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Effect of Friction Technique Massage for Leg After Maximal Exercise on the Removal Rate of Blood Lactate

Effect of Friction Technique Massage for Leg After Maximal Exercise on the Removal Rate of Blood Lactate

1. Yudik Prasetyo --> Faculty of Sport Sciences, State University, Yogyakarta
2. Elyana STP Asnar --> Department of Physiology, Faculty of Medicine, Airlangga University, Surabaya

Abstract

There are still controversies over the benefits of massage given at the break time between two successive matches. One cause of fatigue is lactic acid which accumulates both in muscle and blood. This study aims to determine the effect of friction massage techniques in the legs after maximal exercise on blood lactic acid removal rate to quicken eliminate fatigue. The laboratory research, using a randomized pretest posttest control group design, in 21 male students in Faculty of Sport Sciences State University Yogyakarka 2007, untrained, 21-23 years, were randomly divided into three groups: group front friction massage techniques (MFD: vastus, gastrocnemius), friction massage techniques back (MFB: the hamstring-gastrocnemius) and the rest (R). Treatments consisted of maximal exercise (pedaling a bicycle ergometer with pedal speed 50 RPM, initial load 50 watts, 10 watts every minute until the enhanced unable pedal again), stop, directly given friction massage techniques front, back and rest, each 5 minutes. Lactic acid concentration (mMol/L) was measured 4x, before students try to do the activity, immediately after the maximal exercise, after being massaged or rest 5 minutes, and 10 minutes after maximal exercise. Blood was taken from a fingertip by means of Lactate Pro. There were significant differences (p < 0.05) between the velocity of blood lactate removal MFD group (0.914 ± 0.027) mMol/L/min and R (0.674 ± 0.022); MFB group (0.774 ± 0.041) and R; and groups MFD and MFB. The conclusion is, in sequence, the highest speed lactate removal is with the front friction massage techniques, friction massage technique back, and then rest. These results suggest that massage is done on the dominant active muscle will quickly eliminate fatigue because the rapid removal of lactate from muscle into the blood to other organs that can use lactate as an energy source.

Keyword : friction, technique, massage, blood, lactate, removal,

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