# Improving balance and physical activity in elderly with Parkinson's disease – long-term efficacy and effectiveness in a clinical practise of the HiBalance program

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Sweden

# Title of project or programme

Improving balance and physical activity in elderly with Parkinson's disease – long-term efficacy and effectiveness in a clinical practise of the HiBalance program

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01/12/2014

# **Total duration of award in years**

3

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### **Research Abstract**

Poor balance control and in elderly leads to a sedentary life with physical inactivity and an increased risk for falls. Parkinson's disease (PD) is a neurodegenerative disease where the

prevalence increases with age. PD affects many physiological systems essential for balance control. The first choice therapy is pharmacology treatment; however the effects on balance are limited. New findings suggest that intensive, challenging and cognitively demanding exercises could induce neuroplasticity in PD. We have therefore developed a new balance training (the HiBalance program), emphasizing critical aspects of balance control through highly challenging and progressive exercises incorporating dual/multi tasks with the addition of physical activity prescription. The research proposal consists of an efficacy study (randomized controlled trial with 100 PD) in a hospital setting and a subsequent clinical effectiveness and implementation study (hybrid design) with (6 clinics, 100 with PD) to translate the knowledge into real world settings. Preliminary results of the efficacy study show improved balance, gait and physical activity level in favor for the training group. Long-term follow-up, applied for here, will further explore these effects and also the effect on fear of falling and quality of life. Thereafter, we will evaluate the effectiveness on patient level and whether the HiBalance program was implemented as intended by conducting a process evaluation. Facilitators and barriers for performing the program as part of clinical routines will also be explored. With an improved balance, physical activity level and quality of life, participants in the program will not only reduce their risk of falling and the burden on the health care system but also gain health benefits related to an active lifestyle. Our training will expand techniques and tools for health care professionals treating elderly with balance disorders, as well as important strategies for implementation.

### Further information available at:

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