

# Eight factors predict pain after spine surgery

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(HealthDay)—Eight factors contribute to postoperative pain after spine surgery, according to a study presented at the 2018 World Congress on Regional Anesthesia and Pain Medicine, held from April 19 to 21 in New York City.

Quentin Baca, M.D., from Stanford University in California, and colleagues developed a model of postoperative pain after spine surgery. A total of 1,008 patients who underwent [spine surgery](#) under general anesthesia from 2011 to 2013 were included. An elastic net algorithm was used to create a predictive model of postoperative pain in the first 24 hours after surgery using a randomly selected training cohort; model performance was validated in an independent patient cohort, and bootstrap modeling of factor selection was used to characterize its stability.

The researchers generated a cross-validated predictive model of postoperative pain. Bootstrap modeling of factor selection identified eight robust predictive factors: sex, preoperative pain, duration of surgery, remifentanil use, ketamine use, non-opioid intraoperative pain medication use, volatile anesthetic use, and post anesthesia care unit morphine equivalent consumption. These factors independently contributed to postoperative pain, and there was significant interdependence between several factors. There was a strong dependence of postoperative pain on the number of classes of non-opioid analgesics used during surgery and the use of intraoperative remifentanil.

"The factors identified in this model and their relative contribution to

[postoperative pain](#) present opportunities for interventions to improve pain control in the future," the authors write.

**More information:** [More Information](#)

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