

Gait in elderly with Parkinson's disease – Long term effects of highly challenging balance training program

<https://neurodegenerationresearch.eu/survey/gait-in-elderly-with-parkinsons-disease-long-term-effects-of-highly-challenging-balance-training-program/>

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Norway

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Gait in elderly with Parkinson's disease - Long term effects of highly challenging balance training program

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€ 208,000

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4

Keywords

Research Abstract

Background: Parkinson's disease (PD) is the most common motor system disorder of the basal ganglia resulting from loss of dopamine producing cells in the substantia nigra compacta. Common clinical features are progressive postural instability, hypokinesia, tremor and rigidity. Disturbances of gait manifest in almost all cases, where increased step-to-step variability is a known feature. Increased gait variability is further associated with increased disease severity

and reductions in balance and mobility capabilities. Reduced balance and gait function are contributing factors to increased fall incidence which in turn impacts activity levels and care giver stress.

The main aim of this PhD project was to investigate the long term effects of 10 weeks highly challenging balance training program on balance, gait and gait variability in individuals with mild to moderate PD (study 3). Also, this PhD project explores the validity of the Gait Variability Index for individuals with PD (study 1), and test-retest reliability of step-to-step variability in spatiotemporal gait variables (study 2).

Method: Inclusion criteria: a diagnosis of idiopathic PD, Hoehn &Yahr (H&Y) stage 2 and 3, and ? 60 years. RCT Karolinska: Training group n= 49, control group n=51. Testing was done at baseline, immediately post training, 6 months post training, and 12 months post training. Cross sectional Sunnaas: 30 individuals with PD and 24 healthy controls were tested on two occasions no more than one week apart. Data on disease severity (H&Y, UPDRS), dynamic balance (Mini-BESTest), mobility (Timed Up & Go, TUG) and spatiotemporal gait parameters at different speeds (GAITRite) was collected.

Results study 1: The validity of the GVI could not be confirmed for individuals with mild to moderate PD in its current form due to low associations with validated tests for functional balance and mobility and poor discriminatory ability between H&Y 2 and 3.

Study 2 and 3: Manuscript in progress.

Further information available at:

Types:

Investments < €500k

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Norway

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