The Effects of a Single AquaStretch™ Session on Lower Extremity Range of Motion

Lori A. Sherlock, M.S. & George Eversaul, A.P.H.
From the Division of Exercise Physiology, School of Medicine, West Virginia University

Objective

AquaStretch® is a novel aquatic technique reported to improve many aspects of function and performance. The technique is described as a myofacial release technique using intuitive movement and facilitator-assisted stretching. Clinicians have been using AquaStretch® and reporting a wide array of clinical benefits, though no research currently exists on the technique. This project provides practitioners with valuable, research-based information on the effect of AquaStretch® on lower extremity range of motion (ROM).

Methods

Participants in this study were asked to come to the West Virginia University Student Recreation Center or E. Moore Hall pool. The study was explained and written informed consent was obtained. Both aquatic facilities being utilized for this project are maintained at 85°-90° and vary in depth to allow for water depth to be maintained during the sessions regardless of participant height. The participants met with a trained AquaStretch™ practitioner and were taken through a series of range of motion measurements using a goniometer. Measurements include: ankle plantar and dorsiflexion, knee flexion and extension, hip flexion and extension, and hip internal and external rotation. All measurements were obtained by an individual trained in goniometry. Immediately following the range of motion measurements, participants were taken through a 20-30 minute AquaStretch® session. The same range of motion measurements were then taken immediately following the AquaStretch™ session.

Results

Pre and post measurements were obtained from 35 participants (n = 35) and then compared. Though ROM increased in all variables measured, 4 of the ROM measurements were found to be statistically significant pre-to-post AquaStretch™. Left foot dorsiflexion (p = 0.0006), right foot plantar flexion (p = 0.0023), left hip extension (p = 0.0057), and right hip extension (p = 0.0226).

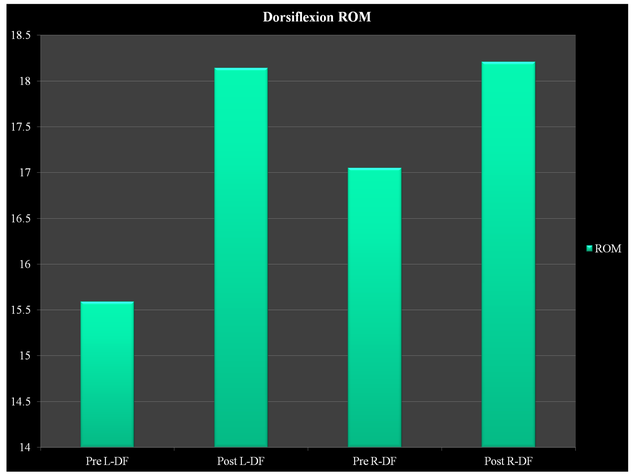

Fig 1. The change in Dorsiflexion ROM prior to and following a single AquaStretch® session in a healthy, uninjured population.

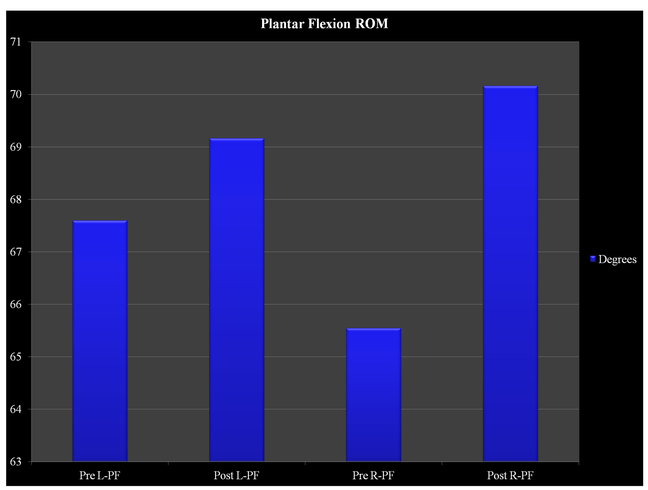

Fig 2. The change in Plantar Flexion ROM prior to and following a single AquaStretch® session in a healthy, uninjured population.

Results Cont.

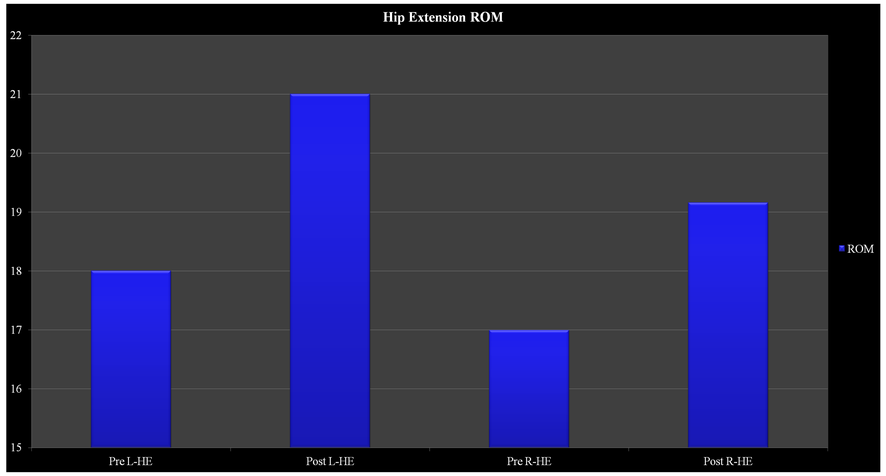

Fig 3 The change in Hip Extension ROM prior to and following a single AquaStretch® session in a healthy, uninjured population.

Conclusion

A single 20-30 minute session of AquaStretch™ results in positive gains in ROM in the lower extremity with statistically significant improvements in Left foot dorsiflexion, right foot plantar flexion, and both left and right hip extension. Individuals with reductions in lower extremity ROM may experience improvements in lower extremity ROM from a single 20-30 minute session of AquaStretch™.

Application to Practice

A single 20-30 minute session of AquaStretch™ may provide improvements in lower extremity ROM with particular benefit to dorsiflexion, plantar flexion and hip extension. Restrictions in ROM have posed a serious clinical issue for a variety of populations. These restrictions can often lead to reduced ability levels to complete necessary activities of daily living as well as recreational activities. Improvements in lower extremity ROM with a short, non-invasive AquaStretch™ session may assist in returning greater function to these individuals.