

Abstract

Title: Change of muscle contraction rate before and after the application of sports massage

Objectives: The aim of this work is to find out if sports massage of leg effects the muscle contraction rate of musculus vastus medialis and musculus vastus lateralis. Part of that aim is to compare differences of muscle contraction rate between men and women.

Methods: The research was realized in a form of quaziexperiment and 8 probands took part in the research. Results were obtained from the TMG machine in the lab in department of physiology and biochemistry UK FTVS. First of all we measured proband's height and weight, after that we measured muscle contraction of musculus vastus medialis and musculus vastus lateralis on left leg. After the first measurement the proband had a sports massage of left leg. After the massage was the second measurement of muscle contraction of musculus vastus medialis and musculus vastus lateralis.

Results: The muscle contraction rate of musculus vastus medialis of all probands before massage was $24,11 \pm 1,87$ ms and $24,35 \pm 1,96$ ms after massage, the muscle contraction rate of men before massage was $25,11 \pm 1,5$ ms and $25,59 \pm 1,47$ ms after massage, the muscle contraction rate of women before massage was $23,11 \pm 1,65$ and $23,1 \pm 1,55$ ms after massage. The muscle contraction rate of musculus vastus lateralis of all probands before massage was $25,96 \pm 4,27$ ms and $27,23 \pm 5,04$ ms after massage, the muscle contraction rate of men before massage was $27,60 \pm 4,70$ ms and $29,63 \pm 5,45$ ms after massage, the muscle contraction rate of women before massage was $24,33 \pm 3,01$ and $24,84 \pm 3,11$ ms after massage. Results showed that muscle contraction after massage was slower.

Key words: massage, tensiomyography, skeletal muscle, muscle contraction