

# Sensorimotor Treadmill Training to Improve Gait and Balance in Parkinson's Disease

Stability and Balance in Locomotion through Exercise

## StaBLE



### Background

Persons with Morbus Parkinson commonly develop gait and balance disorders leading to dependence, loss of mobility and a high risk of falling.

This study investigates the effectiveness of a sensorimotor treadmill intervention to improve walking and balance abilities in persons with early stages of Parkinson's disease. The sensorimotor treadmill training is conducted on a special treadmill device which is challenging the participants by small oscillations. This intervention, which is supposed to simulate walking on natural, uneven surfaces, is compared to a conventional treadmill training.

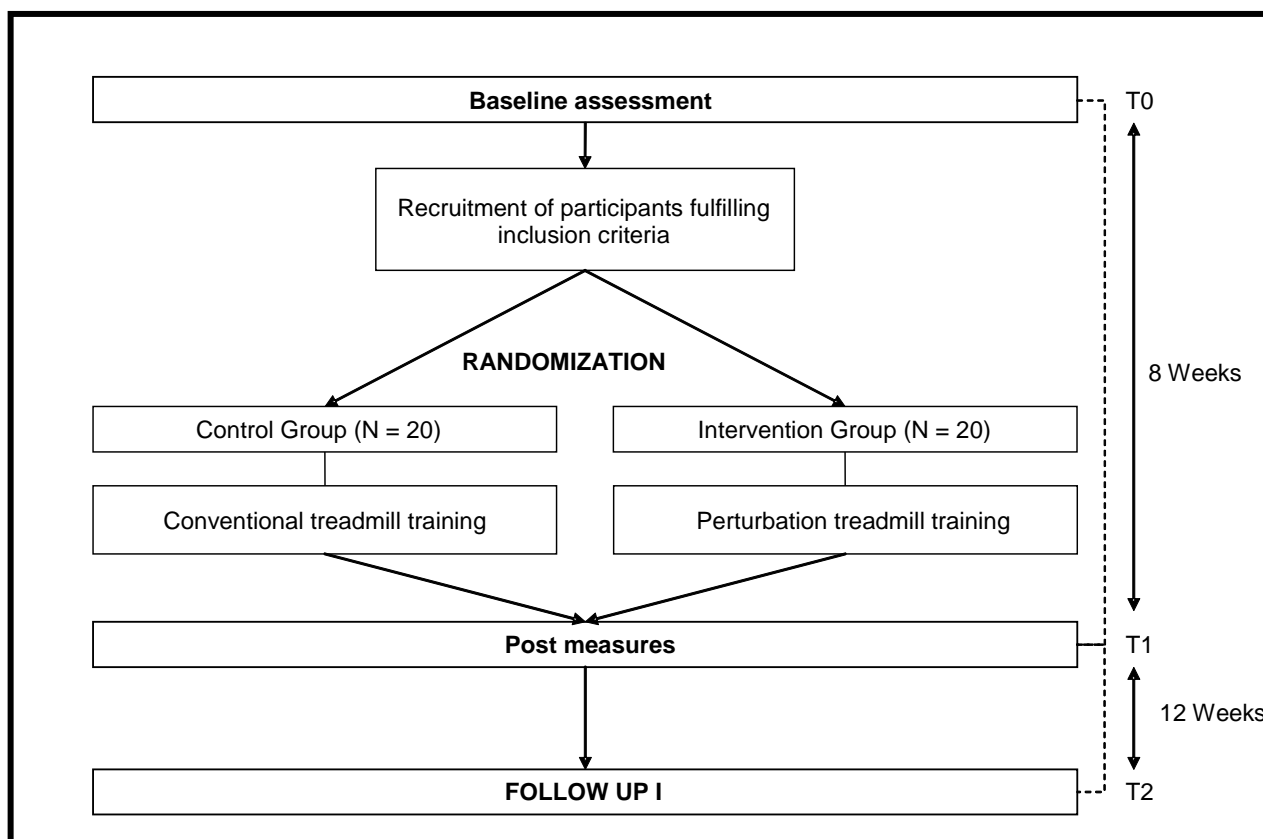
### Methods

#### Primary endpoints:

- Self selected and fast walking speed (10 meter walk test)
- Balance: miniBEST, postural sway bipedal in quiet stance

#### Secondary endpoints:

- Gait performance: 2 minute walk test, Timed "up-and-go" Test, Assessment of tempo-spatial gait parameters
- Balance confidence (ABC scale), fear of falling (FES-I), Mobility (Rivermead Mobility Index), cognitive performance (MOCA), physical activity (7-day activity monitoring)
- Unified Parkinson's Disease Rating Scale (UPDRS)



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