What Makes Dr. Mulvaney's Approach to Spine Pain Different?

A Functional, Whole-System Approach to Lasting Stability

Spine pain is life-stealing pain. It's socially limiting, it can keep you from being the version of yourself you know you are, and I'm sorry you're dealing with something this all-encompassing.

Patients often ask what makes my approach to spine pain different from what they've already tried. The short answer: I treat the spine as one connected, functional system — not as a single disc or joint that happened to fail on its own.

Why "Finding the Pain Generator" Falls Short

When a disc in the spine becomes painful, it's tempting to look for the one structure responsible — the "pain generator" — and treat only that spot. Many physicians do exactly this. But a disc doesn't fail in isolation. It fails because it was operating inside a system that had already become unstable. Spine research describes stability as the joint work of three subsystems: the passive system (discs, ligaments, and joint capsules), the active system (muscles and tendons), and the neural control system that coordinates them.[1] When any part of that system loosens, load shifts onto structures never designed to carry it — and that's usually where the pain shows up.

Repairing or stabilizing only the one disc or level that hurts, without addressing the instability around it, treats the symptom rather than the cause. To restore real function, I look at the entire functional unit involved — in the low back, that means the pelvis, sacrum, and lumbar spine together, with their ligamentous attachments to adjacent levels and the surrounding fascia; the same principle applies to the neck, where the relevant unit extends from the cervical spine to its attachments at the skull base and upper thoracic spine.

Where Standard Treatments Run Into Limits

Standard care for spine pain — including pain that radiates into an arm or leg (radiculopathy) — typically includes physical therapy, epidural steroid injections, chiropractic care, and surgery. Each has real value, and each has limits worth naming honestly.

Physical therapy is a great place to start, and I recommend it to most patients. But some patients are in too much pain to fully engage with it, and others plateau without ever getting the underlying instability addressed.

Epidural steroid injections can help some patients, but the evidence for anything beyond short-term relief is thin. A 2025 systematic review commissioned by the American Academy of Neurology, evaluating 90 randomized trials, found steroid injections offer only modest short-term pain relief for radiculopathy and concluded there was insufficient evidence to establish any long-term pain benefit.[2] Corticosteroids are potent anti-inflammatories — but true tissue healing actually requires inflammation, so suppressing it can quiet pain temporarily without helping the underlying tissue repair itself. And the treatment isn't free of cost: a 2018 systematic review found that repeated epidural steroid use is associated with reduced bone mineral density and increased vertebral fracture risk, and case reports have documented adrenal suppression, and even Cushing's syndrome, after only a handful of injections.[3] For a treatment whose own benefit is measured in weeks, that's a real cost to weigh.

Chiropractic adjustment can provide real relief for many patients. But if a vertebra keeps drifting out of alignment because the ligaments holding it in place have become lax, repeated adjustments will keep correcting a problem that keeps recurring — because the underlying laxity was never addressed.

Surgery has an important place in spine care, and when it's the right call, it can be the best thing that happens to a patient. But it's also one of the biggest, least reversible decisions in medicine, and over 31 years I've sat across from many patients who wish they could turn back the clock on a surgery they once felt certain about. That's exactly why the decision deserves the full picture, not just the part that gets a patient scheduled. Surgery is guided by what a scan shows at one point in time, and it typically focuses on stabilizing or decompressing the single level that appears to be the problem. In carefully selected cases — a large disc fragment causing progressive nerve damage, for example — that's exactly the right call, and I would never dismiss it out of hand. But for the much larger group of patients considering fusion for chronic pain from degenerative disc disease, the outcome data are sobering. In the low back specifically, a meta-analysis of the available randomized trials concluded that fusion surgery is not superior to structured, non-operative care for pain relief or disability.[4] A set of merged Norwegian randomized trials comparing lumbar fusion to a program of cognitive intervention and supervised exercise found no meaningful difference in long-term disability between the two — and nearly a quarter of the fusion patients had already needed a second operation by four years.[5] The same underlying problem shows up in the neck: a landmark 21-year follow-up of patients after single-level cervical fusion found that roughly a quarter went on to develop new, symptomatic disease at the level next to the fusion within 10 years.[6] Across both regions, reported reoperation rates commonly run from roughly 10% to 25%, driven largely by breakdown of the segments adjacent to the fusion. That's not just intuitive — it's been directly measured. Cadaveric biomechanical studies have shown that fusing one or more vertebral levels forces the cumulative motion and load those levels used to share onto the unfused segments immediately above and below; one such study of cervical fusion found intradiscal pressure at the neighboring discs rose by 45–73% and segmental motion increased at both adjacent levels.[7] Concentrating a lifetime's worth of movement and force onto fewer moving segments accelerates wear on exactly those segments — which is the same instability problem this page opened with, now relocated one level over. Surgery is also irreversible in a way none of these other options are. It shouldn't be the first option offered, or the only option, to a patient who hasn't been told what else exists.

Where the Evidence Clearly Favors Surgery

None of this makes surgery the wrong choice — it makes it the right choice for a smaller, well-defined group of patients, and the evidence for that group is just as real and worth knowing.

Cauda equina syndrome — new bilateral leg symptoms, saddle numbness, or loss of bladder or bowel control from severe nerve compression — is a genuine surgical emergency. A meta-analysis of the available literature found a significant advantage to decompression within 48 hours of symptom onset over later surgery, with better recovery of sensory, motor, and bladder or bowel function.[8] This is not a case for watchful waiting or a course of ligament work — it's an emergency room visit.

Progressive myelopathy — spinal cord compression, most often in the neck, rather than just nerve root irritation — behaves differently than pain alone. A large multicenter study of surgical decompression for cervical spondylotic myelopathy found significant, meaningful improvement in function and quality of life across mild, moderate, and severe cases.[9] Once the spinal cord itself is being compressed and function is declining, decompression — not a trial of ligament healing — is the right strategy.

A large disc herniation with radiculopathy that hasn't improved after a genuine trial of conservative care is the group the surgery caution above is not talking about. The SPORT trial's 8-year data found that carefully selected surgical patients had sustained, meaningfully greater improvement than nonoperative patients across nearly every outcome measured.[10] Appropriately selected discectomy has real, durable evidence behind it.

Degenerative spondylolisthesis with spinal stenosis is its own case, and worth separating from stenosis alone. In SPORT's spondylolisthesis cohort, surgical patients maintained a significant pain and function advantage over nonoperative care.[11] Interestingly, that same trial found the surgical advantage for spinal stenosis without spondylolisthesis narrowed considerably by 8 years — a reminder that "spine surgery" isn't one intervention with one answer; the specific diagnosis changes what the evidence actually supports.

The Tent Analogy

I often explain this to patients with a picture: imagine a large circus tent, with a 30-foot pole in the center and a ring of strong manila ropes staking it to the ground in every direction. As long as those guy-ropes stay taut, the tent shrugs off wind from any direction and stays stable.

Now picture the pole slowly shortening. That's what happens to our spines as we age — the discs lose water content and we lose height over time. As the pole shortens, the ropes that were once taut go slack. The next time the wind blows, the tent starts to wobble.

In the spine, those "ropes" are the ligaments holding the vertebrae in position. And just as skin that's rubbed the wrong way develops a callus, the small joints connecting one vertebral level to the next — the facet joints — can develop bony overgrowth when they start moving abnormally against each other. That overgrowth, combined with discs losing height, is what starts to crowd the nerve roots exiting the spine — which is often where the pain, sometimes severe, comes from.

Re-Tensioning the Ropes, Not Just Treating the Pole

When I treat the spine comprehensively, I'm essentially walking around that tent and re-tensioning the ropes — restoring stability to the ligamentous system holding the spine together.

Because there are many structures to treat across a functional segment, doing this under X-ray or fluoroscopic guidance would mean a meaningful dose of ionizing radiation — not ideal for the tissue you're trying to heal. Instead, I do this entirely under ultrasound guidance. I've been an ultrasound-guided spine procedure specialist and instructor for over 20 years, and ultrasound lets me precisely target the dense web of ligaments stabilizing the lumbar, cervical, or thoracic spine without any radiation exposure.

With precise needle guidance, I inject Prolotherapy, platelet-rich plasma (PRP), or — in select cases — bone marrow- or adipose-derived cellular therapies directly into these ligaments, recruiting the body's own repair processes. Ligaments aren't just mechanical tethers — they're densely populated with specialized nerve endings (mechanoreceptors) that sense stretch and tell the nervous system where the joint is in space, which is central to proprioception and to the reflexes that protect a joint from injury.[12] When a ligament's own repair response is stimulated this way, it heals back to the length and tension it needs to do that job again.

How Treatment Is Structured

When I treat a segment of the spine, I treat every level in that segment and most of the attachment points from one level to the next, on both sides, along with the fascial attachments that also contribute to segmental stability. Treating the whole functional unit — not just

the level that hurts — is what produces consistent, durable results.

These treatments are well tolerated and carry a low risk profile. Most patients start with 2–3 monthly sessions of comprehensive Prolotherapy or PRP. I generally avoid injecting directly into the disc itself early in treatment: published case series put the risk of discitis (disc-space infection) from intradiscal injections at well under 1%, but it's a real risk that can mean a prolonged course of IV antibiotics or even surgery.[13] In most cases, restoring stability to the surrounding ligamentous system is enough to get the disc — and the patient — out of trouble without ever needing to inject it directly. A disc typically became a problem because of instability elsewhere in the system, and it's very difficult to get it to heal until that underlying instability is addressed. Often, stabilizing the system is all it takes to get a patient out of pain and back to full activity.

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