

Effects of a Single Bout of Shoulder Horizontal Adduction Contract Relax Stretching

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The research purpose was to determine how long the effects of a single session of horizontal adduction (HA) contract relax stretching (CRS) of the posterior shoulder will last. CRS is a technique where a muscle contraction is held in the target muscle group followed by a passive stretch of the same muscle group. Current research has shown CRS improves both shoulder flexibility and range of motion (ROM). 32 asymptomatic male and female (male=8, female=24) graduate students participated in a repeated measures randomized control trial. Participants were randomly selected to determine which shoulder received treatment. Participants were instructed to perform the CRS on their selected treatment shoulder. Therefore, the participants each served as their own control. Goniometric measurements were taken for internal rotation (IR), external rotation (ER) and horizontal adduction (HA) prior to intervention and up to 24 hours following. Paired T-Tests with Bonferroni adjustments were utilized. A significant ROM difference in IR of the stretched shoulder from pre to immediately post measurements ($p=.014$), post to one hour ($p=.033$), and post to 24 hours ($p<.005$) was found. Furthermore, a subsequent change in HA from immediately post to six hours ($p=.030$) and immediately post to 24 hours ($p=.033$) was found. No difference was detected in ER. CRS improved IR and HA ROM immediately following stretch and returned 24 hours later (IR pre mean value = 48.000, immediate post =52.031, and 24 hrs post =45.750; HA pre mean value = 6.843, immediate post =9.625, and 24 hrs post = 7.000). Due to this research we would recommend that posterior shoulder stretching be implemented more than once in a 24 hour period for optimal benefits which includes increased ROM.