

## **Abstract**

**Title:** Effect of yoga on postural stability in patients with multiple sclerosis

**Objectives:** The aim of this theses is to determine the effect of yoga practice on postural stability and potential influence on stability during gait in patients with multiple sclerosis. Secondary aim of the theses is to evaluate the effect of pranayama, asana and relaxation practice on fatigue and anxiety in these patients.

**Methods:** There were 8 patients with clinically diagnosed multiple sclerosis and EDSS  $\leq$  5 without any previous experience with yoga in the research. Patients participated in 3-month yoga program, which contained 90 minutes guided classes once a week. Each class consists of pranayama, asana sequence and relaxation. In addition patients also practice at home twice a week at least for 30 minutes. The following evaluations were performed at study entry and after 3 months of yoga practice. Postural stability was evaluated using computerized dynamic posturography Smart EquiTest Neurocom and its test protocols: Adaptation Test (ADT), Sensory Organisation Test (SOT), Motor Control Test (MCT), Limits Of Stability (LOS) and Unilateral Stance (US). Subjective perception of stability was evaluated using standardized questionnaires Falle Efficacy Scale International (FES-I) and Activities specific Balance Confidence Scale (ABC). Timed Up and Go (TUG), 2 minute walk test were used for a gait evaluation. Evaluation of fatigue and anxiety was performed by using standardized questionnaires Fatigue Severity Scale (FSS) a Beck Anxiety Inventory (BAI).

**Results:** The results of posturography examination after 3 months of yoga intervention has shown significantly important improvement in evaluated parameters of postural stability. Subjective perception of stability and gait stability were also improved. Statistically significant improvement was detected also in evaluation of fatigue and anxiety.

**Keywords:** yoga, multiple sclerosis, postural stability, gait