TACSM Abstract

Ergometer Speed by Weight, and Strength

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Category: Undergraduate

ABSTRACT

Purpose; The purpose of the study is to determine a relationship between male rower's ergometer time (ET) body weight (WT), height (HT), maximal Squat (SQ), and Dead Lift (DL) results. **Methodology**; Subjects (N=16; HT= 185.34cm ±7.19; WT= 83.82kg ±8.06) were all male high performance athletes participating at the varsity level. All subjects participated in a 20-minute warm up on a Concept 2 rowing ergometer before participating in a 6000 meter timed trial at maximum effort. After 24 hours of recovery subjects were required to participate in a 10-minute warm up (run) before being tested for their 5 Repetition Max (RM) on both SQ and DL. A Pearson correlation was used to analyze data and significance was noted at $p<.05$. **Results:** Analysis yielded a negative correlation between WT and ET ($p=.002$ $R= -.70$), SQ and RS ($p<.001$ $R=-.79$), and DL and ET ($p=.045$ $R=-.51$). There was no significance at $p<.05$ for HT and ET. **Conclusion:** Rowing technique is extremely dependent on the athlete's ability to maximize leg thrust, therefore making the SQ and DL essential in determining ES. ES was also faster when subject's WT was heaver which may be due to increased muscle mass in heavier athletes. Addition studies of larger test groups and 1-RM may be required.