

Title: Gait and balance disorders in Parkinson's disease – comparison of two different methods of physiotherapy

**Abstract:**

This thesis is concerned with the problematics of balance therapy applied to patients with Parkinson disease. The aim of the theoretical part is to briefly describe contemporary knowledge about this problem. The aim of the practical part is then to compare the level of postural stability before and after the therapy applied to those patients, that consider postural stability as their main problem. To assess postural stability problems, following tests were used: computerized Sensory Organization Test, MINI BESTest, UPDRS and measurements of knee flexion and extension. One patient underwent a balance training in the gym according to methodical row of sensory motor stimulation, another two patients underwent balance therapy on the SMART Balance Master®, all of them in the scale of 10 therapies during 5-7 weeks. In the intraindividual comparison, all patients have reached an overall improvement of their postural stability. The amount of steady state stability has not changed (according to the methods used). Proactive stability has improved in one case, the stability of gait has improved in two cases.

**Key words:**

Parkinson's disease, postural instability, physiotherapy, balance training, SMART Balance Master®, sensory motor stimulation