

# Functional Outcomes After Revision Fusion After Pseudoarthrosis: A Systematic Review of Literature

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## INTRODUCTION

Pseudoarthrosis occurs in 10-30% of spinal fusions, with failure rates up to 40-70% even after revision. Following lumbar fusion, it often results in severe symptoms and poor postoperative outcomes, impacting quality of life, work absence, and stress levels.

## OBJECTIVES

This systematic review aims to examine the functional outcomes of revision fusion after pseudoarthrosis.

## METHODS

The authors performed a PRISMA guidelines-based systematic review of the literature. Only articles detailing the functional outcomes of patients who developed pseudoarthrosis following revision and were treated with fusions were included. Information was extracted from each article in regards to type of revision procedure, and pre and postoperative Oswestry Disability Index (ODI), Back Pain, Neck Pain, complication rates, and postoperative pseudoarthrosis.

## RESULTS

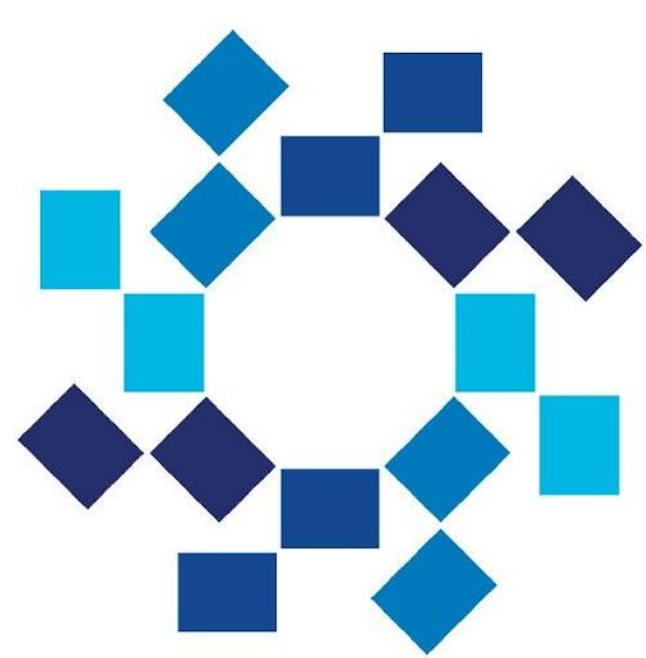
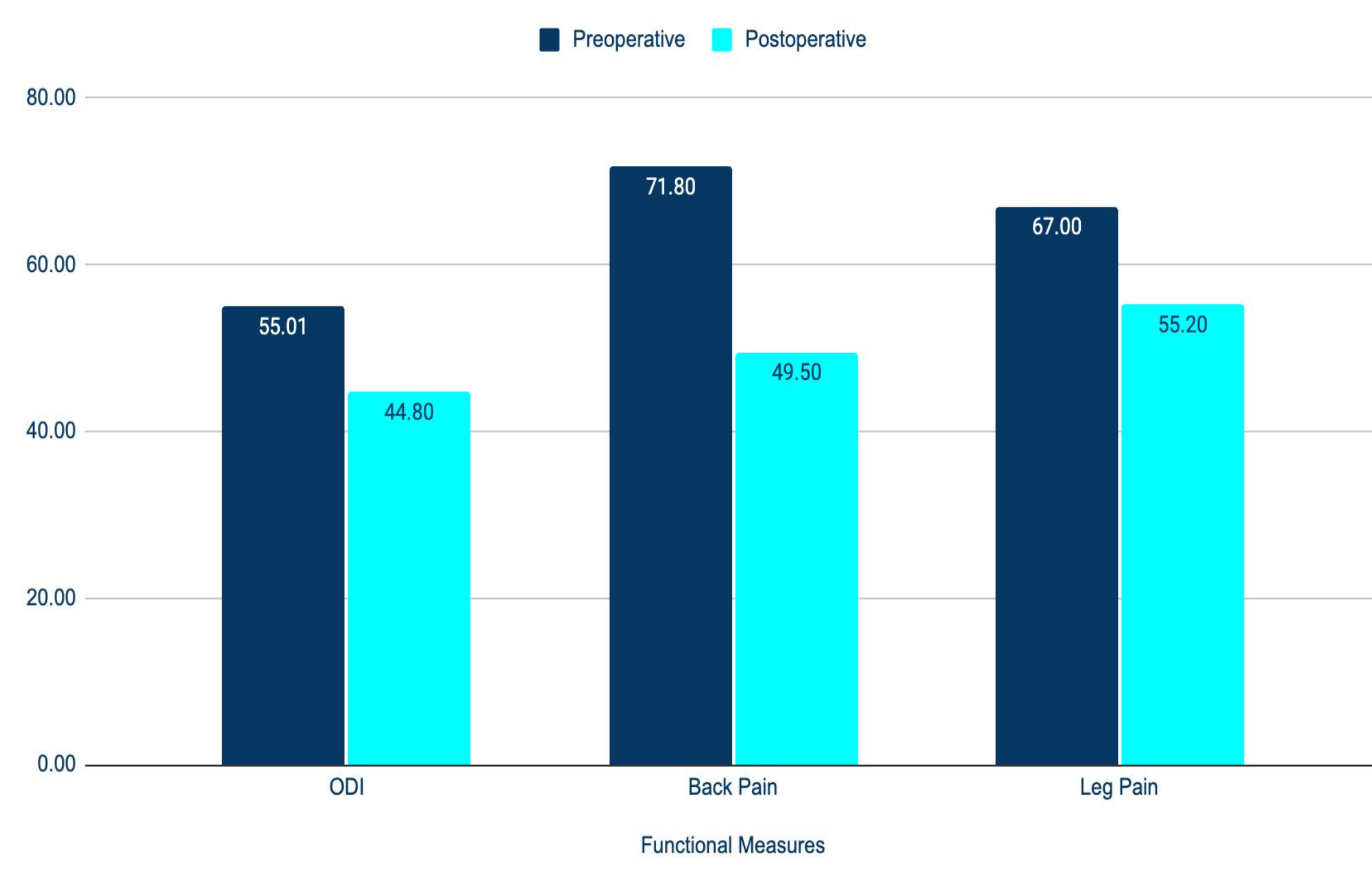
The search resulted in 276 articles of which five articles were included in the study. Of the included studies there were 365 unique patients. Of these patients 48% were male and 52% were female. The average age of all patients was 53. The most common revision procedure was posterolateral interbody fusion with 279 patients. The average change in ODI was demonstrated to be 10.2 (18%). The average improvement in back and leg pain was 2.2 (31%) and 1.2 (17%) respectively. No included studies mentioned patient satisfaction postoperatively. Following the revision procedures, the rate of pseudoarthrosis was reported to be 6% to 28%. The reoperation rate of these procedures was demonstrated to be 29%.

## CONCLUSIONS

Treatment of post-fusion pseudoarthrosis seems to reduce disability and pain. Yet, its effectiveness compared to conservative management and patient satisfaction is unclear. This review found a similar post-revision pseudoarthrosis risk and a 29% reoperation rate. This data aids in discussing revision fusion choices for pseudoarthrosis. More research is required to pinpoint the characteristics that lead to improved revision outcomes.

*“Revision fusion after pseudoarthrosis offers improvement in patient reported outcome measures, but high levels of subsequent pseudoarthrosis and revision procedures cannot be ignored.”*

Comparison Of Functional Outcome Measures Pre and Postoperatively in Patients with Pseudoarthrosis Treated With Revision Fusion



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