

# Effect of Manual Therapy Interventions on Range of Motion Among Individuals with Myofascial Trigger Points: A Systematic Review and Meta-Analysis

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## Abstract

**OBJECTIVE:** Patients with myofascial trigger points (MTPs) frequently manifest restricted range of motion (ROM) during physical evaluation. Multiple manual therapy interventions have been developed for the treatment of MTPs, but their effect on ROM has not been clarified through a systematic review and meta-analysis. Thus, this systematic review aimed to assess the effect of manual therapy interventions on ROM among individuals with MTPs. **METHODS:** A systematic search was conducted in PubMed, Web of Science, Cochrane, Scopus, and Clinical Trials.gov. Articles analyzing the effect of manual therapy interventions on ROM were included. The risk of bias was assessed with the Cochrane Risk of Bias (RoB) 2 tool. The DerSimonian-Laird method was used to compute the pooled effect size (ES) and its 95% confidence interval (95% CI) for ROM. **RESULTS:** A total of 13 randomized controlled trials were included in this systematic review and meta-analysis. The pooled ES for ROM was 0.52 (95% CI: 0.42-0.63). The pooled ES for ROM evaluated in centimeters was 0.36 (95% CI: 0.14-0.59), and the pooled ES for ROM evaluated in degrees was 0.57 (95% CI: 0.47-0.68). **CONCLUSION:** Manual therapy interventions may be an effective approach for improving ROM among individuals with MTPs. © The Author(s) 2021. Published by Oxford University Press on behalf of the American Academy of Pain Medicine. All rights reserved. For permissions, please e-mail: [journals.permissions@oup.com](mailto:journals.permissions@oup.com).

## Author keywords

Manual Therapy; Myofascial Trigger Points; Systematic Review