

Duke Spine Study: Overview

Duke University researchers conducted independent health economics and outcomes research (HEOR) **comparing the health outcomes and long-term cost savings of the Regenexx protocol*** to those of **spinal fusion[†]** and **LFDF[‡]**, respectively. The study sourced **real-world data** from a large national commercial claims database and the Regenexx Provider Patient Registry.[§]

Duke spine research reinforces what Regenexx data have historically demonstrated when compared to surgery¹:

Significant short- and long-term cost savings across all time horizons (1-4 years)

- **~77% cost savings** vs. spinal fusion at Year 1
- Spinal fusion cost **~3-4x** more than the Regenexx approach across all time horizons



Significantly lower downstream healthcare utilization

- X-ray: **23%** for Regenexx protocol vs. **93%** for spinal fusion at Year 1



Low rates of follow-up surgeries

- Regenexx protocol surgical crossover rates: **Below reporting threshold** across all timepoints



Major reductions in complications vs. surgery

- Regenexx protocol: **Below reporting threshold** vs. **1%-4%** for spinal fusion across all time horizons

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Before spine surgery, **consider another option.**

The Regenexx protocol offers a **needle-based approach** that can help members **postpone or avoid high-risk, low-value spine procedures.**

To learn more about **Duke study cost savings and durability findings**, contact the Regenexx Corporate Sales Representative who shared this overview with you.

**Regenexx protocol* refers to image-guided injections of the Regenexx provider patient's own cells. For both the spinal fusion and LFDF comparisons, Regenexx provider patients received Regenexx-SCP (utilizing platelet-rich plasma [PRP]) with or without Regenexx-SD (utilizing bone marrow concentrate [BMC], which contains stem cells).
†Spinal fusion=procedure that fuses certain vertebrae together. It is often performed together with a laminectomy.
‡LFDF=a term used to group four related spine decompression procedures: laminectomy (surgery that removes part of the vertebra), foraminotomy (surgery that treats nerve compression by widening the opening of the spine for the nerve roots), discectomy (surgery to remove all or part of the disc, or cartilage cushion that helps support part of the spine), or facetectomy (procedure that removes part of facet joint in the spine).
§For more information, please visit <https://www.regenexxcorporate.com/research/procedural-outcomes/>.

References
1. Duke University data on file. 2. Lown Institute. Unnecessary back surgery, 2025. Lown Institute Hospitals Index. Published October 7, 2025. Accessed July 17, 2026. <https://lownhospitalsindex.org/unnecessary-back-surgery-2025/>. 3. Cleveland Clinic. Foraminotomy. Cleveland Clinic website. Accessed February 17, 2026. <https://my.clevelandclinic.org/health/procedures/foraminotomy>. 4. MedlinePlus. Discectomy. MedlinePlus website. Reviewed November 2, 2022. Accessed February 17, 2026. <https://medlineplus.gov/ency/article/007250.htm>. 5. American Association of Neurological Surgeons website. Accessed February 17, 2026. <https://www.aans.org/patients/conditions-treatments/minimally-invasive-spine-surgery/>.
Note: The Duke HEOR study data have not yet been finalized by authors. It may contain errors and report information that is not yet accepted or endorsed by the scientific or medical community. The Duke knee and spine studies were sponsored by Regenexx. Per the knee and spine study papers, the sponsor had no role in the conduct of the analyses, interpretation of the data, or manuscript preparation. Duke University investigators had full access to all study data and retained final responsibility for the content of the manuscripts and the decision to submit for publication. Both studies were retrospective, observational analyses using propensity-matched cohorts representing patients who elected orthobiologic treatment among those eligible for surgery; as with any non-randomized comparison, the potential for selection bias cannot be fully excluded. Patients often characterize Regenexx's non-surgical treatment options as "stem cell" or "regenerative medicine" procedures using Regenexx lab processes. For more information about these terms and how Regenexx defines them, please visit <https://regenexx.com/our-approach/stem-cells/>. Like all medical interventions, procedures using Regenexx lab processes have a success and failure rate. Regenexx provider patient reviews and testimonials in this document should not be interpreted as a statement on the effectiveness of regenerative therapy for anyone else. Industry professional reviews and testimonials reflect the experience of that entity with the Regenexx Corporate Program. To discuss what a partnership with Regenexx could look like for your company or client, contact our team. The information provided by Regenexx is for informational purposes only and is not intended or implied to be a substitute for professional medical advice, diagnosis, or treatment. Regenexx is not a teaching institution or medical practice, and does not engage in the training of physicians or the practice of medicine. Physicians listed on the Regenexx websites are independent contractors who have licensed certain Regenexx intellectual property. Nothing on the Regenexx webpages, the Regenexx blog, any informational videos, or other marketing materials should be interpreted as endorsing a particular physician or establishing an employer-employee, partnership, or agency relationship between Regenexx and any physician.