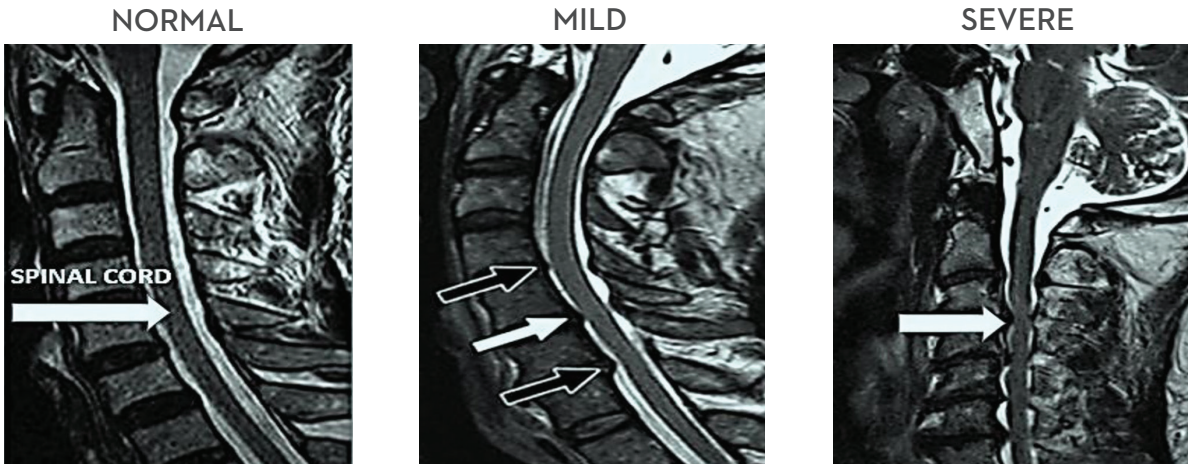
BAPTIST HEALTH®

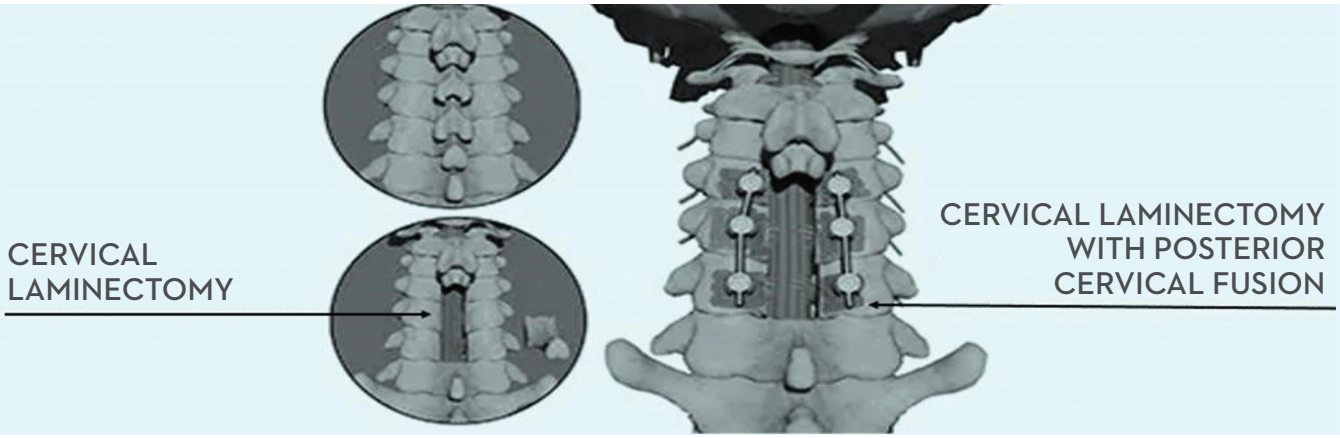
# POSTERIOR CERVICAL FUSION

## Understanding the surgical process

**Why do I need surgery?**
Damaged discs and degenerative arthritis of the neck may cause narrowing of the spinal canal (stenosis), resulting in pressure on the spinal cord, which can result in neck and/or arm pain, numbness, tingling, weakness and difficulty walking, also known as cervical spondylotic myelopathy. When the symptoms involve only the neck and arm, this is called cervical radiculopathy.




**What is a posterior cervical fusion?**
An incision is made in the back of the neck and a small part of the bone in the spine (lamina) is removed. This is called laminectomy and is done to relieve the pressure on the spinal cord and/or nerve roots. Screws and rods are inserted to prevent the spine from being unstable after the bone is removed. This allows two or more bones in the neck (vertebrae) to grow together or fuse. Fusion limits neck movement, but is necessary to prevent future problems and the need for further surgery.



## Evaluating the benefits and potential risks

**What are the benefits of surgery?**
Before the decision to perform the surgery is made, the benefits of surgery must be carefully weighed against the potential risks. The main goal of surgery is to stop further damage to the spinal cord. Generally speaking, 50% to 75% of patients experience clinical improvement after surgery, with most patients reporting a greater improvement in arm pain, weakness and numbness than in neck pain. There is no guarantee that surgery will help every patient.

- **Factors that can limit improvement from this surgery:**
    - o Severe symptoms prior to surgery.
    - o Patients ages 60 and older.
    - o Presence of symptoms more than a year prior to surgery.
    - o Nervous system disease such as peripheral neuropathy, multiple sclerosis, ALS, etc.

**What are the potential risks of surgery?**

- Infection.
- Uncontrollable bleeding.
- Blood clot, known as deep vein thrombosis or pulmonary embolism.
- Pneumonia.
- Allergic reaction to medicine or anesthesia.
- Failure to relieve symptoms.
- Persistent/chronic pain in neck or arm.
- Difficulty urinating, usually related to medication and resolves quickly.
- Muscle weakness in the shoulder and arm, known as C5 traction palsy.
- Damage to nearby structures or organs, such as the spinal cord or nerve roots.
- Rare complications may include spinal fluid leakage; rod or screw breakage; vertebrae not fusing together completely (pseudoarthrosis); permanent weakness; paralysis in about 1 in 10,000 patients; loss of bowel or bladder function; and death, which may occur during or after any surgical procedure.

**What should I tell my surgeon about?**

- Allergies.
- Medical conditions treated by a specialist, such as a cardiologist, pulmonologist, etc.
- Vitamins, herbs, eye drops, creams, over-the-counter and prescribed medications that you take or use.
- Personal or family history of blood disorders, blood clots or bleeding problems.
- Prior surgeries and any complications with prior surgeries.
- Personal or family history of problems with anesthesia.
- Currently pregnant or possibly becoming pregnant.

## Preparing for surgery

**Obtaining surgical approval**

- Depending on your overall condition, written medical clearance may be required prior to surgery. This is sent to the surgeon's office by your primary care physician and/or specialist, such as a cardiologist or a pulmonologist.
- Once medical clearance and insurance approval are obtained, the surgery is scheduled.

Preadmission testing (PAT) is a safety check prior to surgery to ensure you are ready for anesthesia. You will be notified of a date and time for your PAT visit as well as your surgery.

**What to bring to your PAT visit:**

- Photo ID, insurance and/or medical cards.
- Current medications in original containers, including vitamins, herbs, eye drops, creams, over-the-counter and prescribed medications.
- List of allergies.
- Living will and/or advance directives.

**What to expect during your PAT visit:**

- The PAT visit will vary based on your overall condition, but may include a physical exam, blood work, chest X-ray, EKG or other tests.
- An antiseptic skin cleanser (chlorhexidine) is provided with instructions to use the night before and the day of surgery.
- We will review your medications. You will need to **stop** certain medications prior to surgery:
    - Aspirin, blood thinners (anticoagulants) and antiplatelet medications. These medications include aspirin, Coumadin, Plavix®, Eliquis®, Brilinta® or Xarelto®, etc. Check with your PCP or specialist about when/how to stop these medications.
    - Anti-inflammatory medications seven days prior to surgery, including ibuprofen (Advil®, Motrin®), Celebrex®, naproxen (Aleve®), meloxicam (Mobic), diclofenac and indocin.
    - Herbal supplements and certain vitamins seven to 10 days prior to surgery as these medications can result in increased bleeding during surgery. These medications include St. John's wort, garlic, ginseng, ginkgo biloba, vitamin E, vitamin C, chondroitin, danshen, feverfew, fish oil, garlic tablets, ginger tablets, guilinggao and CoQ10, etc.
    - Diabetic patients should NOT take any oral hyperglycemic agents and/or insulin products the morning of surgery.
    - DO NOT take blood pressure medications (ACE/ARB) the morning of surgery. These medications include lisinopril, Lotrel®, captopril, Lotensin®, Monopril®, Prinzide®, Atacand, Benicar, Diovan® and Avalide®, etc.

Thank you for choosing Baptist Health for your surgical care.

We consider it an honor to partner with you throughout each phase of care. Your active participation is key to your successful recovery. This educational guide is meant to supplement instructions given to you by your surgeon as you prepare for surgery.

- Prepare your home for your recovery by placing necessary items within reach so that you can avoid moving your neck.
- Purchase hand sanitizer for use at home for yourself and visitors.
- Stop tobacco use at least four weeks prior to surgery. Do not resume smoking after surgery — tobacco use delays bone and skin healing.
- Arrange someone to assist you for a few days after you are discharged home.
- Arrange your transportation home from the hospital before your surgery.
- Pack loose-fitting, button-up shirts to wear during your hospital stay.
- Limit oral intake to clear liquids only, beginning at midnight the night before surgery.
- Three hours before your surgery, drink a 20-ounce Gatorade. If you have diabetes, drink a 20-ounce Powerade Zero instead.
- Stop all oral intake two hours prior to your scheduled surgery time.
- Bring a list of medications to the hospital that includes the name of the medication, the dosage, the times that you take the medications, and the date and time of the last dose taken.

**What happens the day of surgery?**

You will be assessed by the anesthesiologist in the preoperative area. Your surgery will last two to four hours or possibly longer depending on the amount of reconstruction required to treat your condition. After surgery, you will spend approximately one hour in the recovery room before being taken to your hospital room.

## What to expect during hospitalization

- Physical therapists, occupational therapists and nurses will assist with mobility. You will begin taking short, frequent walks after surgery. **Do not get up without the assistance of staff.**
- Take deep breaths and cough every hour while awake to help prevent pneumonia.
- Rely on oral pain medication (not IV) since pills will provide longer-acting pain relief.
- A neck (cervical) collar may be ordered for six weeks or longer, and should be worn as ordered by your surgeon.
- Muscle spasms are common after surgery. Notify the nurse if spasms occur.
- You may feel like there is a small lump in your throat, some discomfort when swallowing, and a slight change in voice quality due to mild swelling that should improve quickly.
- Your surgeon will determine the length of your hospital stay based on how quickly you recover. Often patients will require a hospital stay of two to four days before discharging home. Occasionally, patients with extra care needs require more days in the hospital or a short stay at a local rehabilitation facility.
- You must meet specific criteria in order to be discharged home, including clearance by staff for safe mobilization (walk independently); reported as medically stable by the medical team; have adequately controlled pain; tolerate food and liquids; be able to urinate; and have an approved, safe discharge plan.
- Having a bowel movement is not a discharge requirement, unless there is a related medical issue.

## Recovery and follow-up care

The surgeon will provide you with written instructions on self-care during recovery. This website provides some additional information Essential Items for Back Surgery Recovery | Spine-health.

**Pain medications:** Discomfort is expected while you gradually return to normal activity; however, increased pain may be a warning sign to slow down. Pain medication is prescribed for home use.

- Pain medication is a narcotic and potentially addictive and must be taken as ordered.
- Do not mix pain medication with alcohol or other sedatives as this can suppress breathing.
- Do not share your pain medication with others.
- Pain medication can cause dizziness, drowsiness and constipation. Drink eight glasses of fluids per day and take over-the-counter stool softeners as needed.
- Wean off pain medication by alternating pain medication with Tylenol®.
- Return leftover medication to the pharmacy or mix with kitty litter and seal in a plastic bag before placing in the trash.
- Request prescription refills during office hours four days in advance.

**When can I return to my normal activities?**
The surgeon will help you determine when you can return to work, driving and exercising. Often, returning to normal activities can take four to six weeks after a posterior cervical fusion. If you are discharged in a cervical collar, you will not be allowed to drive. This is because you cannot turn your head to look for oncoming cars when wearing the collar.

**Restrictions while healing**

- KEEP NECK STRAIGHT. Move eyes to look up and down and turn body to look side to side.
- No pushing, pulling, overhead lifting, or lifting anything that causes straining for 12 weeks.
- Avoid anti-inflammatories such as aspirin, ibuprofen (Motrin or Advil).
- Do not return to work, sports, or resume sexual activity until released by your surgeon.
- Use a pillow that maintains normal neck positioning and, if ordered, wear a cervical collar.
- If you have been provided with a cervical collar, unless otherwise instructed, you may remove the collar daily to shower. No baths, hot tubs or swimming pools until the incision is healed.
- Gradually increase activity to include light housework.
- No driving while taking prescription pain medications.

**Incision care**
The surgeon will instruct you on incision care and when you may bathe. The incision is held together with sutures, staples or surgical glue. The staples and sutures will be removed by the surgeon. Surgical glue will gradually come off on its own.

- Do not pick at the incision, put creams or ointments on the incision, or wear clothing that rubs against the incision.
- Check the incision daily for signs of infection: redness, swelling, increased pain, warmth and/or foul odor.

## What should I expect during follow-up office visits?

- Evaluation of how you are doing, including checking your incision, pain level, functional status, and for symptoms of potential complications.
- Additional X-rays of the neck to evaluate the fusion progression may be ordered prior to the office visit.

## When to call your surgeon

Call your surgeon if any of the following symptoms occur. Do not wait until your follow-up appointment.

- Pain not controlled with medication.
- Persistent nausea, vomiting, dizziness or indigestion.
- Suspected medication allergy – stop the medication.
- Signs of infection: opening of the incision, redness, swelling, drainage (fluid or pus), foul odor from the incision, persistent fever >101 degrees, or increased pain around the incision.
- Bleeding from the incision.
- Persistent headache that eases when lying down.
- Constipation unrelieved by over-the-counter medication.
- Difficulty urinating.
- Increased hoarseness or trouble swallowing.
- Difficulty breathing.
- Sudden numbness or weakness in your arms.
- Difficulty moving or increased weakness in legs.
- Loss of bowel or bladder control.


### References

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**3. Gandhi, S.V. & Schulder, M. (2023). Neurological conditions and treatments: Cervical Spine. American Association of Neurological Surgeons** https://www.aans.org/Patients/Neurosurgical-Conditions-and-Treatments/Cervical-Spine.

### Image credits

**1. Gandhi, S.V. & Schulder, M. (2023). Neurological conditions and treatments: Cervical Spine. American Association of Neurological Surgeons.** https://www.aans.org/Patients/Neurosurgical-Conditions-and-Treatments/Cervical-Spine.
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