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Investigation of the Superman Stretch on Posterior Capsule Range of Motion

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SI/CTR Abstract

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Introduction: Shoulder pain is a common clinical entity affecting all age groups and can frequently be attributed to pathological internal impingement. A primary contributing factor to labrum tears and internal impingement is posterior capsule tightness. In order to improve range of motion (R.O.M.), prior studies have demonstrated that stretching is an important tool for increasing R.O.M. at many joints. We hypothesized that the superman stretch would lead to greater increases in IR than the traditional sleeper stretch.

Methods: A level II, prospective study in collegiate-level athletes from The College of New Jersey (TCNJ) was performed. Shoulder internal rotation (IR), shoulder external rotation (ER), and glenohumeral (GH) horizontal adduction were measured. Students were randomized to perform the sleeper stretch (control) or superman stretch (experimental). Measurements were taken with a digital goniometer. P-values were calculated with a two-sample z-test.

Results: Both stretches produced significant differences in pre- and post-stretch R.O.M. across all outcomes measured (IR, ER, adduction). The superman stretch appears to provide an increase in IR (p-value 0.196) and in horizontal adduction (p-value 0.0731), whereas the sleeper stretch appears to provide an increase in ER (p-value 0.343).

Discussion: Though not statistically significant, our results indicate that the superman stretch may provide an increase in IR and horizontal adduction when compared to the sleeper stretch. A larger sample size is required to determine more significant values. Demonstration of significant improvements in shoulder R.O.M. would allow us to begin to investigate the effects of posterior capsule stretching on overhead athletes experiencing shoulder pain.