



The influence of different High Intensity muscle contraction on blood lactate

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Abstract

Purpose: The purpose was to explore the effect of muscular pathway on bare-hand and machine exercise. **Methods:** There were two tests including bare-hand strength endurance (HSE) and rowing ergometers training (RET). Two tests would be undertook in 24 hours. There were four kinds of different movements in HSE test. All the participants would do their best as this test. As the same, all the participants would do the best in the RET for 30 seconds. **Results:** The blood lactate after finishing HSE exercise in 1 min was 3.9 ± 1.5 mmol/l, and 9.1 ± 1.8 mmol/l in 5 mins. The blood lactate increased 5.2 mmol/l ($p < 0.05$) in 5 mins. The difference between the time of the end of RET and the highest lactate was +2.4 mmol/l ($p > 0.05$). **Conclusions:** Both the maximum of lactic acid accumulation and after finishing in 1 min shows the accumulation in HSE exercise was higher and also it would come out from muscular cell slower in these kinds of short period but high intensity exercise. Thus, we suggest that HSE training might be an awesome choice as off-site training to maintain athlete's anaerobic muscular strength endurance if unable using the strength training machine.

Key words: Muscle contraction 、 High intensity exercise 、 Lactate