

SYSTEMATIC REVIEW

THE EFFECTS OF SELF-MYOFASCIAL RELEASE USING A FOAM ROLL OR ROLLER MASSAGER ON JOINT RANGE OF MOTION, MUSCLE RECOVERY, AND PERFORMANCE: A SYSTEMATIC REVIEW

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ABSTRACT

Background: Self-myofascial release (SMR) is a popular intervention used to enhance a client's myofascial mobility. Common tools include the foam roll and roller massager. Often these tools are used as part of a comprehensive program and are often recommended to the client to purchase and use at home. Currently, there are no systematic reviews that have appraised the effects of these tools on joint range of motion, muscle recovery, and performance.

Purpose: The purpose of this review was to critically appraise the current evidence and answer the following questions: (1) Does self-myofascial release with a foam roll or roller-massager improve joint range of motion (ROM) without effecting muscle performance? (2) After an intense bout of exercise, does self-myofascial release with a foam roller or roller-massager enhance post exercise muscle recovery and reduce delayed onset of muscle soreness (DOMS)? (3) Does self-myofascial release with a foam roll or roller-massager prior to activity affect muscle performance?

Methods: A search strategy was conducted, prior to April 2015, which included electronic databases and known journals. Included studies met the following criteria: 1) Peer reviewed, english language publications 2) Investigations that measured the effects of SMR using a foam roll or roller massager on joint ROM, acute muscle soreness, DOMS, and muscle performance 3) Investigations that compared an intervention program using a foam roll or roller massager to a control group 4) Investigations that compared two intervention programs using a foam roll or roller massager. The quality of manuscripts was assessed using the PEDro scale.

Results: A total of 14 articles met the inclusion criteria. SMR with a foam roll or roller massager appears to have short-term effects on increasing joint ROM without negatively affecting muscle performance and may help attenuate decrements in muscle performance and DOMS after intense exercise. Short bouts of SMR prior to exercise do not appear to effect muscle performance.

Conclusion: The current literature measuring the effects of SMR is still emerging. The results of this analysis suggests that foam rolling and roller massage may be effective interventions for enhancing joint ROM and pre and post exercise muscle performance. However, due to the heterogeneity of methods among studies, there currently is no consensus on the optimal SMR program.

Keywords: Massage, muscle, treatment

Level of Evidence: 2c

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