

Chiropractic spinal manipulation associated with reduction in low back surgery

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A recent study from University Hospitals (UH) Connor Whole Health has found that adults who initially visit a chiropractor to receive spinal manipulation for low back pain caused by disc herniation or

radiculopathy (i.e., sciatica) are less likely to undergo discectomy (i.e., disc surgery) over the subsequent two years. This study was recently published in the journal *BMJ Open*.

Chiropractic is a health care profession that focuses on treatment of musculoskeletal conditions such as low back and neck [pain](#). The most common therapy that chiropractors use is [spinal manipulation](#), which includes a range of hands-on treatments directed to the joints of the spine. While [chiropractic](#) spinal manipulation has been found to be effective for treating low back pain, there has been limited research that explores whether this treatment is associated with a reduction in spine surgery.

In this retrospective [cohort](#) study, the authors selected [adult patients](#), age 18 to 49, from a 101 million patient United States health records network (TriNetX, Cambridge, MA, U.S.), including data from 2012 to 2022. Patients with serious pathology or urgent indications for surgery were excluded from the study. Ultimately, the authors identified 5,785 patients who initially received chiropractic spinal manipulative therapy, and the same number of patients who received other forms of medical care for their low back pain. The authors used a statistical technique called propensity score matching to control for variables that could influence the likelihood that patients would undergo discectomy. In this process, they matched patients in both cohorts according to several such as age, sex, obesity, smoking, previous injections, and medications.

The authors found that patients who initially received chiropractic spinal manipulation for their low back pain were significantly less likely to undergo lumbar discectomy through two years' follow-up.

- At one year follow-up, 1.5% of the patients in the chiropractic cohort had undergone discectomy, compared to 2.2% of patients in the cohort receiving other care

- At two years' follow-up, 1.9% of the patients in the chiropractic cohort had undergone discectomy, compared to 2.4% of patients in the cohort receiving other care

This study builds on previous work that explored the relationship between chiropractic and surgery. Specifically, the authors examined a more specific population of low back pain, and a more specific outcome of discectomy. It represents the first study to examine whether chiropractic care is associated with a reduction in likelihood of discectomy. While the finding that chiropractic spinal manipulation is associated with a reduced likelihood of discectomy is promising, the study design was observational and included real-world data.

Accordingly, there are certain limitations to the study findings. The authors recommended that their study be replicated using a randomized, controlled trial design.

The lead author, Robert J. Trager, is a chiropractic physician at Connor Whole Health, University Hospitals, where he frequently sees patients for [low back pain](#). Through collaboration and mentorship from the research director of Connor Whole Health, Jeffery A. Dusek, the two have been investigating a series of outcomes related to chiropractic care, such as imaging use, medication use, and now surgery. The team aims to continue their research on the topic of health service utilization as well as expand into other study designs.

More information: Robert James Trager et al, Association between chiropractic spinal manipulation and lumbar discectomy in adults with lumbar disc herniation and radiculopathy: retrospective cohort study using United States' data, *BMJ Open* (2022). [DOI: 10.1136/bmjopen-2022-068262](https://doi.org/10.1136/bmjopen-2022-068262)

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