

ACUTE EFFECTS OF TRADITIONAL RESISTANCE TRAINING ON SPORT-SPECIFIC PERFORMANCE IN ADOLESCENT CRICKET PLAYERS

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Introduction

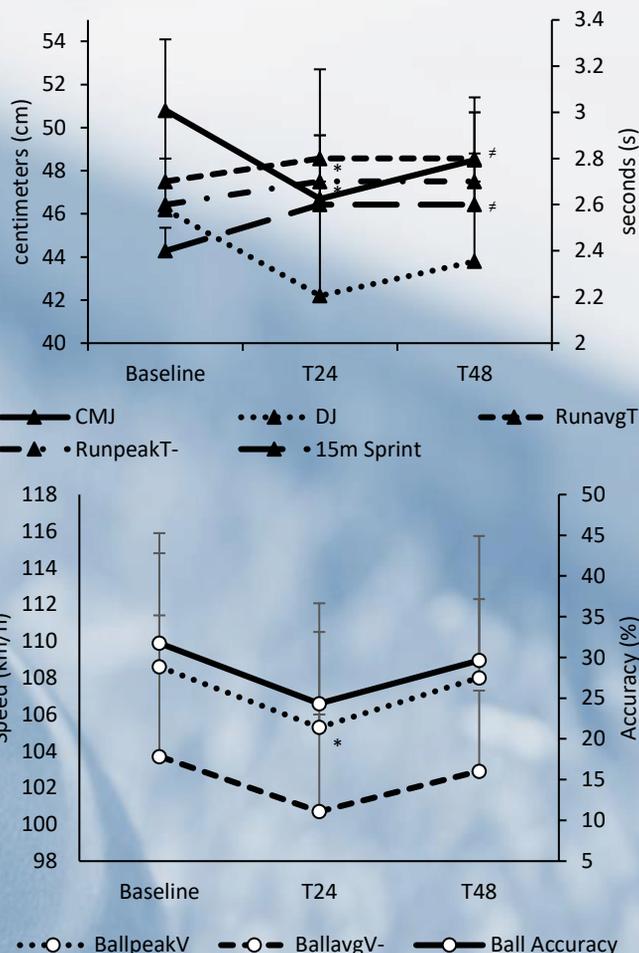
Cricket is a sport played internationally, which requires all players to partake in repetitive, high intensity bouts of exercise, to meet the anaerobic demands needed in a match. This can lead to cricket athletes undertaking resistance training to improve anaerobic performance. However, resistance training results in acute physiological stress known as exercise-induced muscle damage (EIMD), which has been reported to impair generic physical performance measures, subsequently impacting training practice and increasing injury susceptibility. The aim of this study was to examine the acute impact of EIMD on cricket bowling performance following traditional resistance training.

Methodology

State level adolescent male cricket fast bowlers (N=7; age 14 ± 3.2 yrs; height 1.72 ± 0.3 m; weight 68.5 ± 8.5 kg) with 4.2 ± 2.5 years of experience in bowling, who had not undertaken resistance exercises in the past 6 months were included in this study. Bowling-specific performance (BallavgV-, BallpeakV-, RunavgT-, RunpeakT-, Bowl_{accuracy}), anaerobic performance (CMJ, DJ and 15-m) and indirect muscle damage markers (creatine kinase (CK), delayed-onset muscle soreness for lower and upper body (collected subjectively via a 10-point scale), were collected at baseline. Participants were then exposed to a whole-body resistance session, returning 24 (T24) and 48 (T48) hours to re-test baseline measures comparing differences between time points.

Results

The bout of resistance training, significantly increased CK and DOMS up to T48. The 15-m sprint time and CMJ increased up to T48. Ball speed was significantly reduced at T24. However reductions were not present at T48. BallavgV-, RunavgT-, RunpeakT- and DJ did not reach the level of significance.



Discussion

In state level adolescent male cricket fast bowlers, a bout of resistance training elicits exercise-induced muscle damage, and impairs anaerobic performance, and bowling-specific performance measures. This research provides informative data to coaches and practitioners who conduct skill-specific bowling sessions as they can expect an average 3% decrease in bowling speed, and a decrease in bowling accuracy, within 24 hours and 48 hours of resistance-based training, respectively.

Practical Applications

The significance of this research could provide athletes and coaches with recommendations to optimize performance and training adaptations possibly hindered by EIMD.

References

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