

# Sustained use of opioids before spine surgery increases risk of continued use after surgery

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Patients who take prescription opioids for a longer period before spinal surgery are more likely to continue using opioids several months after surgery, reports a study in the June 6, 2018, issue of *The Journal of Bone & Joint Surgery*.

According to the new research, led by Andrew J. Schoenfeld, MD, MSc, of Brigham and Women's Hospital, Harvard Medical School, nearly nine percent of patients were still taking opioids six months after spinal surgery, and duration of opioid use before surgery was the main risk factor for continued use.

## Sustained Preoperative Opioid Use Predicts Continued Use After Spine Surgery

Using insurance claims data, the researchers identified more than 27,000 patients who underwent various types of lower (lumbar) spine surgery between 2006 and 2014. Most of the patients underwent removal of a spinal disc (discectomy) or spinal fusion (arthrodesis). Although the data came from the US Department of Defense's Tricare insurance program, most of the patients in the study were civilians (such as retired military personnel or dependents of active-duty or retired personnel).

Nearly all patients had at least some opioid exposure before spinal surgery. They were classified into four groups:

- *Exposed*: 60 percent had used opioids in the past, but were not actively using them at the time of surgery.
- *Acute exposure*: 34 percent had their first opioid prescription within one month before surgery.
- *Intermediate sustained use*: two percent had uninterrupted opioid use for less than six months before surgery.
- *Chronic sustained use*: three percent had uninterrupted opioid use for six months or longer before surgery.

After surgery, 67 percent of the patients stopped taking opioids within 30 days, and 86 percent discontinued opioids by 90 days. Six months after surgery, 8.8 percent of patients were still taking [prescription opioids](#).

Longer duration of opioid use before spinal surgery was an independent risk factor for continued use after surgery. After adjustment for other patient characteristics, the authors found that the likelihood of discontinuing opioid use within six months was 65 percent lower for patients in the "intermediate sustained" and 74 percent lower in the "chronic sustained" groups, compared to the "acute exposure" group. Somewhat surprisingly, even the patients who were "exposed" but not actively using opioids before surgery were 29 percent less likely than those in the "acute exposure" group to discontinue opioids after surgery.

Several other factors were associated with long-term opioid use after surgery: spinal fusion surgery, preoperative depression or anxiety, preoperative spinal fracture, a longer hospital stay, and junior enlisted rank (suggesting lower socioeconomic status).

The ongoing opioid crisis in the United States has prompted increased attention to the use of pain medications prescribed before and after surgery. Previous opioid use has been linked to an increased risk of complications and adverse outcomes after spinal surgery. This new study

focuses on how [preoperative opioid](#) use affects continued opioid use after lumbar spine surgery, and finds evidence of a "dose-response" effect: patients taking opioids for a longer period before surgery are less likely to discontinue opioid use after surgery.

"Our results indicate that the majority of patients who are using prescription opioids prior to spine surgery discontinue these medications following surgical intervention," Dr. Schoenfeld and coauthors write. However, because close to 1 out of 10 patients are still taking opioids at six months after spinal surgery, the researchers highlight the need for surgeons to recognize the "biopsychosocial" factors contributing to chronic opioid use.

Since nearly all patients receive opioids before [spinal surgery](#), Dr. Schoenfeld believes it's "reasonable" for surgeons to discuss risk factors for sustained opioid use with [patients](#) at the time of surgery. He adds, "Expectation management—defining shared goals of post-surgical pain control and a suspense date when the surgeon and patient agree opioids should likely no longer be necessary—could go a long way toward smoothing the [opioid](#) cessation process following [surgery](#)."

**More information:** Andrew J. Schoenfeld et al. Sustained Preoperative Opioid Use Is a Predictor of Continued Use Following Spine Surgery, *The Journal of Bone and Joint Surgery* (2018). [DOI: 10.2106/JBJS.17.00862](#)

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