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The Effects of Self-Myofascial Release vs. Instrument Assisted Soft Tissue Mobilization on Performance

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Self-Myofascial Release (SMR) and Instrument Assisted Soft Tissue Mobilization (IASTM) both relieve adhesions and restrictions in muscle tissue. These tools are popular however there is limited research as to their efficacy on improving athletic performance. **PURPOSE:** The objective of this study was to determine if using pre-exercise SMR or IASTM would improve performance on measures of vertical and horizontal power. The researchers also examined if any differences in perceived pain existed between the two manual therapy interventions. **METHODS:** A total of 29 male and 22 female college students volunteered to participate in the study. Subjects were required to meet the American College of Sports Medicine recommendations for physical activity. Subjects were randomly assigned to receive either IASTM or SMR. Vertical power was assessed by a vertical jump test and horizontal power was measured by a 40 yard (yd) sprint. In the first session, body fat percentage and baseline measurements for the vertical jump and 40 yd sprint were collected. During the second session, the subjects received either SMR or IASTM prior to their vertical jump test and 40 yd sprint. Subjects were asked to rate the level of pain they perceived after the massage intervention using a visual analog scale. Subjects then repeated the vertical jump and 40 yd sprint tests. A dependent t-test was used to determine differences in pain between the two massage interventions. A 2 x 2 ANCOVA was used to determine if differences existed between genders and the two types of manual therapy. **RESULTS:** There was no interaction ($p > .05$) between the massage intervention and gender for both the vertical jump and 40 yd sprint tests. There was a significant main effect for vertical jump and SMR ($p = .04$). Gender also had a significant main effect for both the vertical jump ($p = .04$) and the 40 yd sprint ($p = .02$). There were no significant differences between massage interventions for the 40 yd sprint times ($p = .73$). There were no significant differences in perceived pain between the massage interventions ($t(49) = -1.60, p > .05$). **CONCLUSION:** The use of SMR prior to exercise may improve vertical power in recreational athletes, and was not perceived to be more painful than IASTM. However, neither SMR nor IASTM improved horizontal power.