

Abstract

Title: Influence of Power Plate machine vibrations on *m. levator ani* contraction.

Objectives: In my thesis I would like to follow up on my bachelor's thesis in which I was analyzing the importance of exercise on the Power Plate machine from a theoretical point of view.

I set the objective of my thesis, in co-operation with professionals in this area, to find out whether Power Plate machines have any impact on the pelvic floor contractions, especially on the *m. levator ani*.

Methods: Theoretical part of my thesis was conducted using the research (exploration of facts) method. For theoretical input I mainly used my bachelor's thesis which was being followed up with. Majority of studies regarding WBVT (whole body vibration training) influence on human body is available from foreign sources.

The practical part of my research was conducted via the quantitative quasiexperimental method. The works was further performed with use of the explanation (empirical and generally theoretical) methods and interpretation methods.

For the data analysis were used the basic descriptive statistics, analysis of variance with repetition with Geisser-Greenhouse adjustment and paired t-test.

Interpretation method was used to generalize the research outcomes, to confront them with existing knowledge, and to debate their application in practice.

Results: Vibrations of the Power Plate machine do not affect neither the maximum contraction nor the contraction holding time of the *m. levator ani*.

Keywords: Power Plate, vibration, vibrations, maximum contraction, contraction holding time, pelvic floor, *m. levator ani*.