

**45 THE EFFECT OF A SERIES OF STRENGTH TRAINING SESSIONS ON 2000 M ROWING ERGOMETER PERFORMANCE AND MUSCLE FUNCTION**

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Research has previously shown that rowers commonly perform strength training three times per week. However, no research has assessed the impact that this weekly frequency of strength training may have on muscle function. Twenty-two highly trained male rowers were evenly assigned to two groups; intervention and control. All rowers performed base-line measures of a maximal isometric contraction of the leg extensors (MVC), five separate, static squat jumps (SSJ), counter-movement jumps (CMJ), and maximal rowing ergometer power strokes (PS) and a single 2000 m rowing ergometer test (2000 m). Intervention participants subsequently performed a protocol of three identical strength training (ST) sessions, in the space of 5 days with a day's break in-between the first to second and second to third sessions. The intervention group repeated the 2000 m test at 24 h following the final ST, in addition MVC, SSJ, CMJ and PS tests were performed. Muscle soreness (MS) and serum creatine kinase (CK) were assessed during both testing sessions for each group. Following the ST protocol, the intervention group experienced significant elevations in MS and CK ( $P < 0.001$ ) coupled with decrements in MVC, SSJ, CMJ and PS, which ranged between 6-8% ( $P < 0.001$ ). Values for these parameters were unchanged between both trials for the control group. Performance of the 2000 m test was not significantly affected by ST. No changes in 2000 m performance occurred from test to re-test in the control group. In summary, a series of strength training sessions resulted in symptoms of muscle damage and decrements in maximal power, but 2000 m ergometer performance was unaffected



## The effect of a series of strength training sessions on 2000 m rowing ergometer performance and muscle function

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