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## **Anterior Cervical Discectomy and Fusion (ACDF)**

### **WHAT DOES THE SURGERY INVOLVE?**

- This surgery is done from the front of the neck. General anesthesia (fully asleep) is used for this surgery.
- While it seems odd to many people to treat the neck from the front (rather than from the back), patients typically recover much quicker and with less pain from this operation compared to operations on the back of the neck. The reason for this is that very little muscle needs to be moved to perform the surgery from the front.
- The surgery involves removing the disc(s) between one or more bones of the neck, thereby taking pressure off of the nerve(s) and/or spinal cord. Once that is completed, Dr. Hoel places a piece of metal or medical-grade plastic where the disc used to be to encourage the body to heal the two adjacent neck bones together into one bone, a process we refer to as a “fusion.” Achieving a fusion prevents these two bones from creating more arthritic changes which could cause the nerves or spinal cord to be compressed again.

### **WHAT ARE SOME REASONS FOR WHICH THIS PROCEDURE IS DONE?**

- This surgery is often done to alleviate pressure on the spinal cord, or on nerves that go to the arms. Most of the time the pressure on these nerves has developed due to arthritic changes or from disc herniations. Other reasons for this surgery include trauma which has caused fractures of bones in the neck, or tearing of ligaments in the neck.

### **DESCRIPTION OF THE SURGERY:**

- Dr. Hoel makes a small horizontal incision on the front of the neck. Whenever possible he will place the incision in one of the natural skin folds of your neck to try to hide the surgical scar. He then moves the trachea (windpipe) and esophagus (eating tube) slightly to the side to get to the spine.
- Dr. Hoel then removes the affected disc(s) to take the pressure off of the spinal cord and/or nerves to the arms.
- After that Dr. Hoel places a “cage” (a block of titanium or medical-grade plastic) between the bones to encourage them to grow together. Within this cage he will use either allograft (processed bone graft) or autograft (bone graft from your own hip) to encourage the affected neck bones to grow together into one bone.
- Once the cage is in position Dr. Hoel will place a metal plate with screws into the affected bones to hold them in place while they heal together.

## WHAT TO EXPECT DURING RECOVERY FROM SURGERY:

- You will wake up with a soft cervical collar around your neck and possibly a small drain tube coming from your incision (if one is placed, the drain will be removed the following day).
- Most people have a sore throat and a “lump” sensation in their throat when they wake up, this usually lasts for approximately 2 weeks.
- Frequently patients feel achiness/pain between their shoulder blades and in their upper back following the surgery. This is a result of stretching the ligaments in the spine back to their original height and is expected - this will resolve gradually over a few weeks.
- For most 1-level fusions, you will wear a soft neck collar only as needed for comfort.
- For most 2-level fusions, Dr. Hoel will ask you to wear a soft neck collar most of the time for two weeks after surgery.
- For most 3+ level fusions, Dr. Hoel will ask you to wear a hard neck collar for around 6 weeks after surgery.
- Immediately following your discharge from the hospital, you may resume light activity, such as walking, and light household chores. Dr. Hoel asks that you refrain from more vigorous activities until at least the 3-week mark after surgery, to avoid having sweat get into your healing incision.
- Your first post-op check will be scheduled 2 weeks after your surgery. Your second post-op check will be scheduled 6 weeks after your surgery, and new x-rays will be taken at that time.
- Postoperatively patients typically return to work within 1-2 weeks if they have a sedentary job. For more physical jobs, Dr. Hoel will work with you to determine the ideal time to return to work, often around the 6-week mark.

## WHAT CHANGES IN FUNCTION SHOULD I EXPECT AFTER I RECOVERY FROM SURGERY?

- Most patients wonder about the motion that they will have in their neck after a fusion surgery. The answer is dependent on how many bones need to be fused together. For a smaller fusion (two bones), most people do not notice a large difference in their range of motion after surgery. As more bones need to be included in the fusion, more motion is given up (for each disc removed, around 10 degrees of up-down and side-to-side motion is given up).
- Even with a 5 bone fusion, though, people typically still have around 50% of their motion looking up-down, and side-to-side. This is because most of these motions come from the two bones at the very top of the neck, which are not treated with this type of surgery.
- For most people having this surgery done, after 3 months they may participate in all of their normal activities.

## VIEW PATIENT EDUCATION:

- ACDF technique walkthrough  
[https://www.youtube.com/watch?v=gBcCUY\\_7ZVE&ab\\_channel=NuVasiveInc](https://www.youtube.com/watch?v=gBcCUY_7ZVE&ab_channel=NuVasiveInc)