

ORIGINAL RESEARCH

IMMEDIATE EFFECTS OF A DYNAMIC ROTATION-SPECIFIC WARM-UP ON X-FACTOR AND X-FACTOR STRETCH IN THE AMATEUR GOLFER

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ABSTRACT

Background: Recent evidence suggests performing a warm-up prior to golf can improve performance and reduce injuries. While some characteristics of effective golf warm-ups have been determined, no studies have explored the immediate effects of a rotational-specific warm-up with elements of motor control on the biomechanical aspects of the full X-Factor and X-Factor Stretch during the golf swing.

Methods: Thirty-six amateur golfers (mean \pm SD age: 64 \pm 8 years old; 75% male) were randomized into a Dynamic Rotation-Specific Warm-up group (n=20), or a Sham Warm-up group (n=16). X-Factor and X-Factor Stretch were measured at baseline and immediately following the warm-up. Mixed model ANCOVAs were used to determine if a Group*Time interaction existed for each variable with group as the between-subjects variable and time as the within-subjects variable.

Results: The mixed model ANCOVAs did not reveal a statistically significant group*time interaction for X-Factor or X-Factor Stretch. There was not a significant main effect for time for X-Factor but there was for X-Factor Stretch. These results indicate that neither group had a significant effect on improving X-Factor, however performing either warm-up increased X-Factor Stretch without significant difference between the two.

Conclusions: The results of this study suggest that performing the Dynamic Rotation-Specific Warm-up did not increase X-Factor or X-Factor Stretch when controlled for age compared to the Sham Warm-up. Further study is needed to determine the long-term effects of the Dynamic Rotation-Specific Warm-up on performance factors of the golf swing while examining across all ages.

Level of Evidence: 2b

Key Words: Golf, motor control, warm-up, X-factor, X-factor stretch

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