ABSTRACT

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Title: Elektromyographic analysis of differences in selected excercises on pommel horse and riding horse

Objectives: The aim of the thesis was to measure the activity of selected muscles, expressed as the percentage value of the maximal voluntary contraction (MVC), during excercises performed by both males and females probands. The effect of treatment (on pommel horse vs riding horse) and proband sex on muscle activity was tested.

Methods: Maximal voluntary contraction of each muscle (eight in total) was electromyographically measured in each proband, using the test according to Janda. These values were used as a standard to which the values obtained by excercising on pommel horse and riding horse were related. The values were averages of three repeated measurements. The effect of studied factors was tested by analysis of variance.

Results: The tested hypotheses were confirmed. The muscle activity during excercises was statistically significantly affected by the factors studied, therefore the variation in measured values is not random. Muscle activity tended to be higher on riding horse than on pommel horse, and in females compared to males.

Key words: horse riding, pommel horse, EMG, electromyography, hipotherapy, correct horse sit