



Spinal Cord Stimulator & Pulse Generator

Postoperative Patient Instructions & Recovery Guide — Percutaneous & Paddle Lead Placement

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Welcome Home

You have just undergone implantation of a **spinal cord stimulator (SCS) and implantable pulse generator (IPG)**. This guide explains what to expect over the coming days, weeks, and months — and tells you when to call us. The first 2-4 weeks are particularly important: your activity choices during this window directly affect whether the leads stay in position.

Expected Recovery Timeline

Timeframe	What to Expect
First 24-48 hours	Soreness at lead and IPG incisions. Stimulator typically programmed before discharge or at the first follow-up. Sleep in a recliner or on your back for comfort.
Days 3-7	Incision discomfort improves. Most patients off opioids by end of week 1. Stimulation programming refined.
Weeks 2-4	Incisions healed externally. Stimulation parameters being optimized through programming sessions. Strict activity limits still in effect to prevent lead migration.
Weeks 4-6	Most internal healing complete. Activity restrictions begin to lift. Programming refinement continues.
Weeks 6-12	Return to most activities. Charging routine (if rechargeable) becomes habitual. Optimal stimulation pattern usually identified.
Months 3-6	Stable long-term programming. Most patients have achieved their

	best pain relief.
Long-term	Ongoing periodic reprogramming. Rechargeable IPG charged on a regular schedule. Annual or biannual device follow-up.

Activity Instructions

LEAD MIGRATION IS THE #1 EARLY COMPLICATION

The leads are anchored at the spinal entry point but are otherwise free in the epidural space.

Excessive bending, twisting, lifting, or reaching during the first 6 weeks can pull the leads out of position and require a revision surgery. Take activity restrictions seriously — they are the difference between a successful implant and a failed one.

You CAN Do

- **Walk** — start the day of surgery. Walking is the safest and most encouraged activity. Goal: 20–30 minutes 2–3 times daily by the end of week 1.
- **Climb stairs** slowly using the handrail.
- **Shower** after 48–72 hours (per surgeon instruction); see wound care.
- **Ride in a car** as a passenger — short trips, with a small pillow for comfort.
- **Light activities of daily living** — eating, dressing (loose-fitting clothing), light meal prep.

You Should AVOID (First 6 Weeks)

- **No lifting more than 15 pounds** for 2 weeks
- **Minimize bending at the waist** — bend at the knees instead.
- **No twisting** the trunk or rotating the spine.
- **No stretching the arms above the head** or arching the back.
- **No driving** until off all opioid pain medication AND cleared by your surgeon — typically 1 week for percutaneous, 2–3 weeks for paddle.
- **No strenuous exercise, running, jumping, contact sports** for 6 weeks minimum.
- **No yoga, Pilates, deep stretching** for 6 weeks.
- **No swimming or submerging the wound** for at least 4 weeks
- **No alcohol** while taking opioids or muscle relaxants.
- **No smoking, vaping, or any nicotine products** — nicotine impairs healing and increases infection risk.

Return-to-Activity Milestones

Milestone	Timing	Details
Walking	Day 1+	Gentle walking; avoid bending and twisting first 6 weeks.
Showering	POD #2	Remove dressing; pat dry. No submersion for 3 weeks.
Stimulation programming	2–3 weeks	First fine-tuning session at first follow-up.
Driving	2–3 weeks	Once cleared and off opioids.
Desk work	1–2 weeks	Most patients return quickly.
Light physical activity	4–6 weeks	Light household activity, walking, gentle stretching.
Sexual activity	2–4 weeks	When comfortable.
Manual labor / lifting	8–12 weeks	After lead migration risk has decreased.
Low-impact sports	6–8 weeks	Swimming (after wound healed), cycling, walking.
High-impact sports	12 weeks	Twisting, jumping, contact sports — surgeon clearance required.

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 $\geq$ 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-	1 tablet at bedtime as needed for	Can cause significant drowsiness — take only at

10 mg	muscle spasm	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.
Doxycycline 100 mg	1 capsule twice daily for 10 days	Antibiotic prophylaxis to protect against infection of your implanted device. Take every dose, even if you feel well. Take with a full glass of water and remain upright for 30 minutes after each dose. Avoid dairy, calcium, iron supplements, and antacids within 2 hours of the dose. Use sun protection — this medicine causes photosensitivity.

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.	NSAIDs may be resumed 7–10 days after surgery if approved by your surgeon. Take with food. 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). **Add a layered NSAID dose once permitted** for breakthrough discomfort. **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.

Showering & Wound Dressing

You may shower starting on postoperative day 2. Remove the surgical dressing before showering — both incisions can get wet. Let warm water run gently over the incisions; do not scrub. Pat dry with a clean towel. **Do not submerge** the incisions in a bathtub, hot tub, or pool for at least 3 weeks. Do not apply ointments, peroxide, alcohol, or lotion to the incisions. The incisions can be left open to air after showering.

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).

Return to Work

Desk work: 1–2 weeks. Light physical work: 4–6 weeks. Manual labor: 8–12 weeks 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.**

Follow-Up Appointments

- **First postoperative visit at 2–3 weeks.** Wound check, doxycycline course review, and **stimulation programming fine-tuning** with the device manufacturer's representative. Most patients require 2–4 programming sessions to optimize their final settings — this is the first.

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.

Living with Your SCS System

Stimulation Programming — Fine-Tuning Happens at Your First Follow-Up

Your initial stimulation program is a starting point, not the final setting. You will be discharged with a baseline program that provides general coverage, but **fine-tuning of the stimulation parameters happens at your first postoperative follow-up appointment (typically 10–14 days after surgery).** This is when the device manufacturer's clinical specialist will work with you to optimize pulse width, frequency, amplitude, and program selection for your specific pain pattern.

- **Expect imperfect coverage in the first 1–2 weeks.** Some areas may not feel covered, or coverage may shift with position. This is normal and is what the programming visit will address.
- **Most patients require 2–4 programming sessions** in the first 3 months to achieve their optimal settings. This is normal and expected.
- **Multiple waveforms may be trialed** — traditional tonic, high-frequency 10 kHz, burst, closed-loop. Your team will guide which to try based on your response.
- **Do not be discouraged if the first program is not perfect.** The therapy is highly customizable, and patience during the programming optimization period yields the best long-term result.

Special Precautions and Restrictions

Magnets and Electromagnetic Interference

- **Strong magnets** (industrial magnets, MRI without proper clearance) can damage or reprogram your device — avoid them.
- **Airport security:** You may walk through metal detectors — they will not damage the device but may trigger the alarm. Show your **device identification card**. Avoid prolonged exposure to handheld scanners over the IPG. Consider requesting a pat-down search instead.

Medical Procedures and Imaging

- **MRI:** Most modern systems are MRI-conditional. **Always inform any provider** that you have an SCS system before any MRI; specific conditions and device programming are required. Carry your device card.
- **CT, X-ray, ultrasound, mammography:** safe.
- **Diathermy (therapeutic shortwave/microwave/ultrasound):** **Contraindicated** — can damage the device and injure the spinal cord.
- **Electrocautery during other surgery:** Inform the operating team; bipolar cautery is preferred when possible.
- **Defibrillation/cardioversion:** Safe but inform the team; the SCS may need to be turned off and reprogrammed.
- **Lithotripsy, radiation therapy:** Special precautions required — coordinate with your SCS team.

Activities to Be Cautious With (Long-Term)

- **Scuba diving:** Most devices have depth limits (typically 33 ft / 10 m); check your specific device specifications.
- **Skydiving and high-altitude exposure:** Pressure changes can affect IPG function; consult your device specifications.
- **Heavy industrial work** with high-voltage equipment: Possible interference.

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: 1.2–1.5 g/kg/day** to support tissue healing.
- **Vitamin D 2000 IU daily** — supports tissue healing.
- **Vitamin C (500–1000 mg/day)** — supports collagen synthesis and wound healing.
- **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.

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: Sleep on your back for the first 1–2 weeks.** Avoid sleeping on the side of your IPG pocket until the incision is fully healed. Avoid sleeping on the stomach.
- **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: 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:

- Sudden weakness, numbness, or paralysis in legs or arms • Loss of bowel or bladder control • Severe sudden back pain after a fall or injury • High fever with confusion, neck stiffness, or worsening pain • Severe difficulty breathing • Chest pain, severe shortness of breath • Sudden severe headache, slurred speech, facial droop (possible stroke or rare CSF leak complication)



CALL OUR OFFICE WITHIN 24 HOURS FOR:

- Fever > 101.5°F • Worsening pain not controlled by medication • Redness, drainage, opening, or swelling at any incision • New tenderness, redness, or warmth at the IPG site • Clear fluid leaking from the back incision (possible CSF leak) • Severe positional headache that improves when lying flat (possible CSF leak) • Loss of stimulation, change in stimulation pattern, or new uncomfortable stimulation • Calf swelling, redness, or tenderness (possible blood clot) • Persistent nausea or vomiting • Constipation > 4 days despite stool softeners • Skin breakdown or thinning over the IPG

Long-Term Outlook

Most SCS patients experience meaningful, durable pain relief and improvements in function and quality of life. Long-term studies show sustained pain reduction of 50% or more in the majority of properly selected patients at 5–10 years. Some patients experience gradual loss of effectiveness — reprogramming with newer waveforms (high-frequency, burst, closed-loop) often restores benefit.

Important long-term considerations:

- **Battery replacement** for non-rechargeable IPGs every 3–7 years while rechargeable is 7–13 years.
- **Possible lead revision** if migration or fracture occurs
- **Ongoing reprogramming** to maintain optimal pain control
- **Notify all healthcare providers** that you have an implanted SCS system, especially before any surgery, MRI, or radiation therapy

Maintain regular low-impact exercise, healthy weight, smoking cessation, and good control of any underlying medical conditions to optimize your long-term outcome.

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.