DOI: 10.7860/JCDR/2025/80480.22606

Combined Therapeutic Strategies with Lumbar Stabilisation Training for Mechanical Low Back Pain: A Systematic Review

DHEERAJ KUMAR RAI[1], KRITI SACHAN[2*]

ABSTRACT

Introduction: Mechanical Low Back Pain (MLBP) is a prevalent condition, often caused by overuse or repetitive strain on the lumbar spine, leading to significant functional impairments. Lumbar Stabilisation Training (LST) has been a key therapeutic approach, focusing on core strengthening to enhance spinal stability. Recent studies suggest that combining LST with other therapeutic strategies may provide superior outcomes in terms of pain reduction, functional improvement, and long-term management.

Aim: This review aims to evaluate the effectiveness of combined therapeutic strategies with LST for managing MLBP, by examining the outcomes of comparative and adjunctive studies.

Materials and Methods: A systematic search of PubMed, Google Scholar, and Research Gate was conducted using relevant keywords.

Randomised controlled trials published on or after 2017 were included in this review. After screening 61 articles, 23 studies focussing on combined therapies with LST for MLBP were selected for the review. Subjects in the study were at-least 18 years old, with pain for more than 12 weeks and site of pain was T12 to gluteal fold, with or without leg involvement.

Results: LST is highly effective in managing mechanical low back pain, especially when combined with adjunctive therapies. Studies show LST improves pain, disability, spinal alignment, and range of motion, with enhanced outcomes when paired with treatments like thoracic mobilisation, cervical posture correction, or Muscle Energy Technique (MET). Combinations with walking protocols or respiratory resistance training offer superior functional benefits. LST also performs as well or better than conventional therapies, highlighting its versatility in personalised treatment plans.

Conclusion: This review underscores the potential benefits of combining LST with other therapeutic strategies for managing MLBP. It suggests that personalised treatment plans, tailored to individual patient needs, are critical for optimal outcomes.

Keywords: Core stabilisation exercises, Muscle energy technique, Respiratory resistance training

PARTICULARS OF CONTRIBUTORS:
1. MPT Student, Department of Physiotherapy, Sharda School of Allied Health Sciences, Sharda University, Greater Noida, Uttar Pradesh. India.
2. Assistant Professor, Department of Physiotherapy, Sharda School of Allied Health Sciences, Sharda University, Greater Noida, Uttar Pradesh, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:
*Kriti Sachan
Department of Physiotherapy, Sharda School of Allied Health Sciences, Sharda University, Greater Noida, Uttar Pradesh, India.
E-mail: kriti.sachan@sharda.ac.in