

ACDF (Anterior cervical discectomy and fusion)

1. General Overview:

- The first goal of an ACDF is to remove a degenerated disc and bone spurs that sit in between neck vertebrae. This is done because the disc and bone spurs may be compressing nerves or the spinal cord resulting in symptoms (please see patient education sections for **“Cervical Pathology”**). The second goal of an ACDF is to stop motion between the affected vertebra. This is accomplished by placing a spacer in the removed disc space and encouraging bony bridging (fusion). In the end, there is no longer pressure on the nerve structures and the fusion prevents motion between the vertebrae.

INSERT FIGURE OF HERNIATED DISC COMPRESSING NEURAL STRUCTURES IN CROSS SECTION

2. Major steps of surgery

- A horizontal or vertical cut is made on either side of the front of the neck
- Your neck muscles are separated from each other gently. Your trachea (windpipe) and esophagus are moved across the middle and the front of your cervical spine (neck) is visualized (See Figure 1).

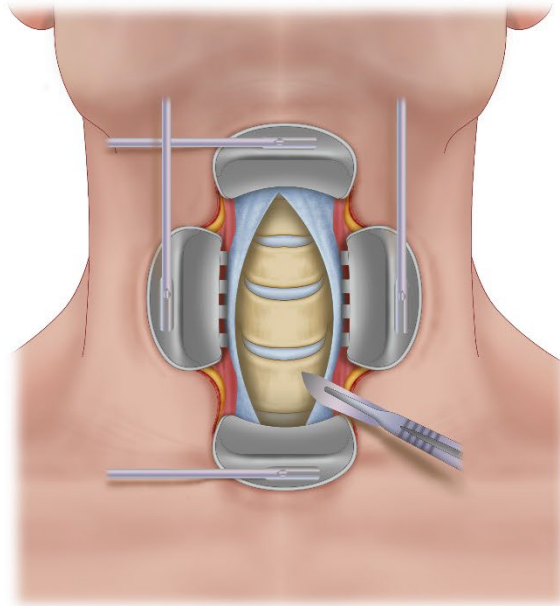


Figure 1

- Next, the degenerative disc(s) and bony spurs causing compression of nerve structures are removed. This disc lays between the vertebra being fused together.
- A spacer device is now inserted to replace the removed disc and keep the space from collapsing. This spacer also encourages bony bridging (fusion) between the vertebrae. The spacer can be made of cadaver bone, your own pelvic bone, plastic, metal, or a combination of the these.
- Sometimes, a metal plate and screws are placed over the front of the spacer connecting the vertebra that need fusion (See Figure 2).
- Sometimes a drain is placed temporarily. This is removed before you go home.
- Next, the incision is closed with suture and a sterile bandage is applied.

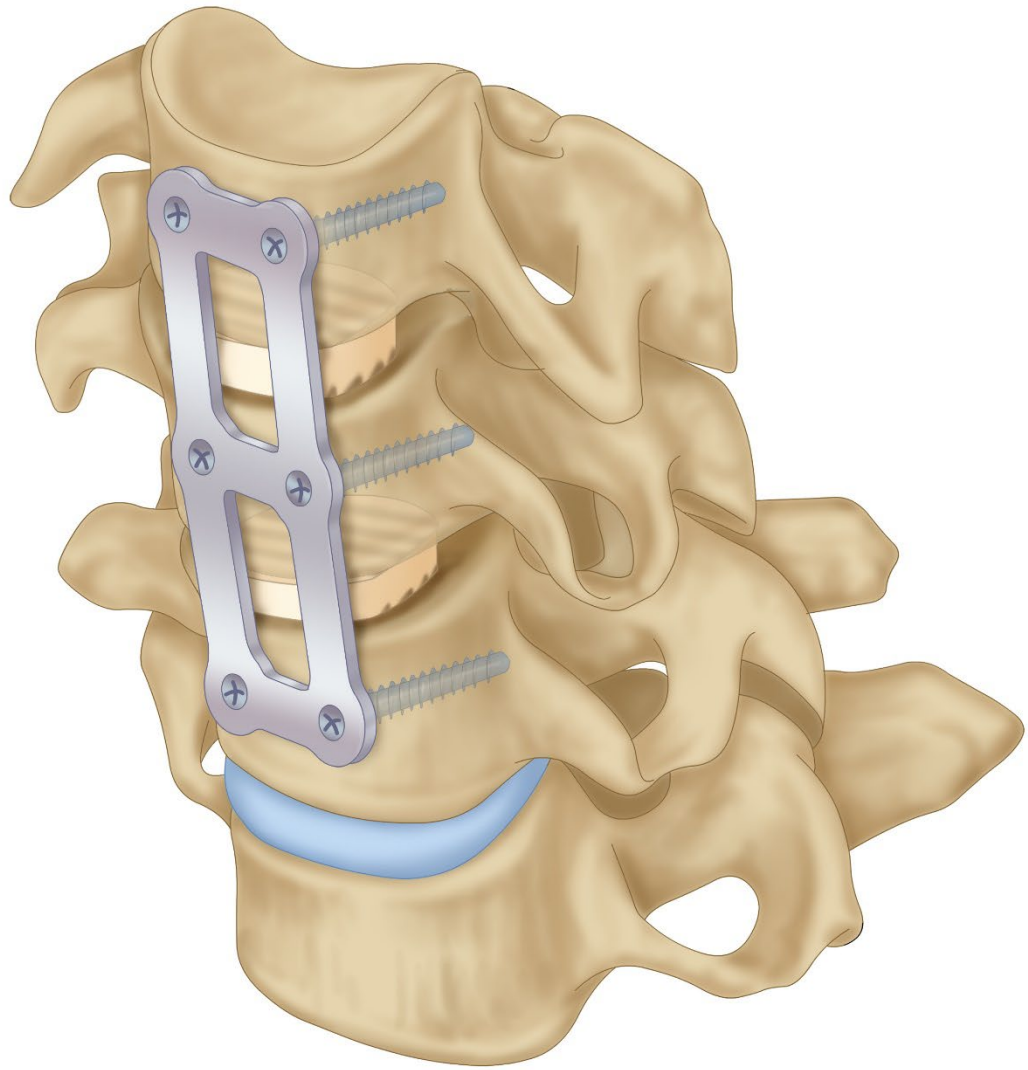


Figure 2

3. Post op Recovery

- A one night stay in the hospital is typical for one level fusions. Longer stays may be necessary for multiple level fusions. For most cases, you should be able to get up and walk on the day of surgery. Physical therapy will see you throughout your hospital stay.
- Depending on your specific situation, a brace may or may not be necessary. Your provide will determine when and for how long you should wear the brace.
- Xrays of your neck will be completed prior to your discharge from the hospital.
- You will receive post-operative instructions before you leave the hospital. These will include activity restrictions, wound care instructions, pain medication instructions, and symptoms you should call/see your doctor for. Each provider is different, but it is extremely important to follow the instructions carefully.
- You will see your provider in clinic at specific time points after surgery. Xrays will be done to evaluate your implants, and physical exams will be done to track your progress. Some providers require visits up to two years after surgery, but this can vary.
- Generally, you should be off narcotic pain medications by 4-6 weeks after surgery. Most patients start engaging in normal activity starting about 3 months after surgery.

ADR (Artificial disc replacement)

1. General Overview

- The first goal of an ADR is to remove a degenerated disc and bone spurs that sit in between neck vertebrae. This is done because the disc and bone spurs may be compressing nerves or the spinal cord resulting in symptoms (please see patient education sections for **“Cervical Pathology”**). After the disc is removed, an artificial disc is placed that imitates the motion of a normal disc. In the end, there is no longer pressure on the nerve structures and motion between the vertebrae is preserved. There are recommendations as to which

patients may benefit from this procedure, not all patients are ideal candidates.

(Picture of disc displacing nerve roots/cord)

2. Major steps of surgery

- A horizontal or vertical cut is made on either side of the front of the neck
- Your neck muscles are separated from each other gently. Your trachea (windpipe) and esophagus are moved across the middle and the front of your cervical spine (neck) is visualized (See Figure 1).
- Next, the degenerative disc(s) and bony spurs causing compression of nerve structures are removed.
- A disc replacement device is then inserted into the empty disc space. These are usually made of titanium and plastic (See Figure 3).
- Sometimes a drain is placed temporarily. This is removed before you go home.
- Next, the incision is closed with suture and a sterile bandage is applied.

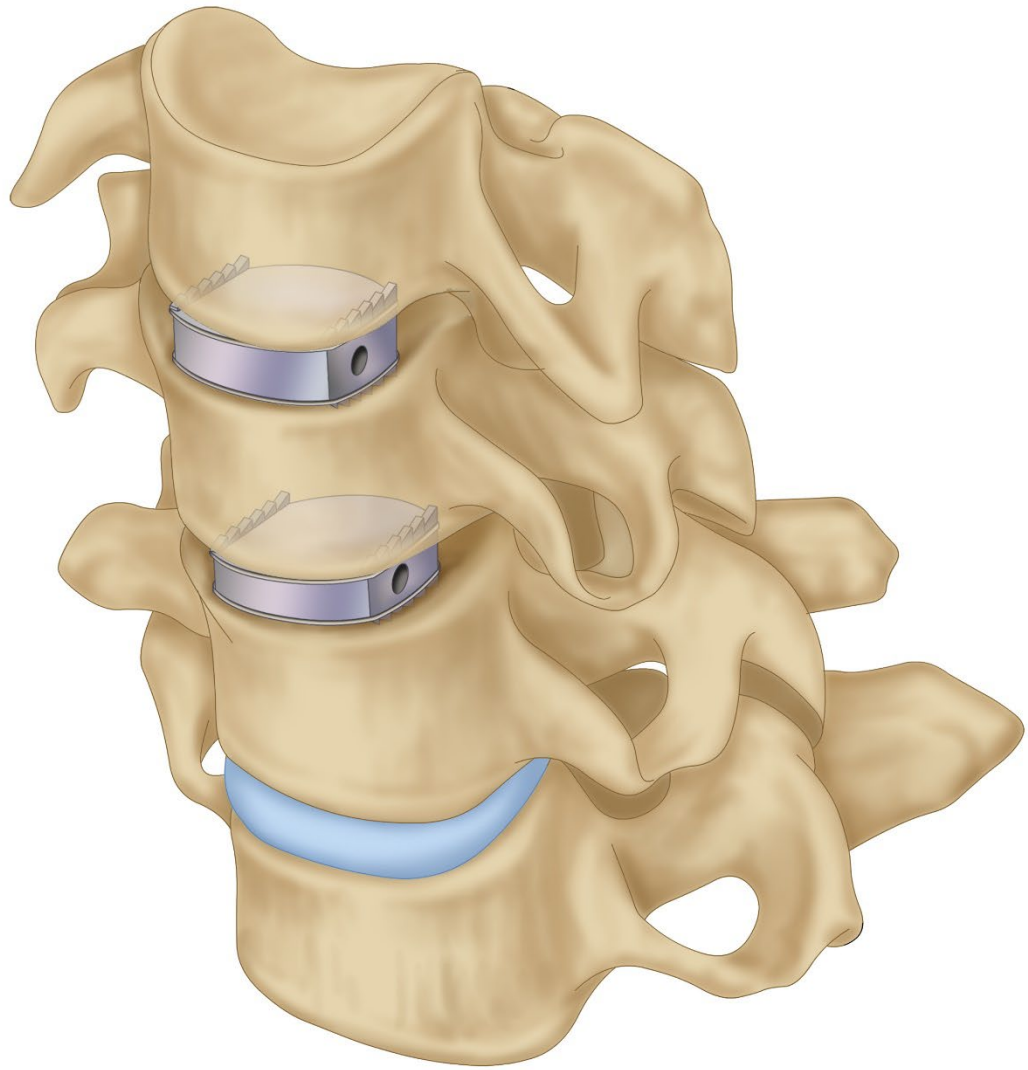


Figure 3

3. Post op Recovery

- Most patients stay in the hospital for 1 night, but you should be up and walking on the day of surgery. Physical therapy will see you throughout your hospital stay.
- Depending on your specific situation, a brace may or may not be necessary. Your provide will determine when and for how long you should wear the brace.
- Xrays of your neck will be completed prior to your discharge from the hospital.
- You will receive post-operative instructions before you leave the hospital. These will include activity restrictions, wound care instructions, pain medication instructions, and symptoms you should call/see your doctor for. Each provider is different, but it is extremely important to follow the instructions carefully.
- You will see your provider in clinic at specific time points after surgery. Xrays will be done to evaluate your implants, and physical exams will be done to track your progress. Some providers require visits up to two years after surgery, but this can vary.
- Generally, you should be off narcotic pain medications by 4-6 weeks after surgery. Most patients start engaging in normal activity starting about 3 months after surgery.