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INPLASY

Postoperative Rehabilitation Following Anterior Cervical Discectomy and Fusion

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 July 2025 and was last updated on 17 July 2025.

INTRODUCTION

Review question / Objective This study aimed to evaluate whether structured rehabilitation programs following ACDF surgery provide meaningful benefits in terms of pain reduction and functional recovery.

Condition being studied Previous studies have shown mixed results regarding the effectiveness of rehabilitation after ACDF. While early studies suggested limited benefits, more recent investigations have indicated that well-structured and timely rehabilitation may significantly aid recovery.

METHODS

Participant or population Cervical myelopathy, myeloradiculopathy, radiculopathy.

Intervention Structured rehabilitation (postural correction, neck exercises, range of motion and strengthening exercises, home based exercise, early functional training, vitamin D supplementation).

Comparator Usual care (no exercise), Standard approach, Placebo.

Study designs to be included Randomized Controlled Trials (RCT), Retrospective Observational Studies (ROS), Prospective Case Observations (PCO).

Eligibility criteria Studies evaluating the effects of postoperative rehabilitation after ACDF, including outcomes such as pain and disability.

Information sources PubMed, Embase, Cochrane Library, Scopus, ClinicalTrials.gov.

Main outcome(s) Pain, Disability, Range of Motion (ROM), Functional Recovery, Quality of Life.

Quality assessment / Risk of bias analysis For randomized controlled trials (RCTs), the risk of bias

was assessed using the RoB 2 tool, while for non-randomized studies, the ROBINS-I tool was used.

Strategy of data synthesis Two reviewers independently reviewed article titles and abstracts to filter out ineligible studies.
They then examined full texts to determine final inclusion, and any differences in judgment were settled by discussion, involving a third reviewer when needed.

Subgroup analysis Not applicable.

Sensitivity analysis Not applicable.

Country(ies) involved Republic of Korea.

Keywords Neurosurgical Procedure, Diskectomy, Rehabilitation, Exercise.

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