or wedge-shaped bone graft. Metal plates may be added. As you heal, the graft and vertebrae grow together. After fusion, your ability to bend your neck may be slightly restricted.

Removing Bone
To reach the disk from the back, your surgeon may enlarge the foramina or remove a portion of the lamina. To help relieve pressure on the nerves or spinal cord, bone spurs may also be removed.
YOUR ROLE IN RECOVERY

You need to protect your cervical spine as it heals. This can best be done by following your surgeon’s instructions about restricting activities and wearing your brace if you have one. Once you’re no longer wearing a brace, you and your doctor can discuss ways to get your neck in shape.

In the Hospital

Expect to spend about 1 to 4 days in the hospital. Right after surgery, you’ll be monitored in the recovery room for a couple of hours. Then you’ll be moved to a hospital room. You may have a drainage tube in your neck. The drain will be removed in a day or so. You may also have a brace to protect your neck. Your surgeon may instruct you to wear the brace all day, even when sleeping and showering. Your throat may be sore for a couple of days, so you may prefer a liquid or soft diet for a while. And you’ll get pain medication as needed.

At Home

As you recover:

- Use a brace as directed by your surgeon. You may need to wear a brace for up to 3 months. Your surgeon may instruct you to wear it 24 hours a day. Or you may be allowed to take it off for short periods.

- Keep the incision clean and dry until instructed otherwise.

- Don’t drive, lift heavy objects, or return to work without your surgeon’s approval.

- Practice good posture when you walk and sit. This helps reduce stress on your neck.

Elevating your head may help relieve pressure on your swollen throat.

A brace or collar may provide stability while you’re healing.
Follow-up Care

Your surgeon will schedule one or more follow-up visits to make sure your recovery is successful. To ensure the best possible results, follow all of your surgeon’s instructions. If you had fusion, x-rays may be taken to see how well the graft is healing. The graft should be almost completely healed in about 3 to 6 months. Your surgeon may also evaluate nerve function and arm strength if you had arm or hand pain, numbness, or weakness prior to surgery. Once your neck is healed, your doctor may recommend exercises or physical therapy to help strengthen your neck.

Call Your Surgeon If You Have Any of the Following:

- Fever over 100°F (37.7°C)
- Redness or discharge at the incision site
- Difficulty swallowing or breathing
- New neck or arm pain
- Numbness or weakness in arms or legs
- Increased pain

Taking walks can help you regain your strength.

Arm strength may be tested to see if the nerves in your arm are healing.
Surgery on your cervical spine may help relieve your symptoms. With ongoing neck care, you’ll be able to resume most, if not all, of the activities you enjoy. This will let you take control of your life once again. Follow the tips below to keep your spine healthy.

- **Stay active.** Regular exercise, such as walking, keeps your muscles strong and flexible. This supports your spine.
- **Practice good posture.** Stand and sit with your ears, shoulders, and hips in line. Avoid slouching or slumping. A physical therapist can tell you more about how to protect your spine.
- **Don’t smoke.** Smoking may make your disks more prone to damage. It also keeps your muscles from getting all the oxygen they need.
- **Manage stress.** Tension can cause or worsen neck and back problems. Relieving it may ease or prevent neck and back pain.