

# Complications Associated with the Over Use of Opioids for Pain Management in the Post-operative Period for Spine Patients: A Systemic Literature Review

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## Goal:

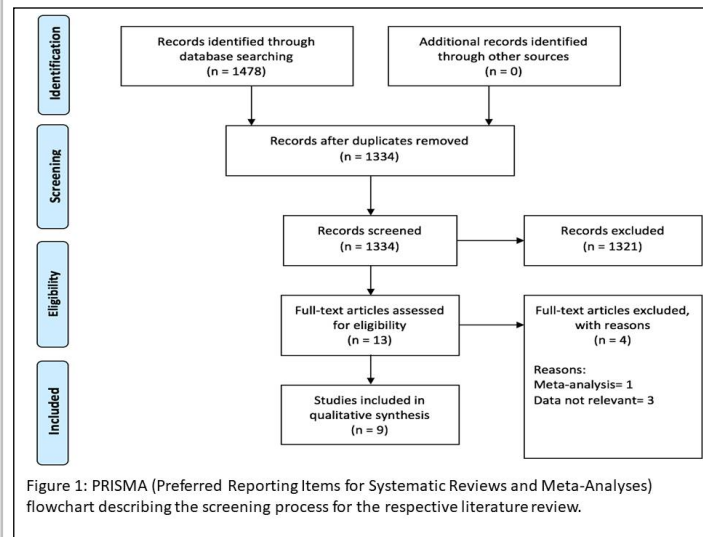
To examine all current literature on opioid usage in the post-operative period for cervical and lumbar spine patients. Furthermore, to assess the quality of the available literature and provide a basis and direction for future studies.

## Introduction

Due to the recent opioid crisis, much attention has been given to the management of pain and the quantity of medications used in healthcare. Within the context of neurosurgery, pain management for patients in the post-operative setting who have undergone cervical or lumbar spinal fusions is a major point of care. To date, no large scale, multi-center study or meta-analysis has examined the consequences or complications. Our study reviews all currently available literature on opioid usage for spinal surgery.

## Methods

Using PRISMA guidelines, PubMed was systematically searched to identify studies using keywords: "opioid use in spinal fusions", "opioid use in postop complications", "cervical spine fusion complications in opioid use", "lumbar spinal fusion complications with opioid use." Articles were filtered for single and multi center studies. Investigation included the pre-, peri-, or post-op use of opioids.



## Results

The initial search identified 1478 articles. Thirteen articles met inclusion criteria and were assessed in full text with nine ultimately included. In spinal fusion surgeries, patients whose pain is managed with opioids have higher post-operative pain scores and worse quality of life compared to patients managed solely through non-medication regimens such as exercise. Both chronic and acute use of opioids for pain management may be linked to post-operative complications following cervical and lumbar spinal fusion procedures. Opioid use prior to admission is associated with longer hospitalizations and a greater number of readmissions. The duration of opioid use in the year leading up to lumbar surgery or re-fusion surgery is associated with a longer duration of post-operative opioid use.

## Conclusions

This study suggests the presence of a correlation between opioid use and post-operative complications. Future studies are warranted to determine if opioid use in and of itself is responsible for more post-operative complications in spinal fusion patients.

## Learning Objectives

1. Pain management is an essential component of clinical management of patients undergoing cervical or lumbar surgeries.
2. Use of opioids for the treatment of pain in the post-operative setting may not be effective for promoting successful and complication free outcomes.
3. Several studies indicate that there is an association between increased opioid use in the post-operative setting and the development of post-surgical complications.

## References

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