WASHINGTON BRAIN & SPINE INSTITUTE

Posterior Cervical Laminectomy and Fusion (PCLF)

Postoperative Patient Instructions & Recovery Guide

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Welcome Home

You have just undergone a **posterior cervical laminectomy and fusion (PCLF)**. This is a major spine surgery, and recovery takes time and patience. This guide explains what to expect and tells you when to call us. Please keep it handy and refer to it often.

Expected Recovery Timeline

Timeframe	What to Expect
First week	Significant neck, upper back, and shoulder pain. Stiffness, muscle spasm. Sleeping in a recliner or with extra pillows may be more comfortable. Fatigue is profound.
Weeks 2–4	Pain improves. Most patients off opioids by end of week 2. Walking endurance builds. Sleep position more comfortable. Wound healing complete.
Weeks 4–6	Significant improvement. Most desk workers return to work. Soft collar (if used) weaned. PT may begin.
Weeks 6–12	Continued improvement. Most pre-surgical neurologic symptoms — particularly hand dexterity, balance, and arm pain — begin to improve. Pain becomes mild and intermittent.
Months 3–6	Fusion consolidating. Most patients return to most activities. Imaging shows progressive fusion. NSAID restriction lifts at 3 months (confirm with surgeon).

Months 6–12	Fusion typically solid. Continued neurologic improvement possible up to 1 year. Permanent residual symptoms may persist depending on preoperative severity.
Year 1+	Final outcome reached. Stay active, maintain healthy weight, avoid smoking.

Activity Instructions

You CAN Do

- **Walk** — start the day after surgery. Walking is the most important activity. Goal: 20–30 minutes 2–3 times daily by the end of week 2.
- **Climb stairs** slowly using the handrail.
- **Shower** after 48–72 hours (per surgeon instruction).
- **Ride in a car** as a passenger — use a small pillow behind the neck for comfort.
- **Light activities of daily living** — eating, dressing, light meal prep.
- **Read, watch TV, work on a computer** — take breaks every 30–45 minutes; vary positions.

What to Be Cautious of

Posterior cervical fusion requires protecting the neck and back from stress while bone heals. **Follow your body.**

- **Minimize bending at the waist for 6 weeks.** Squat or hip-hinge to reach low items.
- **No lifting greater than 15 pounds for ~4 weeks**
- **No rapid twisting or rotation of the neck or trunk** for 6 weeks.
- **No driving** until your follow-up appointment.
- **No reaching overhead** with both arms for 6 weeks.
- **No swimming, bathtubs, hot tubs** for 4 weeks.
- **No high-impact exercise** for 12 weeks.
- **No alcohol** while taking opioids or muscle relaxants.
- **No nicotine in any form** for at least 3 months — preferably permanently. Nicotine prevents bone fusion.
- **No NSAIDs for 3–6 months** (ibuprofen, naproxen, meloxicam, celecoxib, aspirin) — impairs fusion.

Cervical Collar

A soft or rigid cervical collar may be prescribed. Wear it as instructed (typically **6 weeks during waking hours**, removing for showers, meals, and gentle neck exercises if approved). The collar is a reminder to avoid sudden motion and supports the neck during healing.

Orthofix Bone Growth Stimulator

An **Orthofix cervical bone growth stimulator** may be prescribed as an adjunct to support your fusion. This is a non-invasive external device that delivers a low-level pulsed electromagnetic field (PEMF) or capacitive coupling signal across the fusion site to enhance bone formation. Evidence supports its use

particularly in patients with risk factors for pseudarthrosis (smoking history, multi-level fusion, prior pseudarthrosis, diabetes, osteoporosis, revision surgery).

- **Wear the device as prescribed** — typically **2–4 hours daily** for 3–9 months postoperatively, depending on the model.
- **Be consistent.** Daily, uninterrupted use provides the greatest benefit.
- **Position the device over the fusion site** as instructed; the device produces no sensation during use.
- **Charge the unit nightly** so it is ready for the next day.
- **Compliance tracking** — most modern units record usage data that we may review at follow-up visits.
- **Insurance coordination** is handled by our office and the device manufacturer; the device is delivered directly to your home with training.
- Continue daily use until your surgeon confirms solid fusion on follow-up imaging.

Return-to-Activity Milestones

Milestone	Timing	Details
Walking	Day 1+	Daily walks, gradually increasing.
Showering	POD #2	Remove dressing; have family check incision. No submersion 3 weeks.
Cervical collar	6 weeks	Wear at all times except for showers and eating.
Driving	2–3 weeks	Once cleared and out of collar — neck rotation must be adequate.
Desk work	4–6 weeks	Return when off opioids and able to focus.
Light physical activity	3 months	Light household activity, walking.
Sexual activity	4–6 weeks	When comfortable; avoid neck strain.
Manual labor / lifting	4–6 months	After fusion confirmed. Avoid overhead lifting.
Low-impact sports	3–4 months	Swimming (after wound healed), cycling, walking.
High-impact sports	6–12 months	Only with surgeon clearance. Avoid contact sports.

Going Home — Your Discharge Instructions

What to Expect in the First 2 Weeks

Most patients experience moderate soreness around the incision, some fatigue, and a gradual return of energy. **Pain is normal and expected** — most patients describe a 5–7/10 the first few days, improving steadily. Your job is to follow the medication schedule below, walk regularly, eat enough protein, and protect the surgical site. Call us with any concerns — even minor ones. We would rather hear from you than have you worry.

Your Discharge Medications

You will be sent home with the following medications. **Specific doses on your prescription bottle take precedence over this general guide.** Take medications as prescribed.

Medication	Dose & Schedule	Important Notes
Oxycodone (5 mg)	1 tablet every 4–6 hours as needed for severe pain (pain ≥ 7/10)	Take only when acetaminophen and an NSAID together are not controlling pain. Stop as soon as you are able — typically within 5–10 days. Do not drive or drink alcohol while taking. Causes constipation — use the bowel regimen on the next page.
Cyclobenzaprine (Flexeril) 5–10 mg	1 tablet at bedtime as needed for muscle spasm	Can cause significant drowsiness — take only at bedtime to start, and do not drive after taking. May be increased to three times daily under direction. Stop when muscle spasm resolves, usually within 1–2 weeks.

Layered (Multimodal) Pain Control with Over-the-Counter Medications

Use these in combination with the prescription medications above. **The goal is to control pain with the least amount of opioid possible** — these medicines work through different mechanisms, so combining them is more effective than any single one alone.

Medication	Dose & Timing	Notes
Acetaminophen (Tylenol) 500–1000 mg	1–2 tablets (500 mg each) every 6 hours **around the clock for the first week**, then as needed. Do not exceed 3,000 mg in 24 hours.	Safe for most patients. Use the regular Tylenol (not extra-strength) and add it up carefully. Do not combine with other products that contain acetaminophen (Norco, Percocet, NyQuil, etc.) without counting the dose.
Ibuprofen (Advil, Motrin) 400–600 mg	1 tablet every 6–8 hours with food, as needed.	**Avoid NSAIDs (ibuprofen, naproxen, aspirin, meloxicam, celecoxib) for the first 3 months** after fusion surgery. NSAIDs impair bone fusion. After 3 months and with surgeon clearance, they may be resumed. Take with food. Avoid if you have kidney disease, ulcers, or bleeding disorders.
Naproxen (Aleve) 220–440 mg	1–2 tablets every 12 hours with food, as needed (alternative to ibuprofen — do not combine the two).	Longer-acting NSAID — convenient for steadier coverage. Same restrictions as ibuprofen.

Recommended pattern for the first week

Acetaminophen 1000 mg every 6 hours, around the clock (set a timer; do not skip doses). **Use the opioid only when these together are not controlling pain** — typically for severe pain at night or before walking. **Take cyclobenzaprine at bedtime** for muscle spasm.

Bowel Regimen

Opioids and anesthesia almost always cause constipation. Start a softener on day 1; if no bowel movement by day 3, escalate as below. Do not wait for severe symptoms.

- **Days 0–2 (baseline):** Take **docusate sodium (Colace) 100 mg twice daily** while taking opioids. Drink 2–3 liters of water daily, eat fiber (fruit, vegetables, whole grains, prunes), and walk frequently.
- **If no bowel movement by POD #3:** Add **senna (Senokot) 2 tablets at bedtime** AND **MiraLAX (polyethylene glycol) 17 g** (one capful) in 8 oz of water once daily.
- **If no bowel movement by POD #5:** Add **bisacodyl (Dulcolax) 10 mg** — either suppository or oral tablet.
- **If no bowel movement by POD #7: call our office.** We may add additional measures (magnesium citrate, enema, or evaluation for obstruction).

Stop the bowel regimen once you are off opioids and having regular bowel movements again.

Showering & Wound Dressing

You may shower starting on postoperative day 2. Remove the surgical dressing before showering — the incision can get wet. **Have a family member check the wound** before and after showering, since you cannot see it. Let warm water run gently over the back of your neck. Pat dry. **Do not submerge** in a bathtub, hot tub, or pool for at least 3 weeks. If staples or non-absorbable sutures are present, they will be removed at your 2–3 week visit.

Call about the wound if you see...

Redness spreading beyond the incision, drainage of pus or cloudy fluid, opening of the wound edges, increasing pain or swelling, fever over 101.5°F, or any clear fluid leak (possible CSF leak).

Your Brace

Cerivcal collar (or equivalent rigid collar) — to be worn at all times **except** for showering, eating, and gentle hygiene, for **6 weeks postoperatively.** The brace protects the fusion construct while bone heals. You will receive specific instructions on cleaning the collar liner.

- **Wear over a thin shirt** (cotton T-shirt) to protect the skin from rubbing.
- **Inspect the skin daily** under the brace for redness, breakdown, or pressure sores.
- **Tighten or loosen** as instructed — too tight can impair breathing; too loose offers no support.
- **Clean the brace liner** per the manufacturer's instructions (most have washable liners).
- **Bring the brace to every follow-up appointment.**

Driving

Do not drive until cleared at your first postoperative follow-up appointment (2–3 weeks). You may not drive while taking opioid pain medication, cyclobenzaprine, or other sedating medications. Riding as a passenger is fine immediately.

Once cleared to drive, start with short trips in familiar areas. **Do not drive while taking opioid pain medication, cyclobenzaprine, or other sedating medications.** Riding as a passenger is fine immediately.

Return to Work

Desk work: 4–6 weeks. Light physical work: 3 months. Manual labor / heavy lifting: 4–6 months with clearance. These are typical ranges — your individual return-to-work clearance depends on your job demands, recovery, and surgeon assessment at follow-up. **Bring any disability forms or return-to-work letters to your follow-up appointment** and we will complete them at that time.

Follow-Up Appointments

- **First postoperative visit at 2–3 weeks.** Wound check, suture or staple removal if needed, medication review, and review of recovery progress.
- **Second postoperative visit at 8-12 weeks.** Activity advancement, return-to-work clearance, and (for fusion cases) X-rays to assess early fusion.
- **Third visit at 6 months.** X-rays, return to most activities, fusion confirmation.
- **One-year visit.** Final imaging and long-term plan.

Call **301.718.9611** during business hours to schedule or reschedule. Our after-hours answering service will reach the on-call provider for urgent issues.

Recovery Optimization Protocol

Targeted nutrition, sleep, and stress management substantially accelerate recovery and reduce complications. The following protocols are evidence-based and apply throughout your recovery period.

Postoperative Nutrition

- **Protein: ~2 g/kg/day** to support bone and soft-tissue healing during fusion (e.g., 70 kg patient: ~140 g/day).
- **Vitamin D 2000 IU daily** — essential for calcium absorption and bone formation.
- **Calcium 1000–1200 mg daily** — through dairy, fortified plant milks, leafy greens, or supplementation as needed.
- **Vitamin K2 (90–120 mcg/day)** — directs calcium into bone and is often deficient. Found in fermented foods, egg yolks, and supplements.
- **Vitamin C (500–1000 mg/day)** — supports collagen synthesis.
- **Magnesium (300–400 mg/day)** — supports bone matrix formation.
- **Zinc (15–30 mg/day)** — accelerates wound healing.
- **Hydration: 2–3 liters of water daily.** Aids wound healing, prevents constipation, and supports kidney clearance of pain medications.
- **Foods that support healing:** lean proteins (eggs, fish, poultry, Greek yogurt, legumes), leafy greens, berries, nuts, seeds, fatty fish (salmon, sardines), olive oil, whole grains.
- **Foods to limit or avoid:** alcohol (impairs healing, interacts with pain medications), ultra-processed foods, refined sugars, trans fats, excessive caffeine, sugary drinks.

Bone Fusion Nutrition Optimization

Because NSAIDs are restricted for 3–6 months after fusion, an **anti-inflammatory diet provides a natural compensatory strategy** while also supporting bone formation. Emphasize:

- **Omega-3 fatty acids** — fatty fish (salmon, sardines, mackerel) 2–3 servings/week, or fish oil supplement 1–2 g EPA+DHA daily (resume after the initial 2 weeks of bleeding-risk avoidance)
- **Polyphenol-rich foods** — berries, dark leafy greens, green tea, dark chocolate (70%+), olive oil
- **Spices with anti-inflammatory properties** — turmeric (with black pepper for absorption), ginger, cinnamon. Note: high-dose turmeric supplements should be discussed with our office as they can affect bleeding.
- **Fermented foods** — yogurt, kefir, sauerkraut, kimchi — support gut health, which influences systemic inflammation
- **Maintain blood glucose control** — chronically elevated blood sugar impairs bone formation. Target HbA1c <7% if diabetic.
- **Absolutely no nicotine in any form for at least 3 months** — preferably permanent. Nicotine is the single most modifiable risk factor for pseudarthrosis.
- **Limit alcohol to ≤1 drink/day** (and avoid entirely while on opioids). Alcohol impairs bone formation.

Sleep Optimization

- **Target 7–9 hours nightly.** Sleep is when most tissue healing occurs. Sleep deprivation amplifies pain perception.
- **Sleep hygiene basics** — consistent bedtime and wake time, dark/cool/quiet bedroom, no screens 30 minutes before bed, no caffeine after noon.
- **Position recommendations: Use a small neck-supportive pillow.** Sleep on your back or side, not on your stomach. A recliner is often the most comfortable position for the first 1–2 weeks after posterior cervical surgery.
- **Melatonin 1–3 mg** 30–60 minutes before bed is reasonable for short-term sleep difficulty. Avoid alcohol or benzodiazepines as sleep aids.
- **If you use CPAP, continue every night.** Untreated sleep apnea impairs healing and increases cardiovascular risk.

Stress and Pain Self-Management

"Hurt does not equal harm." Postoperative pain is your body's signal that healing is underway — not that damage is occurring. Modern pain neuroscience shows that how we **interpret** pain significantly affects how intensely we experience it. Patients who catastrophize ("this pain means something is wrong") report worse outcomes than those who reframe pain as part of recovery.

- **4-7-8 breathing** — inhale through the nose for 4 seconds, hold for 7 seconds, exhale through the mouth for 8 seconds. Repeat 4 cycles. Practice 2–3 times daily and whenever pain spikes.
- **Progressive muscle relaxation** — starting at your feet, tense each muscle group for 5 seconds, then release. Work your way up to your shoulders and face. Takes about 10 minutes and is excellent at bedtime.
- **Mindfulness apps** all offer free guided meditations specifically for pain, sleep, and surgical recovery.
- **Postoperative blues are normal** — many patients experience an emotional dip around days 3–7. If low mood persists beyond 2–3 weeks, or if you have thoughts of self-harm, contact us or call **988** (Suicide and Crisis Lifeline).

Warning Signs — When to Call or Go to the ER

🚨 **CALL 911 IMMEDIATELY FOR:**

• Sudden weakness, numbness, or paralysis in arms or legs • Loss of bowel or bladder control • Severe difficulty breathing • Chest pain, severe shortness of breath, coughing up blood • Sudden severe headache, slurred speech, facial droop, confusion • Inability to walk that came on suddenly

⚠️ **CALL OUR OFFICE WITHIN 24 HOURS FOR:**

• Fever > 101.5°F • Worsening pain not controlled by medication • Redness, drainage, opening of the incision, or clear fluid leaking (possible CSF leak) **• New weakness in the shoulders or arms** (possible C5 palsy) **• Severe headache when sitting or standing that improves when lying flat**

(possible spinal fluid leak) • **Calf swelling, redness, or tenderness** (blood clot) • **Persistent nausea or vomiting • Constipation > 4 days despite stool softeners • Difficulty urinating or burning with urination**

Long-Term Outlook

Most PCLF patients achieve solid fusion and significant relief or stabilization of myelopathic symptoms. Patients with milder, shorter-duration symptoms tend to do best. Patients with severe, long-standing myelopathy may stabilize but not fully reverse. **The most important benefit is preventing further neurologic decline.** Hand dexterity, balance, and gait often continue to improve gradually over 6–12 months.

Expect some permanent neck stiffness after a multi-level posterior fusion — this is a normal trade-off for the stability and decompression the surgery provides. **Long-term, maintain regular low-impact exercise, good posture, healthy weight, and avoid smoking.**

Contact Information

Provider: Lekhaj Daggubati, MD

Practice: Washington Brain & Spine Institute

Main Phone (All Locations): 301.718.9611 — business hours

After-Hours / Urgent Concerns: 301.718.9611 — answering service will contact the on-call provider

Clinical Office Locations

Rockville: 3202 Tower Oaks Boulevard, Suite 100, Rockville, MD 20852

Tysons: 8605 Westwood Center Drive, Suite 201, Vienna, VA

Frederick: 198 Thomas Johnson Drive, Suite 17, Frederick, MD 21704

White Oak: 11886 Healing Way, Suite 401, Silver Spring, MD 20904

Emergency: Call **911** or proceed to the nearest emergency department for life-threatening symptoms — severe difficulty breathing, sudden weakness or paralysis, loss of consciousness, seizure, severe sudden headache, chest pain, or stroke-like symptoms.