WASHINGTON BRAIN & SPINE INSTITUTE

Anterior Cervical Discectomy and Fusion (ACDF)

Postoperative Patient Instructions & Recovery Guide

Provider: Lekhaj Daggubati, MD | Phone: **301.718.9611**

ROCKVILLE	TYSONS	FREDERICK	WHITE OAK
3202 Tower Oaks Boulevard, Suite 100 Rockville, MD 20852	8605 Westwood Center Drive, Suite 201 Vienna, VA	198 Thomas Johnson Drive, Suite 17 Frederick, MD 21704	11886 Healing Way, Suite 401 Silver Spring, MD 20904

Welcome Home

You have just undergone an **anterior cervical discectomy and fusion (ACDF)**. This guide walks you through what to expect over the coming days, weeks, and months — and tells you when to call us. Please keep this packet handy and refer to it often.

Expected Recovery Timeline

Timeframe	What to Expect
First 24–48 hours	Sore throat, mild hoarseness, difficulty swallowing solid food, mild–moderate neck discomfort. Arm pain is often dramatically better immediately.
Days 3–7	Swallowing improves daily. Sore throat fades. Energy still low; naps are normal. Most patients are off opioids by end of week 1.
Weeks 2–4	Return to driving (if off opioids and neck rotation is comfortable). Return to desk work. Walking 30+ minutes daily. Swallowing close to normal.
Weeks 4–6	Most pre-surgical neck and arm symptoms continue to improve. Soft collar (if prescribed) discontinued. Light physical therapy may begin.
Months 2–3	Fusion is consolidating. Most patients return to most activities. Imaging at 3 months often shows early fusion.
Months 3–6	Fusion typically solidifies. NSAID restriction lifts at 3 months

	(confirm with surgeon). Return to higher-impact activity is possible.
Months 6–12	Full fusion in most cases. Continued improvement in residual numbness/tingling can occur up to 1 year.

Activity Instructions

You CAN Do

- **Walk** — start the day of surgery. Walking helps prevent blood clots, pneumonia, and constipation. Goal: 20–30 minutes 2–3 times daily by the end of week 1.
- **Climb stairs** slowly, holding the handrail.
- **Shower** after 48 hours (see wound care).
- **Ride in a car** as a passenger.
- **Light household tasks** — preparing simple meals, light tidying, walking the dog on flat ground.
- **Read, work on a computer, watch TV** — take breaks every 30–45 minutes to avoid neck strain.

What to Be Cautious of

Cervical fusion healing depends on protecting the neck from stress and avoiding agents that interfere with bone biology. **Follow your body.**

- **Minimize bending at the waist for 6 weeks.** Squat or hip-hinge to reach low items — this reduces strain transmitted through the cervical spine.
- **No lifting greater than 15 pounds for ~4 weeks**; then 15–25 lbs through 3 months.
- **No rapid twisting or sudden rotation of the neck** for 6 weeks.
- **No driving** until your follow-up appointment.
- **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) — impairs fusion.

Cervical Collar

If a soft collar was prescribed, wear it as instructed. Typical use is **2–4 weeks during waking hours**, removing it for showers and meals. The collar is a reminder to avoid sudden neck motion, not a rigid stabilizer. If no collar was prescribed, simply avoid sudden or extreme neck motions.

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 help recovery. Build to 30 min by week 2.
Showering	POD #2	Remove dressing; pat dry. No submersion for 3 weeks.
Soft collar	As needed	Discretionary use for comfort; not required for fusion.
Driving	2–3 weeks	Once cleared at first follow-up and off opioids.
Desk work	1–2 weeks	Most patients return promptly to seated work.
Light physical activity	4–6 weeks	Light household activity, gentle stretching.
Sexual activity	2–3 weeks	When comfortable.
Manual labor / lifting	3 months	After fusion is progressing. Avoid overhead lifting.
Low-impact sports	6–8 weeks	Swimming (after wound healed), cycling, walking.
High-impact sports	3–6 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.
Ondansetron (Zofran) 4 mg	1 tablet by mouth every 8 hours as needed for nausea	Dissolves on the tongue or swallows with water. Do not exceed 24 mg in a day. Stop when nausea resolves.
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. Let warm water run gently over the front of your neck; **do not scrub**, do not use a washcloth or loofah directly on the wound. Pat dry. **Do not submerge** in a bathtub, hot tub, or pool for at least 3 weeks. Do not apply ointments, peroxide, alcohol, or lotion to the incision. The surgical glue will come off in approximately two to three weeks.

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).

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: 1–2 weeks. Light physical work: 4–6 weeks. Manual labor / heavy lifting: 3 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.
- **When to call us:** insomnia lasting beyond 2 weeks despite good sleep hygiene, new-onset severe nightmares, or daytime confusion.

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: Calm, Headspace, Insight Timer** 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:**

• Severe difficulty breathing or noisy breathing (stridor) • Rapid, severe neck swelling • Chest pain, severe shortness of breath, or coughing up blood • Sudden weakness or numbness in arms or legs • Loss of bowel or bladder control • Inability to swallow your own saliva • Sudden severe headache, slurred speech, facial droop

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

• Fever > 101.5°F • Worsening pain not controlled by medication • Redness, drainage, or opening of incision • Worsening swallowing difficulty or coughing while drinking • Persistent or worsening hoarseness beyond 3 weeks • Calf swelling, redness, or tenderness (blood clot) • Nausea or vomiting that prevents you from keeping medications down • Constipation > 4 days despite stool softeners

Long-Term Outlook

Most ACDF patients achieve solid fusion and significant relief of arm and neck symptoms. Numbness and tingling can take 6–12 months to resolve and may not always fully recover. Adjacent segment disease (degeneration of levels above or below the fusion) occurs at about 2% per year and a small subset of patients may eventually need surgery at a new level. Maintaining good neck posture, regular low-impact exercise, healthy weight, and avoiding smoking are the best long-term investments.

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.