

Bewegen als medicijn bij parkinson

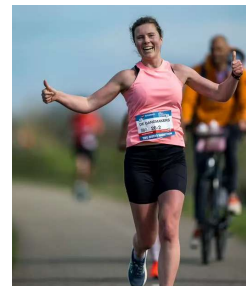
Sabine Schootemeijer

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Disclosures

Disclosure belangen spreker	
Geen (potentiële) belangenverstremgeling	
Voor bijeenkomst mogelijk relevante relaties	Bedrijfsnamen
<ul style="list-style-type: none"> • Sponsoring of onderzoeksgeld • Honorarium of andere (financiële) vergoeding • Aandeelhouder • Andere relatie, namelijk 	<ul style="list-style-type: none"> • ZonMw, Hartstichting, Hersenstichting, VWS



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Gezondheidsvoordelen:

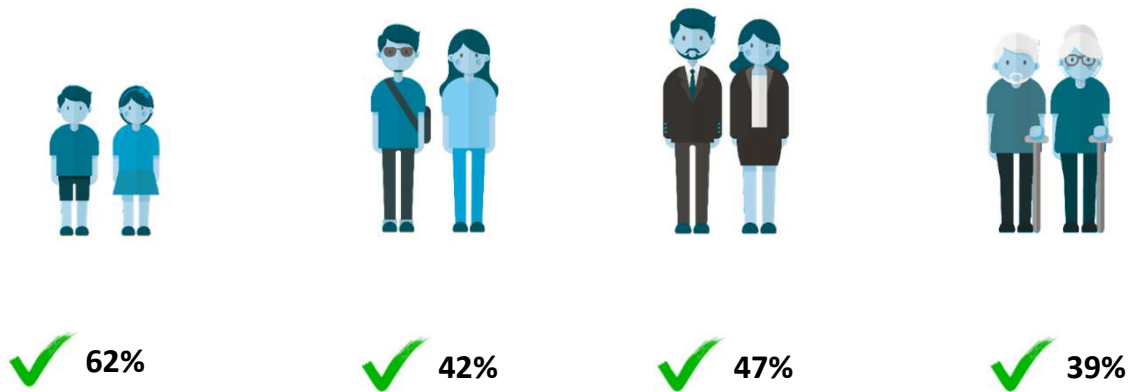


Eijsvogels, JAMA 2015

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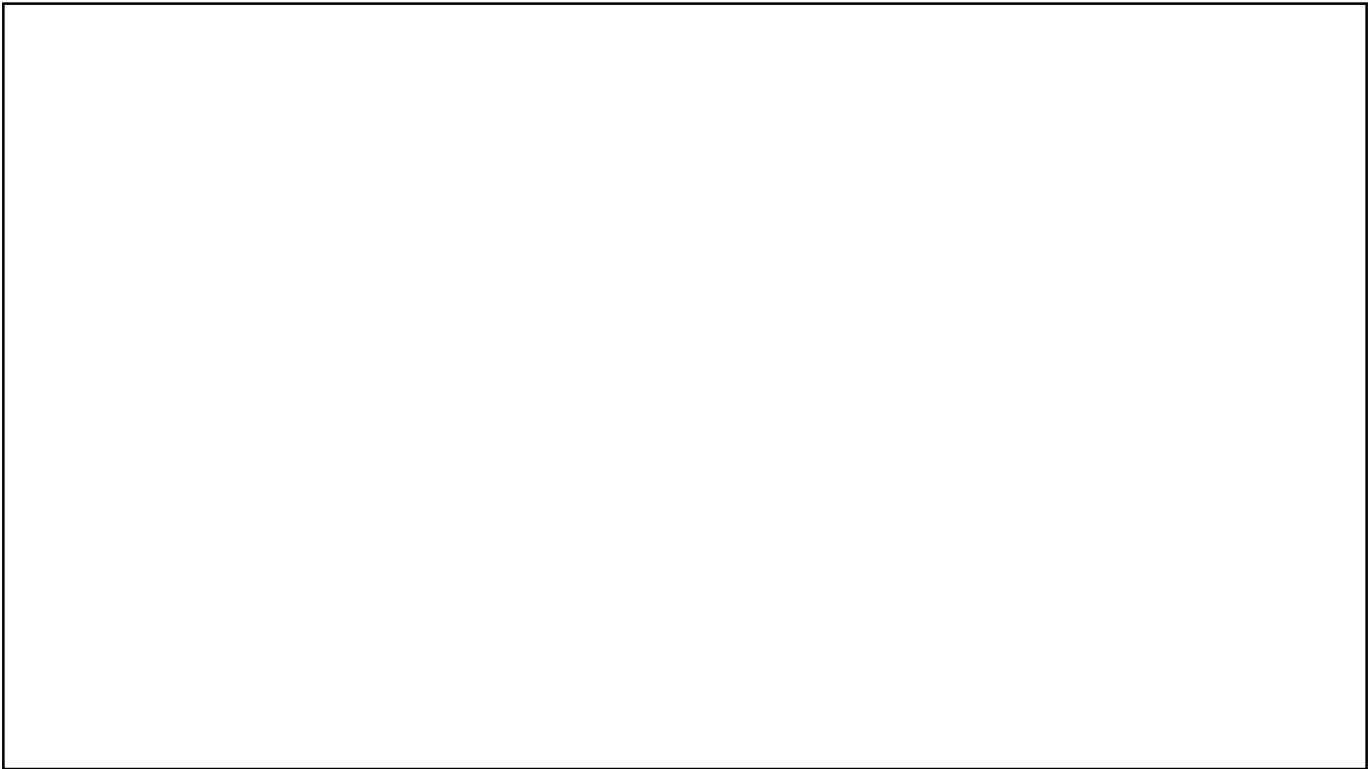
Bewegen Nederlanders genoeg?



RIVM 2024

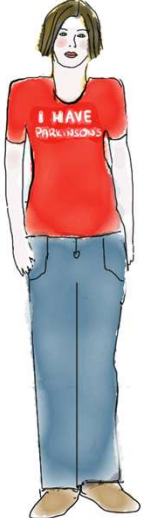
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FACES OF PARKINSON'S



Anxiety

Depression

Impulsive behaviour

Problems with multi-tasking

Sleep disorders

Loss of smell

Gastrointestinal problems

Pain

Fatigue

Dizziness

Facial masking

Softening voice

Frozen shoulder

Cramping

Involuntary movements

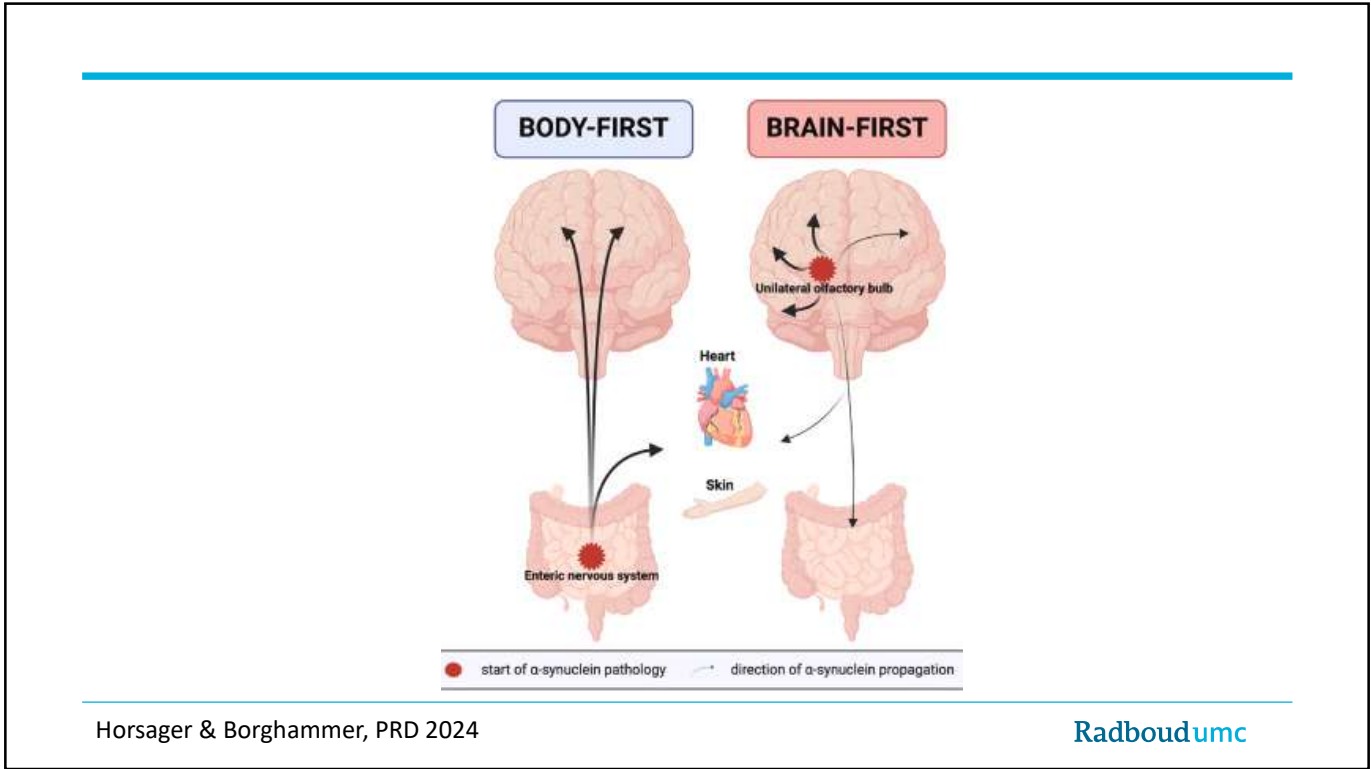
Walking difficulties

Tremor

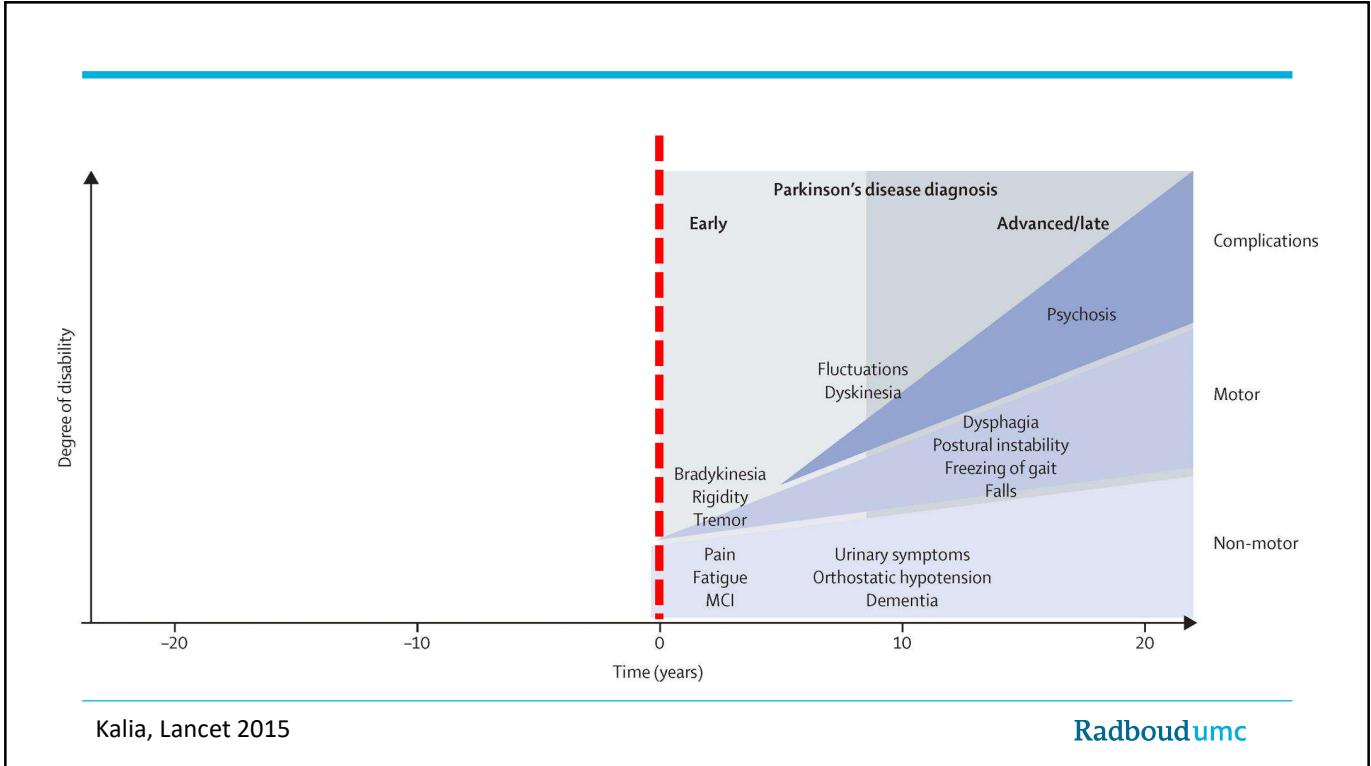
Imbalance

Marina Noordegraaf
www.verbeeldingskr8.nl

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Medische behandeling

Dopaminerge medicatie



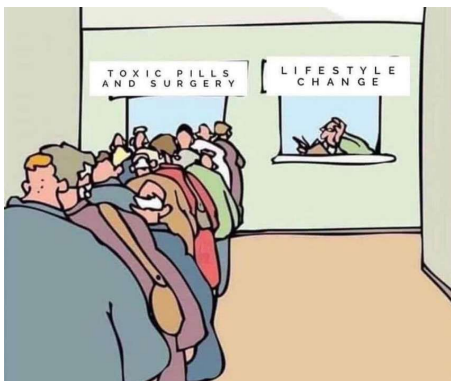
Diepe hersen stimulatie



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Niet farmacologische interventies



Allied healthcare

Physiotherapy
Occupational therapy
Speech-language therapy
Nursing



Lifestyle interventions

Exercise
Nutrition
Psychological interventions
Combined lifestyle interventions

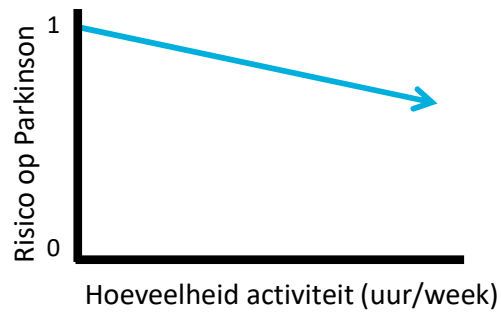
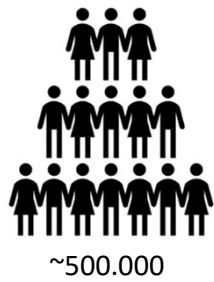
Other non-pharmacological interventions

Art
Work-related interventions

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Cohort studies



Fang, JAMA 2018

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Trials



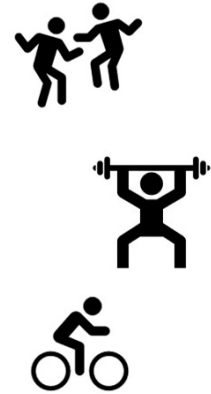
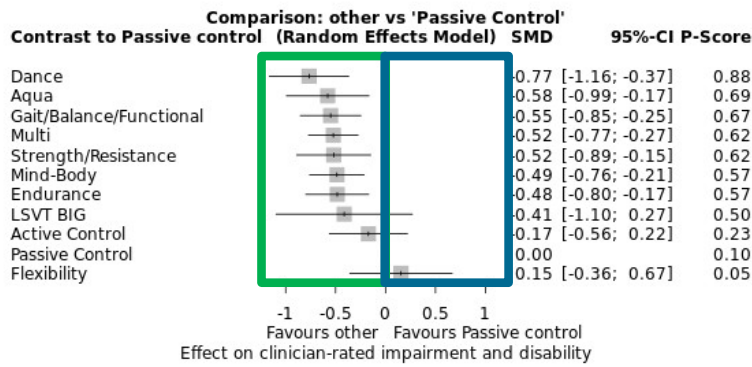
Physical exercise for people with Parkinson's disease: a systematic review and network meta-analysis (Review)

Ernst M, Folkerts AK, Gollan R, Lieker E, Caro-Valenzuela J, Adams A, Cryns N, Monsef I, Dresen A, Roheger M, Eggers C, Skoetz N, Kalbe E

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Motor symptomen

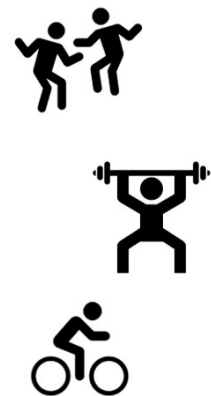
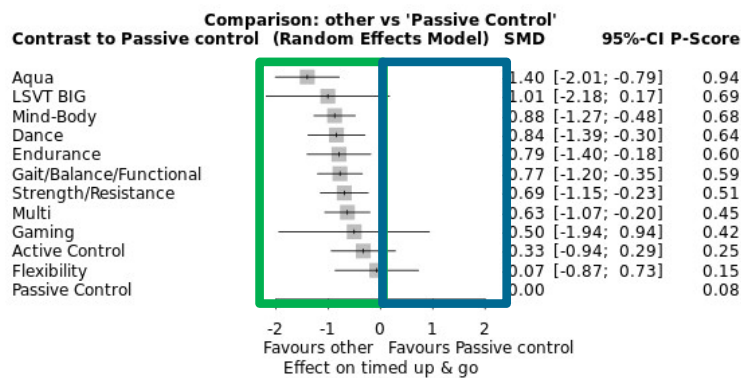


Ernst, Cochrane 2023

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Mobiliteit en balans

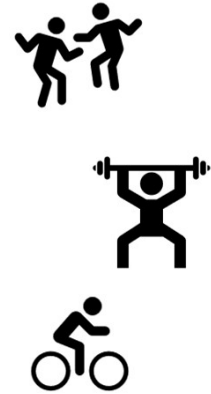
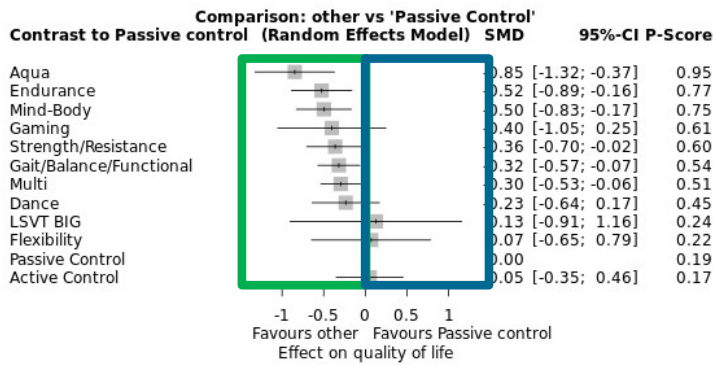


Ernst, Cochrane 2023

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Kwaliteit van leven



Ernst, Cochrane 2023

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Effectiveness of home-based and remotely supervised aerobic exercise in Parkinson's disease: a double-blind, randomised controlled trial



Nicolien M van der Kolk, Nienke M de Vries, Roy P C Kessels, Hilde Joosten, Aeilko H Zwinderman, Bart Post, Bastiaan R Bloem

Summary

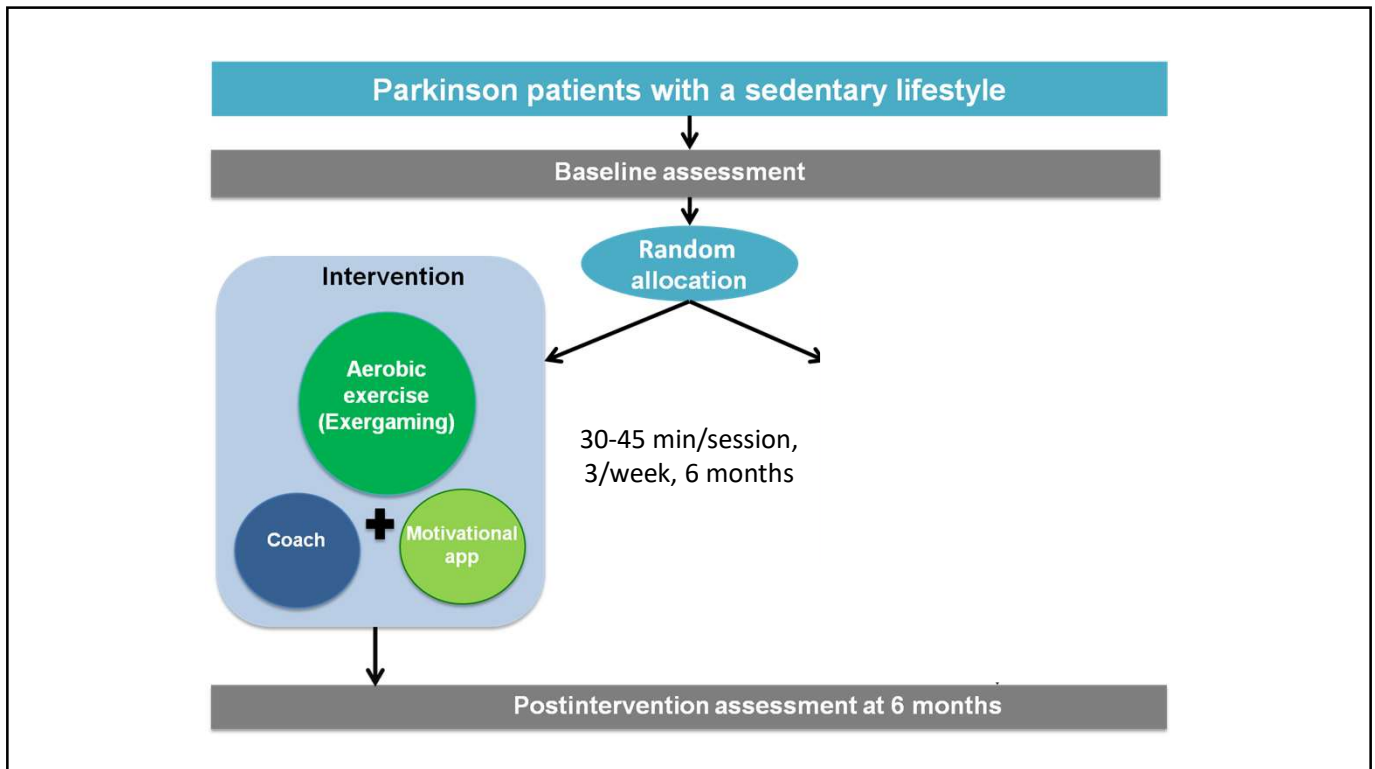
Background High-intensity aerobic exercise might attenuate the symptoms of Parkinson's disease, but high-quality evidence is scarce. Moreover, long-term adherence remains challenging. We aimed to evaluate the effectiveness of aerobic exercise—gamified and delivered at home, to promote adherence—on relieving motor symptoms in patients with Parkinson's disease with mild disease severity who were on common treatment regimes.

LancetNeurol 2019
 Published Online
 September 11, 2019
[http://dx.doi.org/10.1016/S1474-4422\(19\)30285-6](http://dx.doi.org/10.1016/S1474-4422(19)30285-6)



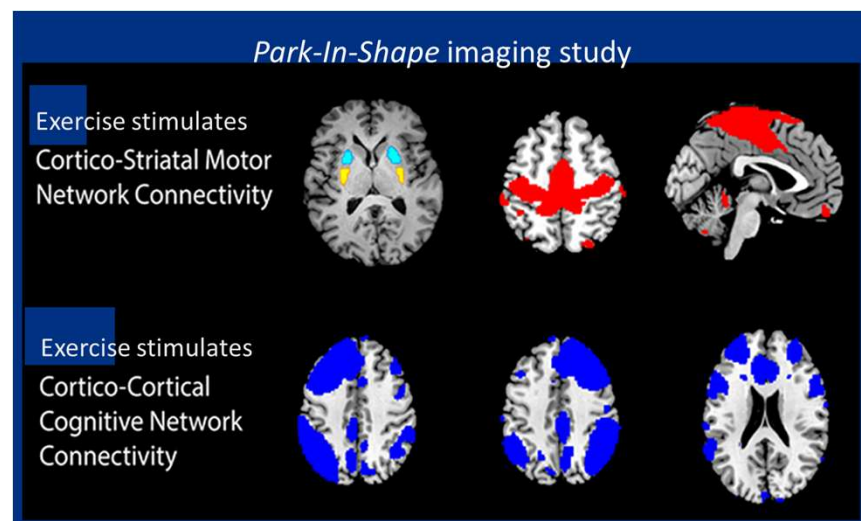
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Werkingsmechanisme?



Johansson, Ann Neurol 2022

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Huidige advies

Parkinson's Exercise Recommendations

Parkinson is a progressive disease of the nervous system marked by tremor, stiffness, slow movement and balance problems.

Exercise and physical activity can improve many motor and non-motor Parkinson's symptoms:

Aerobic Activity	Strength Training	Balance, Agility & Multitasking	Stretching
<p>3 days/week for at least 30 mins per session of continuous or intermittent at moderate to vigorous intensity</p> <p>TYPE: Continuous, rhythmic activities such as brisk walking, running, cycling, swimming, aerobics class</p> <p>CONSIDERATIONS: Safety concerns include falls of freezing of gait, low blood pressure, blunted heart rate response. Supervision may be required.</p>	<p>2-3 non-consecutive days/week for at least 30 mins per session of 10-15 reps for major muscle groups, resistance, speed or power focus</p> <p>TYPE: Major muscle groups of upper/lower extremities such as using weight machines, resistance bands, light/heavy resistance hand weights or body weight</p> <p>CONSIDERATIONS: Muscle stiffness or postural instability may hinder full range of motion.</p>	<p>2-3 days/week with daily integration if possible</p> <p>TYPE: Multi-directional stepping, weight shifting, dynamic balance activities, large movements, multitasking such as yoga, tai chi, dance, boxing</p> <p>CONSIDERATIONS: Safety concerns with cognitive and balance problems. Hold on to something stable as needed. Supervision may be required.</p>	<p>>2-3 days/week with daily being most effective</p> <p>TYPE: Sustained stretching with deep breathing or dynamic stretching before exercise</p> <p>CONSIDERATIONS: May require adaptations for flexed posture, osteoporosis and pain.</p>

See a physical therapist specializing in Parkinson's for full functional evaluation and recommendations.

Safety first: Exercise during or periods when taking medication. If not safe to exercise on your own, have someone with you.

It's important to modify and progress your exercise routine over time.

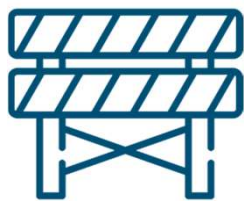
Participate in 150 minutes of moderate-to-vigorous exercise per week.

AMERICAN COLLEGE OF SPORTS MEDICINE
 Parkinson's Foundation
 Helpline: 800.473.4636/Parkinson.org

Parkinson's Foundation, parkinson.org

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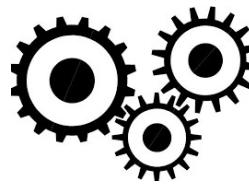
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Gait



Balance



Cognition



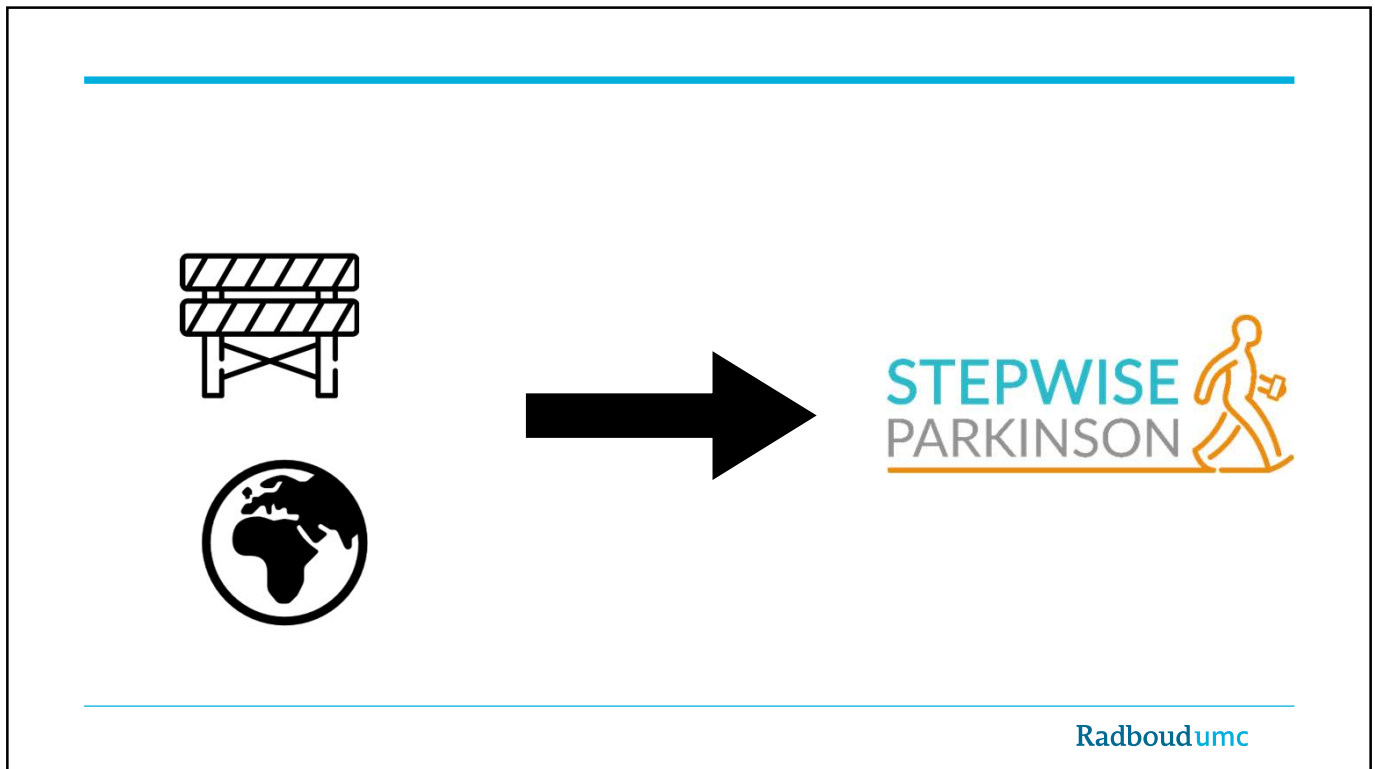
Fatigue



Schootemeijer, JPD 2020; Ellis, Phys Ther 2011

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Motiverende app

Concept: Virtual Coach

- Afspraak
- Deelt kennis (tips)
- Geeft uitdagingen (to do's)
- Monitort voortgang

The image shows two smartphones displaying the Stepwise Parkinson app. The left phone shows the "VOORTGANG" (Progress) screen with a large "45" and the text "45 HET NIEUW". The right phone shows the "CHAT" screen with a message from "Bas Dieren" asking "Wanneer heb je de tijd om dat?" and a response from the user: "Laten we beginnen met de dingen die je al doet."

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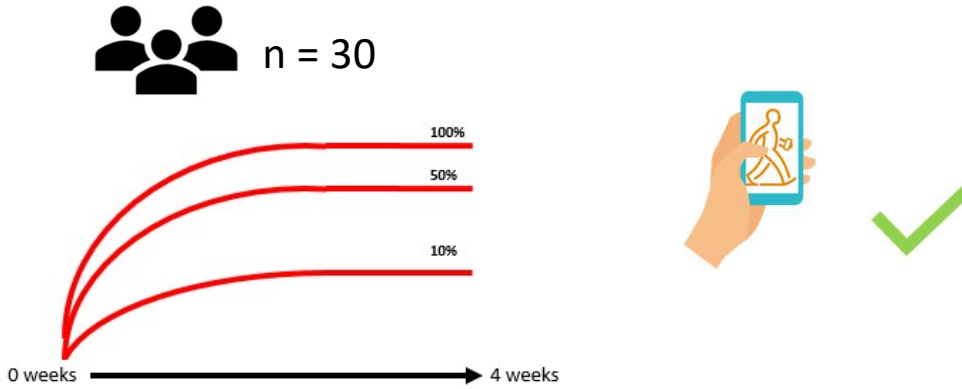
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Pilot studie

OPEN

Promoting Physical Activity in People With Parkinson's Disease Through a Smartphone App: A Pilot Study

Sabine Schootemeijer, MSc, Nienke M. de Vries, PhD, Sirwan K.L. Darweesh, MD, PhD, Alberto Ascherio, MD, PhD, Michael A. Schwarzschild, MD, PhD, Eric A. Macklin, PhD, and Bastiaan R. Bloem, MD, PhD



Schootemeijer, JNPT 2024

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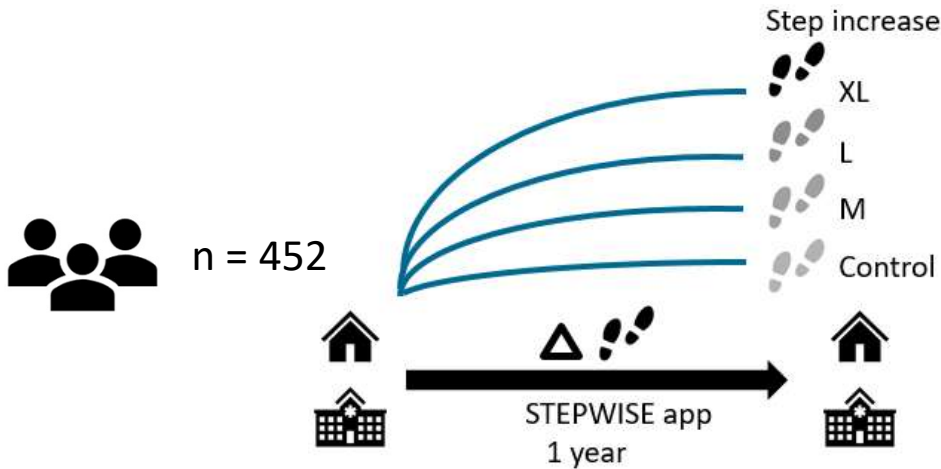
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STUDY PROTOCOL

Onderzoek op grote schaal

The STEPWISE study: study protocol for a smartphone-based exercise solution for people with Parkinson's Disease (randomized controlled trial)

Sabine Schootemeijer¹, Nienke M. de Vries¹, Eric A. Macklin^{2,3}, Kit C.B. Roes⁴, Hilde Joosten¹, Larsson Alberto Ascherio^{2,7}, Michael A. Schwarzschild^{2,13} and Bastiaan R. Bloem^{1*}

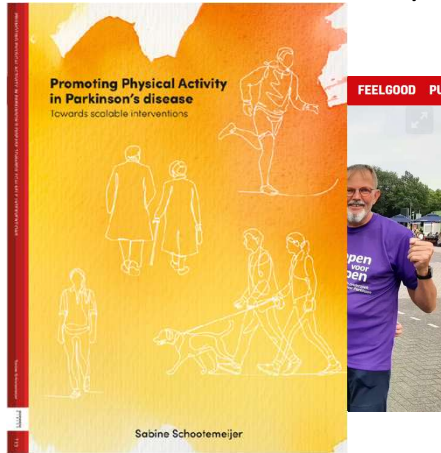


Schootemeijer, BMC Neurol 2023

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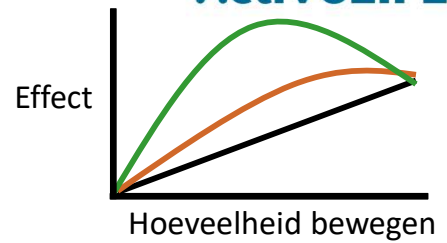
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*“Dankzij STEPWISE voel ik mij **kipler** en loop ik als een **kievit**.”*



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Slow-SPEED

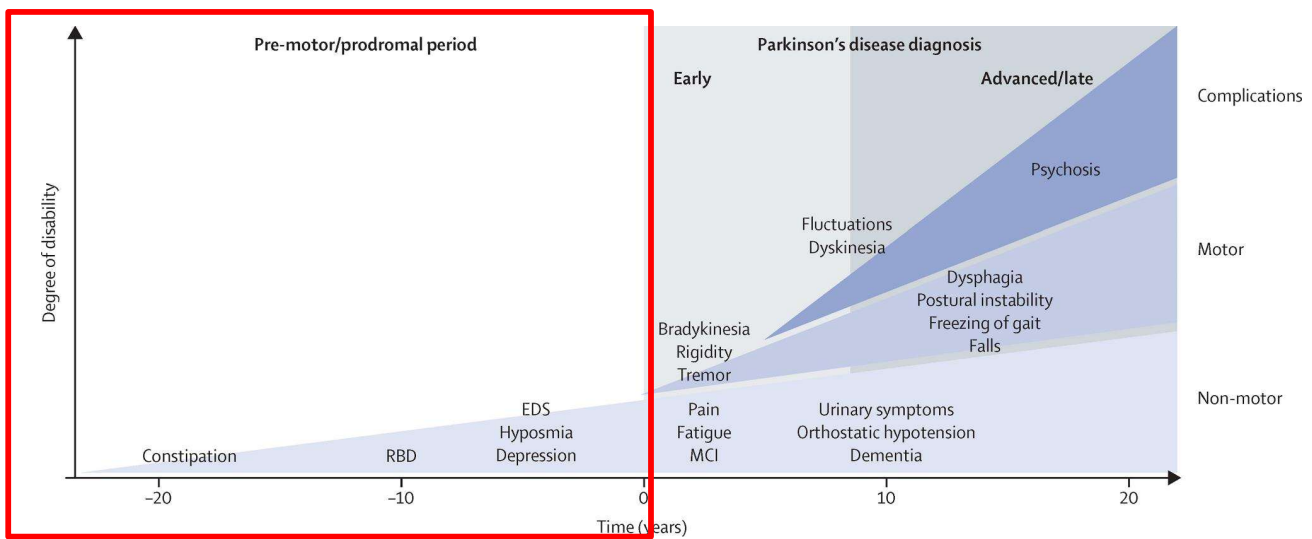
Slowing Parkinson's Early through Exercise Dosage



ANNE WOJCICKI
FOUNDATION



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An integrated, personalized and stepped care lifestyle approach for people with Parkinson's disease.






















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Parkinson leefstijl keuzehulp

1. Parkinson 2. Over jou 3. Leefstijl 4. Jouw doelen 5. Samenvatting



Jouw doelen

In deze stap vul je in wat je nu van je leefstijl vindt en wat je wilt veranderen. Als je van gedachte verandert, dan kun je je antwoorden altijd aanpassen.

Hoe tevreden ben je over je leefstijl?

Beweging	Zeer tevreden	Tevreden	Neutraal	Ontevreden	Zeer ontevreden
Voeding	Zeer tevreden	Tevreden	Neutraal	Ontevreden	Zeer ontevreden
Ontspanning	Zeer tevreden	Tevreden	Neutraal	Ontevreden	Zeer ontevreden
Slaap	Zeer tevreden	Tevreden	Neutraal	Ontevreden	Zeer ontevreden
Sociale activiteiten	Zeer tevreden	Tevreden	Neutraal	Ontevreden	Zeer ontevreden

<https://parkinson.keuzehulp.nl/>

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Bewegen bij Parkinson heeft een positief effect op

- Parkinson klachten
- Brein



Implementeren blijft **moeilijk**

- Inzet van **technologie** kan wellicht helpen



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Thesis:



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