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## Opioid Tolerance Influences Outcomes after Lumbar Fusion in Patients with Degenerative Pathology

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SI/CTR Abstract

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Opioid Tolerance Influences Outcomes after Lumbar Fusion in Patients with  
Degenerative Pathology

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**Introduction:** Extended opioid use prior to surgery has been implicated in poorer postoperative outcomes. However, it remains unclear if there is a significant difference in postoperative outcomes among preoperative opioid-naïve and opioid-tolerant patients who undergo lumbar spinal fusion. The purpose of this study was to determine the effect of preoperative opioid use on patient-reported outcome measures in patients undergoing lumbar spinal fusion.

**Methods:** This retrospective cohort analysis identified 260 patients who underwent lumbar spinal fusion at a high-volume, single institution. There were two cohorts: patients who were opioid-naïve (defined as total opioid consumption of  $\leq 7$  days in the two months prior to surgery) and opioid-tolerant users ( $> 7$  days). Outcome measures were analyzed via the number of and duration of opioid tablets consumed, and patient-reported outcome measures (ODI, SF-12 PCS and MCS, and VAS Back and Leg pain scores).

**Results:** Overall, opioid-naïve patients were prescribed significantly fewer tablets on average compared to opioid-tolerant users. The number of tablets prescribed prior to surgery was a predictor for prolonged opioid use—defined as greater than one script

after surgery. Opioid-tolerant users had decreased improvement in outcomes postoperatively compared to opioid-naïve users.

**Discussion:** This study suggests that preoperative opioid-tolerant usage was associated with worse outcome scores postoperatively. Opioid-tolerant users were found to have significantly more pain medication tablets preoperatively and for a longer duration postoperatively. Therefore, opioid-tolerant usage can adversely affect patient outcomes and is a modifiable risk factor prior to undergoing lumbar spinal fusion.