

# **ABSTRAKT**

## **Title:**

The influence of equipment and arms on skeletal muscles activities while practising direct kick.

## **Aim:**

The aim of this thesis was to find out the influence of carried equipment and arms on the activity of skeletal muscles when a direct front kick is being practised.

## **The methods used:**

This thesis has an empirically observational character. Muscular activities were measured by means of surface electromyography synchronised by Qualisys screen system. To obtain statistic data, a t-test has been used, requiring 5 % significance level.

## **Results:**

While carrying a 15-kilogram load, the activity of skeletal muscles was not significantly reduced when performing a direct front kick. However, a 30-kilogram load caused a substantial reduction of skeletal muscular activities during the kick described above. After adding a 15-kilogram bag to another 15 kilograms in the form of a body armour, a helmet and arms, the muscular activity changed its features in a considerable way. Furthermore, most respondents proved 45-kilogram load to be over their limit. The equipment and arms of that weight led to the summation action potential, exceeding the power-coordinative functional reserve, and thus the deformation of the direct front kick technique.

## **Keywords:**

close combat, EMG, equipment, arms, direct front kick