

# Nerve block can reduce need for postsurgical opioids

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A preoperative nerve block used in combination with other medications can reduce the need for opioids to manage pain following spinal surgery, UT Southwestern Medical Center researchers found. The findings,

published in [European Spine Journal](#), suggest a way to lessen the reliance on opioids to reduce postoperative pain and help patients become ambulatory sooner.

Open lumbar spine [surgery patients](#) who received a bilateral erector spinae plane block (ESPB) as part of a multimodal analgesic regimen had a significant reduction in both [pain scores](#) and opioid consumption in the first 24 to 48 hours after surgery, compared with those who were treated just with a multimodal analgesic approach, according to the study. These patients also required less medication to control nausea or vomiting and had shorter recovery room stays.

"Patients undergoing spine surgery typically have a moderate to high level of [postoperative pain](#) and require significant [pain management](#) efforts, which traditionally means large doses of opioids," said study leader Girish Joshi, M.D., Professor of Anesthesiology & Pain Management at UT Southwestern and Director of Perioperative Medicine and Ambulatory Anesthesia at Parkland Health.

"But given the downsides of opioid usage, many physicians are seeking alternative approaches to managing postoperative pain. Our study demonstrates that the erector spinae plane block is an effective tool for reducing the need for opioids when combined with a multimodal pain management approach that includes acetaminophen and nonsteroidal anti-inflammatory drugs."

The retrospective study compared postoperative measures of 50 patients who underwent open lumbar laminectomy for spinal stenosis. Half received an ESPB along with standardized multimodal analgesia, and half received multimodal analgesia alone. ESPBs are administered just prior to surgery through an ultrasound-guided injection.

At 24 hours post-surgery, opioid requirements among ESPB patients

were reduced by about half compared with non-ESPB patients and remained lower at the 48-hour mark. Pain scores in the post-anesthesia care unit (PACU) and through the second day after surgery were also significantly lower, and time in the PACU was reduced by about 30 minutes.

"ESPBs are safe and easy to administer, and they can make a significant difference in a patient's level of postoperative pain," said Jesse Stewart, M.D., Associate Professor of Anesthesiology & Pain Management and the study's first author.

"That's important because postoperative pain is one of the biggest factors in delayed recovery after surgery as well as reduced patient satisfaction, and we know that the use of opioids in pain management presents its own challenges, including the risk of dependency. These findings suggest that ESPBs can play a major role in an opioid-sparing recovery plan that utilizes a multimodal pain management approach, not only in spine surgery but potentially for other types of surgery as well."

The study builds on earlier UTSW research that focused on multimodal analgesia and the creation of specific enhanced recovery plans for different types of procedures, primarily to help reduce the use of [opioids](#) to treat acute postoperative [pain](#).

**More information:** Jesse W. Stewart et al, Ultrasound-guided erector spinae plane blocks for pain management after open lumbar laminectomy, *European Spine Journal* (2023). [DOI: 10.1007/s00586-023-07881-4](#)

Provided by UT Southwestern Medical Center

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