

## **Abstract**

**Title:** The change in heart rate during postural therapy

**Objectives:** The main aim of this thesis is to objectivize the relationship between the quality of postural stabilization according to the postural provocation test with Propriomed and changes in heart rate, which are monitored during this test (or therapy).

**Methods:** The experimental study includes 18 healthy probands at the age of 20-30 years. To evaluate the level of postural stabilization was used the aid Propriomed, sensors to record movements of Propriomed, shoulder girdle, hand and pelvis; and the measuring program Microswing 5.0. To heart rate monitoring during Propriomed testing was used the sporttester Polar RS800CX. This sporttester was used to evaluate the physical fitness according to the Polar Fitness Test™ (OwnIndex), too. Polar Fitness Test™ is based on the heart rate variability monitoring. The evaluation of results and statistic data processing were done in Microsoft Office Excel 2007.

**Results:** Between the level of postural stabilization in the postural provocation test and the difference between the maximum and minimum heart rate achieved during this test, no statistically significant relationship was demonstrated. When monitoring heart rate changes during the series of six provocation tests, people with lower quality of postural stabilization showed greater differences in peak heart rates at the start and at the end of the series. There was also demonstrated a statistically significant correlation between the level of postural stabilization and the level of aerobic fitness according to the Polar Fitness Test™.

**Keywords:** postural stabilization, Propriomed, heart rate, pulse, OwnIndex