

Abstract

Title: Evaluation of the ability to dynamically stabilize and postural strategy of Czech female handball players

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Aim: The main objective of the diploma thesis is to investigate the difference of dynamic postural stability and its strategy between female handball players in the Czech republic and the group of women, who don't practise any sport. For the objectivization is used a dynamic posturography Smart EquiTest by NeuroCom company.

Methods: The participants of this quantitative cross-sectional study are 44 women, divided into the experimental (24 handball players) and the control group (20 unsporting women) in the age from 18 to 28 years old. Measurements of dynamic postural stability were performed on Smart EquiTest by Neurocom in the Kinesiological Laboratory at the department of the physiotherapy on Faculty of Physical Education and Sport of Charles University. The whole test battery contains 7 testing protocols. The measured data from z Neurocom Balance Manager Software were exported to Microsoft Excel 2016, where were used other statistical methods like Shapiro - Wilk test, Student's T-test, Mann – Whitney test and Cohen's d effect size..

Results: A statistically significant difference in favor of non-handball players was found of Limits of Stability, Sensory Organisation Test and Motor Control Test. The analysis of players specializations clearly shows the difference in dynamic postural stability skills. A significant differences between the specializations of elite handball players was found of Limits of Stability and Sensory Organisation Test.

Key words: dynamic postural stability, dynamic posturography, Neurocom EquiTest, handball, female handball players