

HIP RANGE OF MOTION IN RECREATIONAL WEIGHT TRAINING PARTICIPANTS: A DESCRIPTIVE REPORT

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ABSTRACT

Background: The surveillance of hip injuries and risk factors have become an emerging focus in sports medicine due to the increased recognition of hip pathologies. Researchers suggest that decreased hip range of motion (ROM) is a risk factor for injury in various athletic activities. One under reported population that has potential for hip injuries is recreational weight training (WT) participants. Currently, no studies have reported hip ROM values in WT participants which creates a knowledge gap in this population.

Purpose: The purpose of this study was to report hip passive ROM values of WT participants to develop reference data for future research on injury patterns and prevention strategies for this population.

Study Design: Descriptive cross sectional study

Methods: Two-hundred healthy recreational adult WT participants (age = 27.18 ± 9.3 years, height = 174.84 ± 9.8 cm, mass = 91.0 ± 17.9 kg, body mass index = 29.6 ± 4.5 kg/m²) were recruited. Bilateral hip passive ROM was assessed for flexion, extension, internal rotation, external rotation, and abduction. Statistical analysis included subject demographics (means and SD) and a two-tailed independent *t*-test to compare mean passive hip ROM values between sexes and hips. Statistical significance was considered $p < .05$.

Results: A total of 400 hips (right + left) were measured for this analysis. When comparing hip ROM values within sexes, men had no significant difference ($p \geq .28$) between the right and left hip for all motions. Women did have a significant difference ($p \leq .05$) between the right and left hip for all motions. The right hip had lower values for all motions than the left hip suggesting a more global decrease in right hip ROM. When comparing hip ROM values between men and women, there was a significant difference ($p \leq .05$) between men and women for all motions. Men had lower ROM values for all hip motions when compared to women.

Conclusion: This is the first investigation to provide a descriptive analysis of hip ROM in healthy recreational WT participants. These data provide a starting point for clinicians and researchers to further study this population for injury prevention.

Evidence Level: 2

Key words: Exercise, hip joint, injury, mobility, prevention

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