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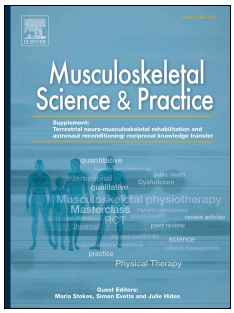

Effectiveness of movement control exercise on patients with non-specific low back pain and movement control impairment: A systematic review and meta-analysis

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ABSTRACT

Background: Patients with low back pain (LBP) and movement control impairment (MVCI) show altered spinal movement patterns. Treatment that aims to change movement behaviour could benefit these patients.

Objective: To assess the effectiveness of movement control exercise (MVCE) in terms of clinically relevant measures (disability and pain) on patients with NSLBP.

Methods: A systematic review and meta-analysis were conducted. CINAHL, MEDLINE, PUBMED and PEDro databases were searched for RCT's evaluating MVCE treatment in patients with NSLBP from review inception to April 2017. Authors were contacted to obtain missing data and outcomes. PEDro was used to assess methodological quality of the studies and the GRADE approach was used to assess the overall quality of evidence Data were combined using a random effects meta-analysis and reported as standardized mean differences (SMD).

Results: Eleven eligible RCT's including a total of 781 patients were found. Results show 'very low to moderate quality' evidence of a positive effect of MVCE on disability, both at the end of treatment and after 12 months (SMD -0.38 95%CI -0.68, -0.09 respectively 0.37 95%CI -0.61,-0.04). Pain intensity was significantly reduced after MVCE at the end of treatment (SMD -0.39 95%CI -0.69, -0.04), but not after 12 months (SMD -0.27, 95%CI -0.62, 0.09).