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The Impact of Moderate and High Intensity Total Body Fatigue on Passing Accuracy in Expert and Novice Basketball Players

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ABSTRACT

Despite the acknowledged importance of fatigue on performance in sport, ecologically sound studies investigating fatigue and its effects on sport-specific skills are surprisingly rare. The aim of this study was to investigate the effect of moderate and high intensity total body fatigue on passing accuracy in expert and novice basketball players. Ten novice basketball players (age: 23.30 ± 1.05 yrs) and ten expert basketball players (age: 22.50 ± 0.41 yrs) volunteered to participate in the study. Both groups performed the modified AAHPERD Basketball Passing Test under three different testing conditions: rest, moderate intensity and high intensity total body fatigue. Fatigue intensity was established using a percentage of the maximal number of squat thrusts performed by the participant in one minute. ANOVA with repeated measures revealed a significant (F 2,36 = 5.252, p = 0.01) level of fatigue by level of skill interaction. On examination of the mean scores it is clear that following high intensity total body fatigue there is a significant detriment in the passing performance of both novice and expert basketball players when compared to their resting scores. Fundamentally however, the detrimental impact of fatigue on passing performance is not as steep in the expert players compared to the novice players. The results suggest that expert or skilled players are better able to cope with both moderate and high intensity fatigue conditions and maintain a higher level of performance when compared to novice players. The findings of this research therefore, suggest the need for trainers and conditioning coaches in basketball to include moderate, but particularly high intensity exercise into their skills sessions. This specific training may enable players at all levels of the game to better cope with the demands of the game on court and maintain a higher standard of play.

Key words: Squat thrusts, ecological validity, anaerobic

Key Points

- Aim: to investigate the effect of moderate and high intensity total body fatigue on basketball-passing accuracy in expert and novice basketball players.

• Fatigue intensity was set as a percentage of the maximal number of squat thrusts

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