

# Anterior Cervical Discectomy and Fusion (ACDF)

## What is it?

Anterior cervical discectomy [disk-EK-tuh-mee] and fusion (ACDF) is a surgery for treating damaged or worn discs in your neck. In this procedure, a surgeon removes the damaged disc, relieving pressure on pinched nerves, and fills empty disc space with bone.

## Why do I need it?

The most common reason to have this surgery is to relieve severe pain caused by one or more “pinched” spinal nerves. Nerves become pinched when discs are worn or injured or when a spinal bone or vertebra [VUR-tuh-bruh] develops bone spurs. Besides pain, pinched nerves can also cause numbness or weakness in your arms or legs. ACDF can relieve pressure on pinched nerves and may ease the pain, numbness, and weakness.

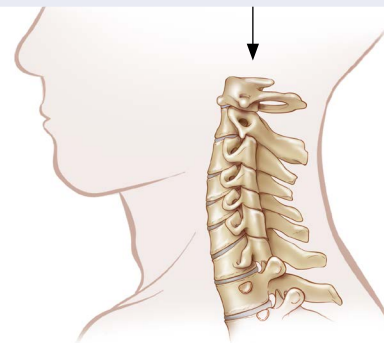
## How long does it take?

ACDF surgery can usually be done in 1 to 2 hours, but may take up to 3 or more hours. The time depends on how many discs will be removed, how badly the discs or vertebrae [VUR-tuh-brey] are diseased, and other factors. Your surgeon will give you a general idea about how long your surgery might last.

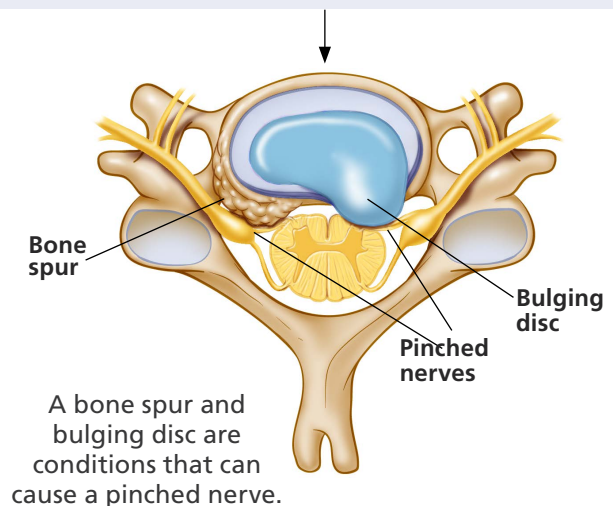
## How effective is ACDF?

Your spine team will go to great lengths to ensure that this is the right operation for you. They will also ensure that your surgery is done with the utmost care, to give you the best chance of a successful outcome.

Cervical vertebrae are the bones in your neck.



Cervical vertebra shown from the top.



In general, ACDF is:

- **Most effective** in relieving arm pain from a pinched nerve root. When pressure is removed from the painful nerve, the nerve pain almost always disappears immediately. Most patients are very satisfied with their results.
- **Much less effective** in relieving neck pain. About half of patients feel relief from neck pain.

## How do I prepare for surgery?

Follow these steps to help your surgery go better:

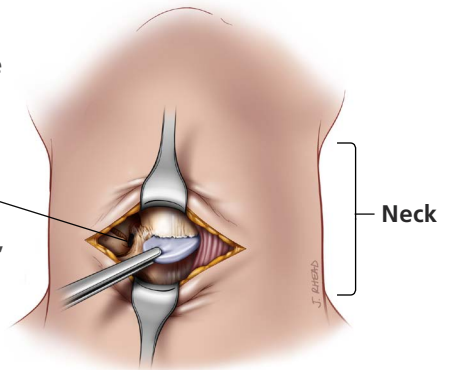
- **Stop smoking.** If you smoke, try to stop before your surgery. Non-smokers have fewer complications related to surgery. More importantly, smoking slows bone growth and could cause your surgery to fail.
- **Stop certain medicines.** Stop taking aspirin 2 weeks before surgery. Stop taking anti-inflammatory medicines, such as ibuprofen (Advil, Motrin) and naproxen (Aleve), 1 week before surgery. If you take blood thinners, ask your doctor when to stop taking them. You can continue to take most of your other regular medicines, but tell your doctor about everything you take.
- **Ask about a neck brace.** You may need to be fitted for a neck brace to wear during your recovery.
- **Ask for time off work.** Ask your doctor how long you may need to be off work, and make arrangements with your employer.

## What happens before surgery?

You will be admitted to the hospital on the day of the surgery. Be sure to:

- Follow all instructions on when to stop eating and drinking before your surgery. This will help prevent anesthesia complications.
- List all of your current medicines and bring the list with you to the hospital. Include over-the-counter medicines and vitamins.
- Expect to fill out some paperwork once you get to the hospital. This may include a consent form for the surgery.

Approaching from the front allows the surgeon to reach the disc without cutting through the vertebrae and nerves. Your trachea, esophagus, and arteries are moved to the side.

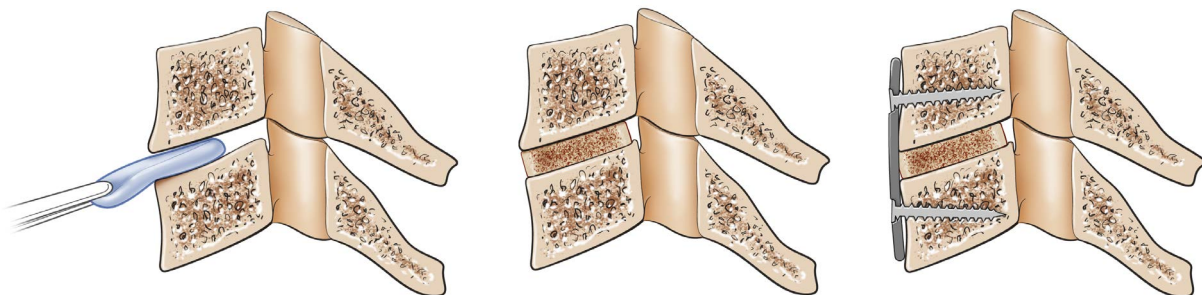


## What happens during surgery?

You will lie on your back on the operating table so the surgery can be done through your neck. An anesthesiologist will put you to sleep so you will not feel or remember the surgery. You will also be given antibiotics to prevent infection.

- 1 The surgeon will make an incision (cut) in the front of your neck and move your trachea [TREY-kee-uh], esophagus [ih-SOF-uh-guhs], and arteries to the side. X-rays will be taken to identify the problem disc.
- 2 The surgeon will carefully remove the damaged or worn disc or bone spurs that are putting pressure on your nerves. A microscope helps the surgeon see clearly and perform this surgery safely.
- 3 The disc space will be filled with bone.
- 4 In most cases, a thin metal plate made of titanium [tahy-TEY-nee-uh m] will then be screwed tightly to the vertebrae above and below the disc space.
- 5 The surgeon will close the incision with stitches.

The surgeon will remove the damaged disc, fill the space with bone, and may attach a metal plate to hold the bone in place.



## Where does the bone for fusion come from?

Your surgeon may use a small block of donor bone from the bone bank and shape it to fit into your disc space. Or, your surgeon may use small bits of your own bone from your neck, packed into a plastic or metal (titanium) spacer. Bone will not be taken from your hip.

## Why is a metal plate attached to the fusion?

The metal plate helps the bone heal, helps decrease neck pain after surgery, and may allow you to return to work and other activities sooner. A plate is not always necessary for surgery on a single disc, but may be used for surgery on more than 1 disc. The plate does not need to be removed later.

## Will I lose movement or flexibility?

You will lose the movement between the bones (vertebrae) that are fused. Whether or not you notice the change in your day-to-day life will depend on how many vertebrae were fused and the types of activities you are used to doing. Most patients do not notice a significant change. In fact, some patients can do more than before surgery since movement may be less painful.

## How will this affect the spinal discs above and below the fused vertebrae?

When vertebrae are fused together, all motion between them is lost. This may place additional stress on surrounding discs, which can cause them to degenerate and become painful.

Potential benefits	Risks and potential complications	Alternatives
ACDF may relieve neck pain, arm pain, and numbness or weakness caused by a pinched nerve root.	<ul style="list-style-type: none"> <li>• <b>Blood loss.</b> Blood loss from ACDF is usually very small. But as with any surgery, there is always the potential for major or even life-threatening blood loss.</li> <li>• <b>Hoarse voice</b> or swallowing difficulties.</li> <li>• <b>Failure of fusion</b> (fewer than 1 in 50 cases). If the bone fusion fails to heal, you may need to have more surgery.</li> <li>• <b>Infection</b> (fewer than 1 in 100 cases). Even with antibiotics and careful sterile techniques, there is still a very small risk of developing a wound infection.</li> <li>• <b>Damage to spinal nerves or the spinal cord</b> (fewer than 1 in 10,000 cases). If nerves or the spinal cord are damaged, you could end up with permanent pain, numbness, or weakness in your arms or legs.</li> <li>• <b>Failure to relieve symptoms.</b> Your surgeon will do everything possible to give you the best results. Even so, surgery may not relieve all your symptoms.</li> </ul>	<p>ACDF is usually done after non-surgical treatment options have failed. These can include:</p> <ul style="list-style-type: none"> <li>• Medicines</li> <li>• Physical therapy</li> <li>• Traction</li> <li>• Spinal injections</li> <li>• Watching and waiting</li> </ul> <p>If you feel your symptoms are not severe enough to have surgery, speak up. Your doctor will respect your decision.</p> <p>Some patients with a diseased disc in their neck may be candidates for an artificial disc.</p>

## What happens after surgery?

- You will wake up from surgery in a recovery area of the hospital. A nurse will monitor your vital signs until you are ready to leave the area.
- You may have a sore throat and difficulty swallowing for a few days and may also feel pain between your shoulder blades. This will gradually go away.
- The pain in your arm will likely be gone.
- Most patients are walking the day of the surgery.
- Most patients go home the morning after surgery. If you've had surgery on several discs, you may need to stay longer. You will be allowed to go home as soon as your surgeon approves.

## What do I do when I get home?

Once you go home from the hospital, you'll need to take it easy until the bone graft heals solidly. This can take from 2 to 6 months, sometimes even longer.

**Use pain medicine as directed.** You may have a sore throat and trouble swallowing for a few days, or even a few weeks. You may also feel pain in your shoulder blades. The pain should gradually go away.

Safely manage your pain by:

- **Taking all pain medicines exactly as prescribed by your doctor.** This will keep your pain from getting worse and make it easier to manage. It **will not take away your pain completely.** Pain medicine may cause constipation. You may need to take an over-the-counter stool softener or laxative.
- **NOT taking anti-inflammatory medicines**, such as ibuprofen (Advil, Motrin) or naproxen (Aleve), because these medicines slow bone healing.

**Avoid strenuous activity.** You should be able to resume many of your regular activities within just a few weeks of surgery. However, **DO NOT** do any strenuous physical activity until your doctor advises (based on x-rays of your spinal fusion). It can take from 2 to 6 months for your spinal fusion to heal solid. Your doctor will advise you when it is safe for you to resume all activities including driving and sex.

When you're ready, start taking short walks every day. The right kind of movement can help you heal.

**Return to work when your doctor advises.** When you can return to work depends on how physically strenuous your work is. If you work at a desk, you may be able to return to work within a week. If your work is physically strenuous and you do not have the option of a light-duty assignment, you may need to be off work up to 6 months until the bone has healed completely.



### *When should I call a doctor?*

---

---

---

---

---

---

---

---

### *Other special instructions:*

---

---

---

---

---

---

---

---

Intermountain Healthcare complies with applicable federal civil rights laws and does not discriminate on the basis of race, color, national origin, age, disability, or sex. Se proveen servicios de interpretación gratis. Hable con un empleado para solicitarlo. 我們將根據您的需求提供免費的口譯服務。請找尋工作人員協助

© 2008–2016 Intermountain Healthcare. All rights reserved. The content presented here is for your information only. It is not a substitute for professional medical advice, and it should not be used to diagnose or treat a health problem or disease. Please consult your healthcare provider if you have any questions or concerns. More health information is available at [intermountainhealthcare.org](http://intermountainhealthcare.org). Patient and Provider Publications FS012-12/16 (Last reviewed - 12/16) Also available in Spanish.