

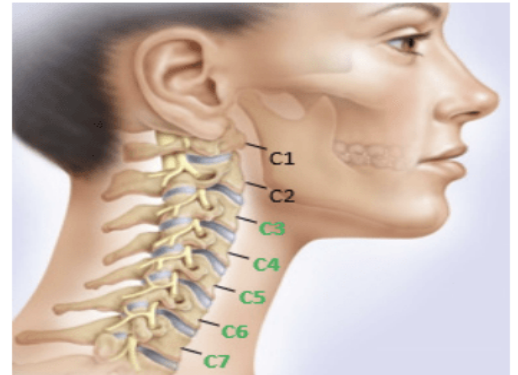
# Anterior Cervical Discectomy and Fusion (ACDF)

## Introduction

ACDF is used to treat neck and arm pain that typically results from disks that wear out in your neck. In your neck, there are seven bones that make up what is called the cervical spine. Between each bone are disks and they are numbered for the two bones the disk sits between, so the disk between bones 4 and 5 is known as C4/5. The most common disks that wear out are C4/5, C5/6, and C6/7.

When disks wear out, they can collapse and form bone spurs causing neck pain, and they can pinch nerves that go into your arms that cause pain in your arm and fingers.

ACDF is a surgical procedure that removes the worn out disk(s), removes pressure on compressed nerves, and replaces the disks with titanium cages. A small amount of synthetic bone (Medtronic Mastergraft) is used to help bone grow into the cages. A titanium plate and screws are used to secure the bones to make sure they heal. The screws and plates are made of titanium by Medtronic. They don't go off with metal detectors and are MRI-compatible.



## Symptoms Treated

- Neck pain (cervical spondylosis)
- Arm pain (pinched nerve, cervical radiculopathy)

## Non-surgical Treatments

- Neck collar
- Improved neck hygiene
- Physical therapy
- Medications such as steroids, gabapentin, anti-inflammatories, muscle relaxants
- Epidural injections that may reduce swelling of pinched nerves

## Description of Surgical Procedure

- A horizontal 1.5 inch cut (incision) is usually used for 1-2 level ACDF.
- A tunnel is created between the muscles and important structures in the neck such as the carotid artery, jugular vein, vagus nerve, trachea, and esophagus.
- The disk(s) is/are removed and any bone spurs are removed until the nerves are freed.
- Titanium cage(s) is/are placed where the disks are removed to support the empty disk space(s).
- A titanium plate and 4-6 screws are typically used to secure the plate and provide a strong spine.
- The incision is sutured back together with dissolvable stitches.

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## What to Expect

### Prior to surgery

- We will obtain authorization for your surgery which usually takes 5-7 business days. Once authorization is obtained, our surgery scheduler will contact you to help coordinate your preoperative health check-up and schedule a time for your surgery.
- Lab tests, EKG, chest x-ray, and any necessary imaging studies such as a cervical spine CT, and cervical spine x-rays will be performed.
- 7 days prior to surgery: stop certain medications such as blood thinners and anti-inflammatories.

### Morning of surgery

- No food except water after midnight.
- You may take water with your medications the morning of surgery. If you regularly take beta-blockers or blood pressure medications, make sure you take those as scheduled.
- Check in to admitting at the hospital 2 hours prior to your surgery schedule time.

### Surgery

- You will be asleep under general anesthesia. You will wake up in the recovery room. Most surgeries end about 3-4 hours from your scheduled start time.

### After surgery: Post-operative hospital care

- You may have a sore throat. Occasionally some patients will have a hoarse voice. You will have a bandage on the right side of your neck and you will be in a cervical collar.
- You will be admitted to the hospital. Most patients will go home the next day, once they can eat and walk, and their pain is controlled.
- Expected surgery pain: Moderate
- Arm pain may resolve right away.
- What to watch for: If you have pain, ask the nurse for pain medications.
- If you have difficulty breathing, feel a big lump in your throat that is getting worse, or can't move your arms, please let the nurse know right away. These things are very rare, and may occur in less than 1% of patients.
- We will examine you the day after surgery. If you are doing well, then you can go home.

### After surgery: Home care

- Wear your cervical collar at all times.
- You will have pain medications at home. For Percocet, you can take 1 to 2 tablets every 4 hours only as needed when you have pain. Take antibiotics for 3 days.
- You can remove the outside dressing 3 days after surgery. Do not touch the white strips of tape on the actual incision. Do not shower or get the incision wet until your follow-up visit with us.
- Follow up with us 7-10 days after surgery to check on your incision.
- Six weeks after surgery, we will get x-rays of your neck. If the x-rays look good, then we will remove the collar and start you on physical therapy.
- If everything goes well, you will be able to resume your normal activities 3 months after surgery.
- Typical follow-up appointments are at 1 week, 6 weeks, and 12 weeks after surgery.

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- Need for assistance: Most patients will not be in too much pain 1-2 days after surgery and can perform most basic care needs by themselves at home. While having someone to help you at home is beneficial, it is typically not necessary for this operation.

### Goals and Risks of Surgery

Goals of surgery: To relieve pain. To prevent worsening nerve damage. Most patients are quoted a 90% chance of symptomatic improvement and 10% chance of no symptomatic improvement or symptomatic worsening.

Risks of surgery: Infection, bleeding, failure to achieve the goals of surgery, CSF leak, injury to adjacent structures leading to increased pain, weakness, paralysis, misplaced screws, pseudoarthrosis requiring repeat surgery in the future, and adjacent-level disease

Most patients are quoted a low surgical risk at 5% chance of complications.

### References

- Medtronic ACDF:  
<https://www.medtronic.com/us-en/patients/treatments-therapies/cervical/treatment-options/cervical-fusion.html>
- Mastergraft:  
<https://www.medtronic.com/us-en/healthcare-professionals/products/spinal-orthopaedic/bone-grafting/mastergraft-bone-graft.html>
- Appendix: List of medications not to take, 7 days prior to surgery

### Contact Information

Surgery Scheduler: Claire Shi (626) 768-7373, extension 101

Website for more information: [www.drchou.la](http://www.drchou.la)