

# NSAIDs Administration Should be Avoided Within 90 Days after Posterior Cervical Fusion: A Propensity-Score Matched Study

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## INTRODUCTION

Non-steroidal anti-inflammatory drugs (NSAIDs) are controversial modes of pain relievers after spine surgery. However, research on NSAIDs' impact on bone healing show mixed results, with all studies, to date, focusing on the impact of NSAIDs use on posterior lumbar fusion. However, the increasing rate and cost of posterior cervical fusion (PCF) in the U.S. underscore the need for research on NSAIDs' effects on PCF outcomes. This study aims to explore the outcomes of PCF patients receiving NSAIDs postoperatively, focusing not only on non-union and hardware failure but also on wound complications like infection and dehiscence.

## OBJECTIVE

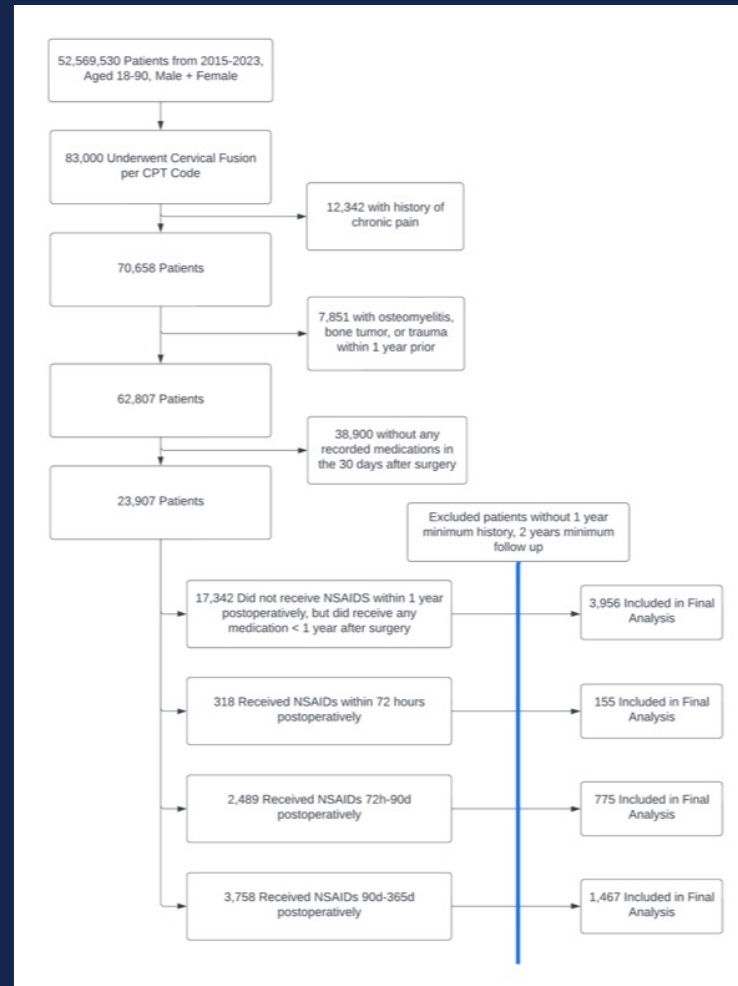
This cohort study uses a national database to compare the effects of short-term and long-term NSAID use on patient's postoperative outcomes following PCF surgery.

## METHODS

Propensity-score matched cohorts of patients who received NSAIDs in less than 72 hours, 72 hours-90 days, and 90 days-1 year of surgery, compared to no NSAIDs.

Outcomes assessed: all-cause 30-day readmissions, length of stay, chronic pain diagnosis, pseudoarthrosis, hardware failure, and wound complications.

## COHORT SELECTION



## RESULTS

	OR/IRR	95% CI	Sig.
<b>No NSAIDs vs. NSAIDs (≤72 hours)</b>			
<b>Length of Stay</b>	2.33	1.55, 3.48	0.23
<b>30-Day Readmissions</b>	3.31	2.11, 5.18	<b>&lt;0.001</b>
<b>Wound Complications</b>	1.78	0.981, 3.22	0.06
<b>Pseudoarthrosis</b>	2.01	1.37, 2.94	<b>&lt;0.001</b>
<b>Arthrodesis</b>	0.752	0.324, 1.75	0.51
<b>Hardware Failure</b>	1.53	0.795, 2.94	0.2
<b>Chronic Pain</b>	2.45	1.23, 4.91	<b>0.01</b>
<b>No NSAIDs vs. NSAIDs (72 hrs-90 days)</b>			
<b>Length of Stay</b>	1.07	0.917, 1.26	<b>&lt;0.001</b>
<b>30-Day Readmissions</b>	1.99	1.53, 2.6	<b>&lt;0.001</b>
<b>Wound Complications</b>	1.85	1.39, 2.47	<b>&lt;0.001</b>
<b>Pseudoarthrosis</b>	0.939	0.802, 1.1	0.43
<b>Arthrodesis</b>	1.45	1.07, 1.98	<b>0.02</b>
<b>Hardware Failure</b>	1.62	1.2, 2.2	<b>0.002</b>
<b>Chronic Pain</b>	1.68	1.13, 2.5	<b>0.01</b>
<b>No NSAIDs vs. NSAIDs (90 days-1 year)</b>			
<b>Length of Stay</b>	1.12	0.991, 1.27	<b>&lt;0.001</b>
<b>30 Day-Readmissions</b>	0.849	0.645, 1.12	0.25
<b>Wound Complications</b>	1.26	0.976, 1.64	0.08
<b>Pseudoarthrosis</b>	0.905	0.801, 1.02	0.11
<b>Arthrodesis</b>	1.1	0.841, 1.44	0.49
<b>Hardware Failure</b>	1.17	0.896, 1.52	0.25
<b>Chronic Pain</b>	0.752	0.494, 1.14	0.18