

# Researchers find epidural steroid injections do not benefit spine patients

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Researchers at the Rothman Institute at Jefferson examined data on patients being treated for lumbar stenosis and the degenerative spine condition spondylolisthesis and found that patients who received epidural steroid injections (ESI) had a higher rate of crossover to surgery and fared worse in physical health and bodily pain versus those who did not receive ESI, dispelling their pre-study hypothesis.

Data for this study was gathered from the database of the prospective, multicenter NIH-funded SPORT (Spine Patient Outcomes Research Trial) of surgical treatment versus nonoperative treatment for lumbar stenosis and degenerative spondylolisthesis. In the first three months of the trial, some [patients](#) were given ESI and some were not.

"At the onset of our study, we hypothesized that patients who received ESI would have improved outcomes and lower rates of surgery compared to patients who did not receive ESI," said Kristen E. Radcliff, MD, of the Rothman Institute at Jefferson and an author on the study. "This was not supported by the data."

Preliminary study findings will be presented in abstract format on Tuesday, February 7 at 2:06 PM at the American Academy of Orthopedic Surgeons' annual meeting in San Francisco.

The study included 69 ESI and 207 non-ESI spinal stenosis patients. Averaged over four years post-surgery, surgically-treated ESI patients reported less improvement in physical function and bodily pain. There

was also increased crossover to surgery of patients who received ESI and were assigned to nonsurgical treatment at enrollment (58% vs. 32% among non-ESI patients); patients who received ESI and were assigned to surgical treatment at enrollment were also found to be more likely to require surgery than non-ESI patients (32% vs. 11%).

Patients who received ESI had operative times of an average of 26 minutes greater than those who did not receive ESI and also had an increased length of stay in the hospital.

The spondylolisthesis cohort reported similar findings. Of the 118 non-ESI patients and 45 ESI patients there was significantly less improvement in bodily pain, physical function and sciatic pain, reported by the sciatica bothersome index, over four-years post-surgery among the patients who received ESI. There was also a trend over four years for increased reoperation in the ESI patients (26% vs. 15%).

"This shows us that despite equivalent baseline statistics, the group of patients who received ESI had significantly less improvement and no evidence of surgical avoidance," said Radcliff.

Rothman at Jefferson researchers are now conducting basic science research to better understand the impact of steroids on the cartilage cells in the discs, nerves and tissues of the spine.

Provided by Thomas Jefferson University

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