Abstract

Title: Analysis of strenght training of rock climbers - campusing

Objectives:

The main objective of this work is to determine time and space characteristic of working muscle chains of upper body during training on campus board and climbing on vertical wall. Comparing basic exercise by measuring EMG signal in combination with cinematographic analysis synchronized with video record, to analyse coordination markers of muscle work in selected area of movement system.

Methods: In our thesis we used a method of analysis and a method of comparison. We apllied the method of analysis in research of campusing movement and the method of comparison in comparing the basic climbing movement and basic campusing.

Results: It is possible to define campusing as movement in vertical axis, which is executed by three times faster muscle chains activation compared to basic climbing on vertical wall. Movement is realized by upper limbs, by changing positions of one point holding position and two point holding position. In both activities measured muscles are wireing in similar mode, during campusing the musculus pectoralis major and the musculus triceps brachii are faster in start of their activity compared to climbing on vertical wall.

Keywords: sport climbing, muscle chains, electromyography, campusing