



The Effects Of Core Stabilization On Blood Lactate Levels

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Background

The Wingate anaerobic test is considered one of the best tests to measure anaerobic power. It is an “all out” ride for 30 seconds against a resistance based on body weight. Lactic acid is produced when energy demands exceed amount of oxygen being provided or rate of utilization which results in an accumulation of lactic acid in the muscle which then diffuses into the blood. Many studies have established that low level, active recovery such as swimming and running following exercise serves to significantly reduce blood lactate levels. It is currently unknown whether core stabilization exercise performed following an intense anaerobic exercise would help lower blood lactate levels.

Purpose

The purpose of this research was to examine if Core Stabilization exercise enhanced blood lactate clearance following a Wingate Anaerobic Power Test (WAnT).

Methods

A total of 12 participants(6 male and 6 females) came to the ESRL on 2 separate occasions, separated by at least 3 days. On both occasions resting blood lactate measurements were taken with finger stick.

Methods (cont'd)

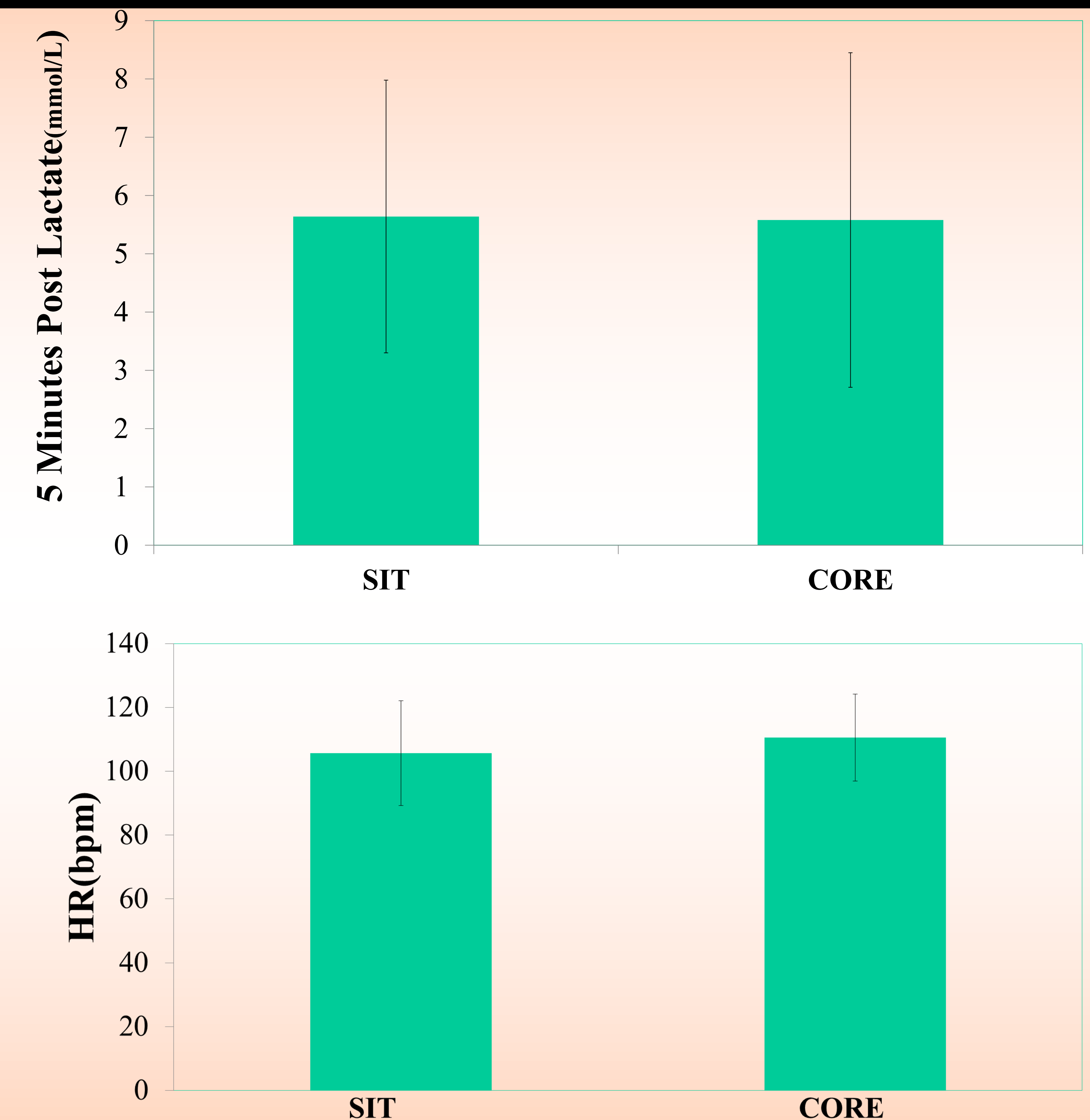
A Wingate anaerobic power test on cycle ergometer was performed each day. This test requires the subject to pedal as hard and fast as possible for 30 sec. Immediately following this exercise another finger prick was done to measure blood lactate levels. The subject would then either sit quietly for 5 min or go through core stabilization exercises for 5 min. A final blood lactate measure was made at this time. The order of the recovery activities, 5 min of sitting or 5 min core stabilizing exercises was randomly determined. Subjects completed the other protocol on their final visit.



Results

Statistical analyses revealed no significant interaction between recovery intervention and condition ($p= 0.404$). The results of the Wingate anaerobic cycle test were not significantly different between the two trials ($p= 0.141$).

Results (cont'd)



Conclusions

The results of this study indicated that there was no significant difference when incorporating core stabilizing exercises during a recovery period compared to resting on the level of blood lactate.