



Opioid use prior to surgery *A summary of evidence*

Several studies have shown that giving opioids prior to surgery will lead to worse outcomes.

Increased preoperative opioid consumption, Modified Somatic Perception Questionnaire score, and Zung Depression Scale score prior to undergoing spine surgery predicted worse patient-reported outcomes. (Lee et al., 2014)

Patients who chronically use opioid medications prior to total knee arthroplasty may be at a substantially greater risk for complications and painful prolonged recoveries. (Zywiell, Stroh, & Lee, 2011)

Radcliff et al performed a trial comparing opioid to nonopioids in the treatment of back pain with radiculopathy from herniated disc. Their conclusion was that there was no difference in the 4-year outcome of both groups but that more people in the opioid group ended up having surgery. (Radcliff et al., 2013)

Even remifentanyl given IV intraoperatively can lead to worse outcomes. It is felt that this is secondary to opioid-induced hyperalgesia causing an increased sensitivity to pain. (Kim, Stoicea, Soghomonyan, & Bergese, 2014)

Implications for Practice

Based on this evidence, Dr. Don Teater notes the following implications for practice:

Opioids should be avoided preoperatively prior to surgery. If surgery is a possibility in the future for individuals with back, knee, or other orthopedic problems, acetaminophen with ibuprofen or other appropriate NSAID medications should be used rather than opioids for pain control. Other modalities should also be utilized.

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Evidence Summary

Kim, S. H., Stoicea, N., Soghomonyan, S., & Bergese, S. D. (2014). Intraoperative use of remifentanyl and opioid induced hyperalgesia/acute opioid tolerance: systematic review. *Frontiers in Pharmacology*, 5, 108. doi:10.3389/fphar.2014.00108

Lee, D., Armaghani, S., Archer, K. R., Bible, J., Shau, D., Kay, H., ... Devin, C. (2014). Preoperative Opioid Use as a Predictor of in Patients Undergoing Spine Surgery. *The Journal of Bone and Joint Surgery*, 89, 1–8.

Radcliff, K., Freedman, M., Hilibrand, A., Isaac, R., Lurie, J. D., Zhao, W., ... Weinstein, J. N. (2013). Does opioid pain medication use affect the outcome of patients with lumbar disc herniation? *Spine*, 38(14), E849–60. doi:10.1097/BRS.0b013e3182959e4e

Zywiell, M., Stroh, D., & Lee, S. (2011). Chronic opioid use prior to total knee arthroplasty. *The Journal of Bone & Joint Surgery*, 93, 1988–1993. Retrieved from <http://jbjs.org/article.aspx?articleid=180073>

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