

## **Abstract**

**Title:** Effect of fitness concept FLOWIN® on balance and spinal segmental stabilisation

**Objectives:** The goal of this thesis is to find out whether exercising the fitness concept FLOWIN® has any real and measurable effect on balance and spinal segmental stabilization of the individual, based on the comparison of measured data of exercisers of different levels of proficiency, which is differentiated by the length of exercise (beginners, advanced) and instructors of group lessons operating in the Czech Republic.

**Methods:** The study in nature was a blinded experiment, attended by 13 beginners, 19 advanced exercisers and 10 instructors of the fitness concept FLOWIN®. Each participant's balance was tested by using the Y Balance test on lower and upper body and testing of spinal segmental stabilization was performed by using tests based on the principles of Australian method. The average results of testing of balance and spinal segmental stabilization of the experimental groups were then compared with each other. Separately were evaluated results of measuring spinal segmental stabilization in the group of instructors, depending on their experience in practicing the concept.

**Results:** In the case of testing balance, the resulting research data showed that after comparing the average values of individual experimental groups, they meet specified criteria for verification of improving the state of balance in all components of the measurement and so the positive effect of fitness concept FLOWIN® on balance of participants was confirmed. In the case of spinal segmental stabilization the criteria for verifying the improvement of the condition of spinal segmental stabilization meets only one of the two components of the measurement and so the positive effect of fitness concept FLOWIN® on spinal segmental stabilization was not confirmed. A separate evaluation of the results of spinal segmental stabilization in the group of instructors, research has shown that the best values were measured in those participants who operate as instructors for 5 or more years.

**Keywords:** exercise on unstable surface, friction, Y Balance test, Australian method