

*Patient Information*



# ACDF

Anterior Cervical Discectomy and Fusion



*Life moves us* 

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# ACDF

## Anterior Cervical Discectomy and Fusion

### Patient Information

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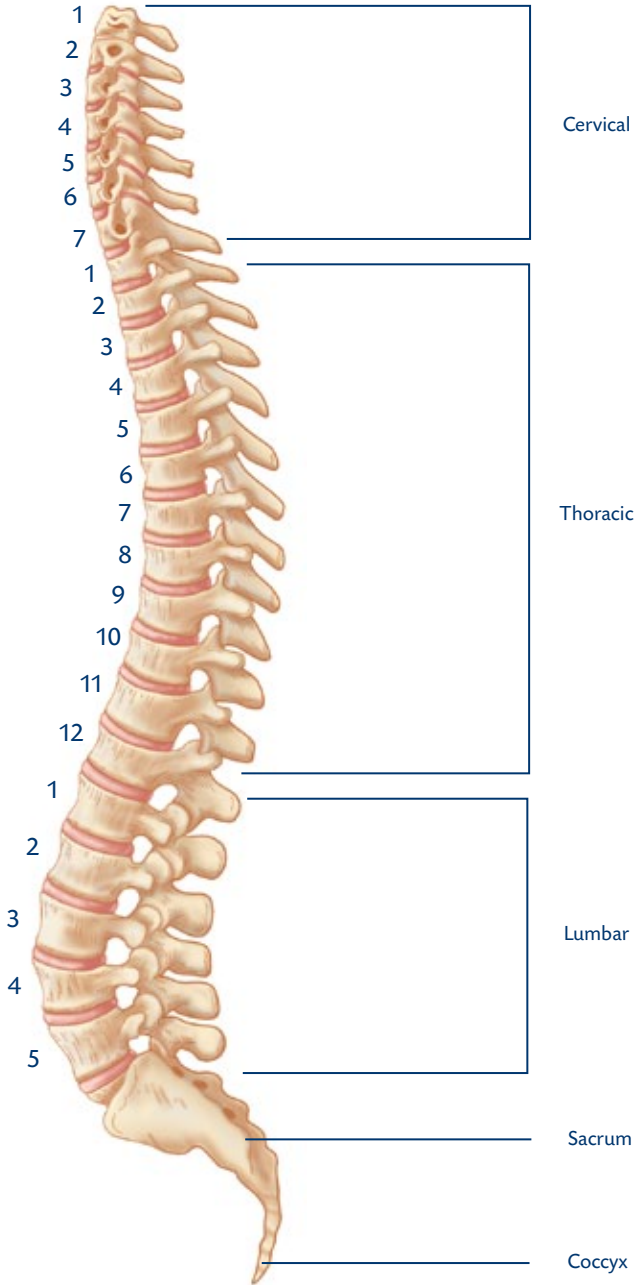
This brochure will help you understand more about:

- General conditions of the spine
- Information about surgical treatment of the cervical spine
- What to expect from surgery

*The decision to receive medical treatment is individualized to the patient and the patient's symptoms. The information presented within this brochure may not apply to your condition, treatment, or its outcome, as surgical techniques vary and complications can occur. It is important to discuss the viability of this procedure with your physician to decide whether this treatment option is right for you.*

*This brochure is intended to be an educational resource only and is not meant to be a warranty or to replace a conversation between a patient and their physician or member of their health care team. Please consult your physician for a complete list of indications, precautions, clinical results and other important medical information that pertains to this procedure.*

# Anatomy of the Spine



# Anatomy of the Spine

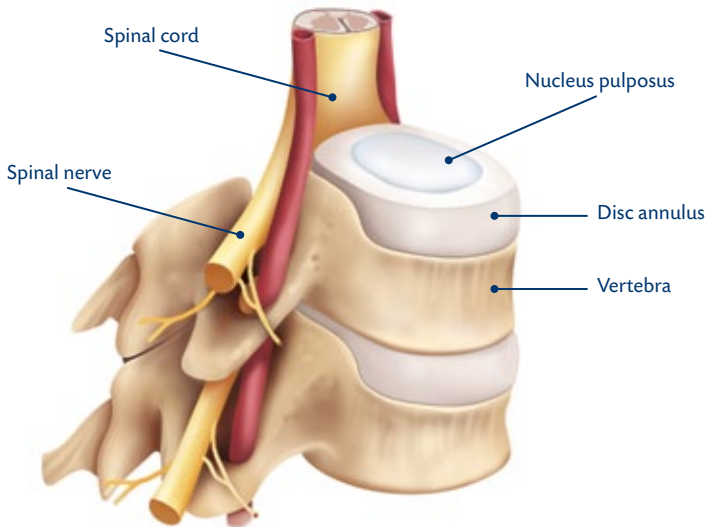
The spine is made up of vertebrae and is divided into three main sections:

- Cervical (7 vertebrae)
- Thoracic (12 vertebrae)
- Lumbar (5 vertebrae)

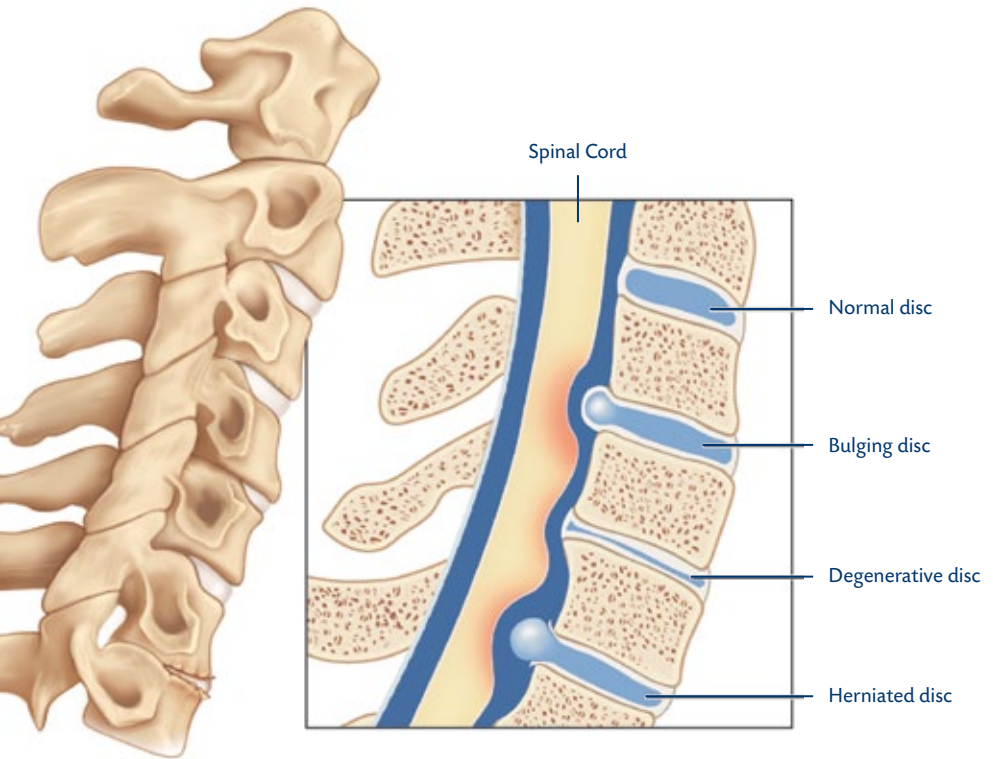
Below the lumbar spine is the sacrum which is comprised of five fused vertebrae. At the end of the spine is the coccyx, or the tailbone.

The vertebrae bear the weight of the upper body and provide points of attachment for muscles and ligaments. It also protects the spinal canal (*cavity that runs successively through each of the vertebrae and contains the spinal cord*) and provides exit points for spinal nerves.

The individual vertebrae are separated by intervertebral discs, which act as cushions or shock absorbers between the vertebral bodies.



# General Conditions of the Cervical Spine



## General Conditions of the Cervical Spine (cont'd)

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In the normal spine, intervertebral discs act as a cushion between vertebrae. Age, genetics, injury, and everyday wear and tear caused by routine activities can contribute to damage and deterioration of the discs in your neck.

### **Degenerative Disc Disease (DDD)**

Over time, the discs can lose flexibility, elasticity, and height. When this happens, the discs' shock absorbing characteristics are reduced and can lead to abnormal motion or alignment and instability of the spine.

### **Herniated Disc**

Degeneration can cause cracks and tears in the outer layer of the intervertebral disc, through which, material inside the disc can be forced out, causing the disc to bulge (protrusion), break open (extrusion), or break into pieces (sequestration), putting pressure on a nerve root or the spinal cord.

### **Spinal Stenosis**

Narrowing of areas in the spine where nerve roots and the spinal cord must travel. This can be caused by herniated discs, osteophytes (bony projections), or ligaments compressing the spinal cord.

Symptoms of these conditions can include:

- loss of motion and dexterity
- tingling or numbness in the arm or hand
- radiating pain, weakness and/or numbness in your shoulders, arms and neck

These symptoms may be treated with non-surgical methods for as long as possible. These treatments include rest, ice or heat, weight control, exercise, physical therapy, epidural injections for pain management, and medication.

If these non-surgical treatments do not bring relief after a period of time, surgical treatments may be recommended to take pressure off the nerves that are causing pain by restoring alignment of the spine and/or the space between the vertebrae.

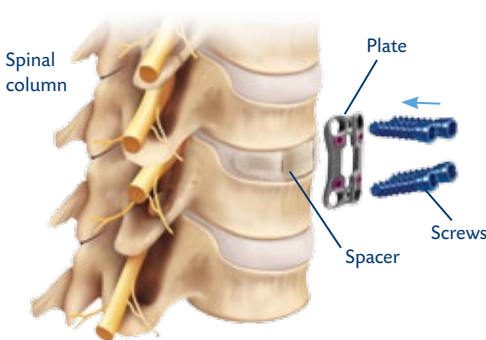
# What is an Anterior Cervical Discectomy and Fusion (ACDF)?

The primary goal of this procedure is to relieve pressure on either the nerve roots or spinal cord and/or treat an unhealthy disc in the cervical spine.

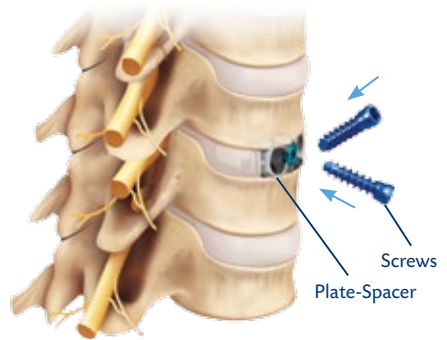


Anterior Cervical means “front of the neck”

The unhealthy disc is removed, via discectomy, and replaced with an interbody fusion implant. A plate, spacer, and screws construct, or an integrated plate-spacer with fixation (i.e. screws, blades, or other anchors), may be used to hold the vertebrae in place while fusion (joining of two bones) occurs.



Spacer with Cervical Plate and Screws



Integrated Plate-Spacer with Screws



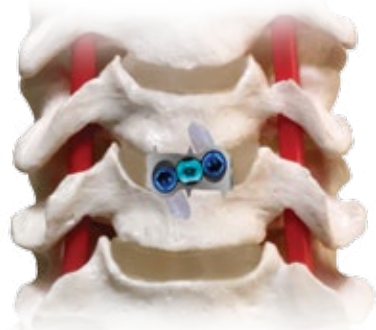
## How is an ACDF Performed?

A small horizontal incision (a surgical cut made in skin) is made in the anterior (front) of the neck to either the left or right of the center. The soft tissues of the neck are gently separated to allow access to the surgical site. Surgical instruments are used to remove the intervertebral disc and decompress (relieve pressure on) the nerve structures.

To fill the vacant disc space and join the vertebrae together, an interbody fusion implant is used. If a combination of a spacer and a plate are used, the spacer is placed into the disc space with the plate placed over top to hold it in place and screws inserted through the plate into the upper and lower vertebrae. Or, if an integrated plate-spacer implant is used, the implant is placed into the disc space and fixation hardware, screws in this example, are inserted to secure the implant in place.

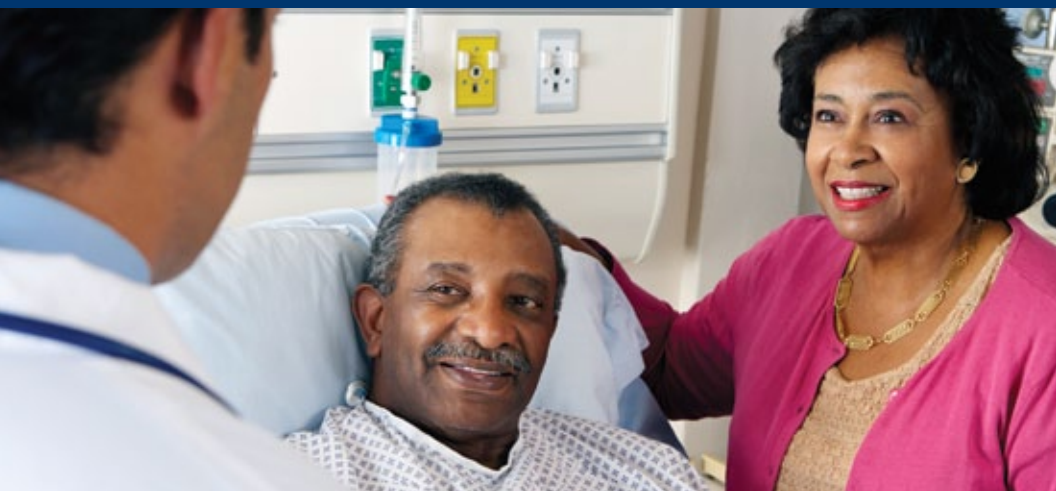


Spacer with Cervical Plate and Screws



Integrated Plate-Spacer with Screws

Over time, the vertebrae can grow together through fusion. This process varies between patients and can take anywhere from a few months up to a couple of years to completely fuse.



## Frequently Asked Questions

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### **What Should I Expect from Surgery?**

Treatment with a minimally invasive ACDF may help you return to normal activities. Patients may notice improvement of some or all symptoms, and pain from surgery may diminish between 2 to 4 weeks after surgery. However, recovery time varies between patients.

It is the surgeon's goal for the patient to eventually return to his/her preoperative activities. A positive attitude, reasonable expectations and compliance with your doctor's post-surgical instructions may all contribute to a satisfactory outcome.

### **When Will I Be Able to Return to Work?**

The amount of recovery time needed prior to returning to work will vary depending on the surgery, your job, and you as an individual. Please consult your surgeon for an individual recommendation.

### **How Long Will I Have Restricted Activities?**

As with any surgery, the duration of time between procedure and return to normal activities is different for every patient. Your surgeon may provide a list of activities you should avoid during the first six weeks after surgery.

## Contraindications, Complications, Warnings and Precautions

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You may be contraindicated (not suitable) for this device if you have an infection, a congenital abnormality, are obese, pregnant, mentally ill, diabetic, suffer from rheumatoid arthritis, osteoporosis, or cancer.

As with any surgical procedure, complications may occur following the placement of this device. These can include but are not limited to early or late implant bending, failure, loosening, movement / migration, bone fracture, and allergic reaction to implant material.

Other general complications associated with any spinal procedure include non-union or delayed union, pseudarthrosis (failed spinal fusion), pain, second surgery, bleeding, early or late infection, spinal cord and / or nerve damage, incisional complication, scar formation, blood vessel damage, cardiovascular system compromise, respiratory problems, complications due to bone grafting, reactions to anesthesia, impotence, sexual dysfunction, paralysis, and death.

*This list does not include all possible contraindications, complications, warnings, or precautions. Please consult with your surgeon for additional information on this topic and how it applies to your particular medical condition.*



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