

ABSTRACT

Static Stretching versus Active Range of Motion of the Triceps Surae: Effect on Ankle Dorsiflexion Range of Motion

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Purpose

The purpose of this study was to determine whether static stretching or active range of motion exercise of the triceps surae was more effective in improving ankle dorsiflexion range of motion in normal subjects.

Methodology

Two research designs were employed in this study: (1) a single blind one factor, one sample experimental design with repeated measures, and (2) a single blind one factor, two sample experimental design with repeated measures. The repeated measure was the dorsiflexion range of motion.

Subjects were selected for inclusion on the basis of their general health, the absence of any current pathological or dysfunctional condition of the ankle joint and surrounding tissue, and the absence of recent injury to the ankle.

Two data analysis techniques were chosen: (1) the paired differences t-test was employed to determine whether observed differences in pre- and post- treatment dorsiflexion range of motion measures were statistically significant; and (2) the two sample independent t-test was used to determine whether differences in mean changes in dorsiflexion range of motion between the two groups was statistically significant.

Findings

Both the static stretching and active range of motion treatment groups showed statistically significant improvement between pre- and post-treatment measurements. The static stretching group improved to a statistically significant extent over the active range of motion group.

Conclusions

The current study determined that both static stretching and active range of motion were effective in improving ankle dorsiflexion range of motion, and, although the statistical differences between the two groups were significant, they were also marginal. In light of these results, the questionable physiological effects of static stretching, and the theoretical benefits of active range of motion, one may surmise that active range of motion is the technique of choice in the long term.