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EXTENSIVE INTENSITY EXERCISE MOST EFFECTIVELY INCREASES ANAEROBIC THRESHOLD

EXTENSIVE INTENSITY EXERCISE MOST EFFECTIVELY INCREASES ANAEROBIC THRESHOLD

1. Muchsin Doewes --> Department of Physiology, Faculty of Medicine, Sebelas Maret University, Surakarta

Abstract

One of the factors that determine performance in sports is the physical work capacity. To improve physical work capacity required training programs that meet the aerobic-anaerobic metabolic elements that proportion depends on the metabolic pathways of energy systems. Means to determine the metabolic pathways of energy systems is the intensity of exercise in accordance with the predominant energy system (ATP-PC, ATP-PC-LA, LA-O2). The intensity of exercise that most effectively improves the physical work capacity is still unknown. The purpose of this study was to prove the effects of various kinds of exercise intensity on the anaerobic threshold. This experimental study using the design randomized control group pretest-posttest design on 100 respondent students boarding school Al-Mukmin Ngruki, Solo. It is divided into four groups, namely the intensive intensity group (ATP-PC), extensive intensity group (ATP-PC-LA), moderate-intensity group (LA-O2) and the control group. Paired t-test found that the three types of exercise intensity can increase anaerobic threshold significantly (p<0.01). Increased anaerobic threshold is marked by a shift value of lactate 4mmol/L to a heavier workload, which means an increase in physical work capacity. Anacova test results, showed a highly significant difference between the intensive-intensity group with extensive- intensity group (p< 0.01), there are significant differences between groups of intensive-intensity with moderate-intensity groups (p<0.05), and there is no difference between extensive-intensity group with moderate-intensity group (p>0.05). Exercise load achieved by an extensive group of the most effective intensity increase anaerobic threshold, then follow the moderate intensity exercise group. Intensity exercise group intensive increase anaerobic threshold, but less effective.

Keyword : intensity, exercise, lactate, anaerobic, threshold, ,

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