Train the sedentary brain: move smart. The cognitive benefits of an interactive cycling training in APOEe4 carriers and non-carriers in early stage dementia

No registrations found.

Ethical review	Positive opinion
Status	Recruitment stopped
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON29449

Source
NTR

Health condition

Dementia, Alzheimer, Cognitive decline, Physical activity

Sponsors and support

Primary sponsor: Radboudumc
Source(s) of monetary or material Support: ZON-MW, organization for health research and development, the Netherlands. Project: 733050303

Intervention

Outcome measures

Primary outcome

Executive functioning (set-shifting, response inhibition)

Secondary outcome

Verbal and visual-spatial memory, working memory, attention, psychomotor speed, physical fitness, levels of physical activity, quality of life.
Frailty (Evaluative Frailty Index for Physical Activity)

Study description

Background summary

There is no cure for dementia. Non pharmacological interventions are needed. The aim of this study is to investigate the cognitive effects of an interactive cycling training in early stage dementia patients, compared to an aerobic stationary cycling training and an active control group.

Study objective

A 3-month interactive cycling training is feasible and leads to improved executive functioning and physical fitness in early stage dementia patients. The association between physical activity and cognition is moderated by the presence of the ApoE4 allele.

Study design

Full assessments at pretest, after 12 weeks and at follow up (24 weeks). Short assessments after 6 weeks.

Intervention

Within the study, three interventions are provided: (1) Interactive aerobic stationary cycle training, (2) Aerobic stationary cycle training, (3) Non-aerobic stretching and toning exercises. Forty-five minute sessions were offered 3 times per week for a period of 12 weeks. The interactive cycling training is a dual-task training in which participants follow a route on a screen in front of the bike and conduct simple cognitive tasks.

Contacts

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Eligibility criteria

Inclusion criteria

Age > 60 years; diagnosis of dementia; Mini Mental State Examination score higher than 20; having insufficient physical activity according to the ACSM guideline for older adults, maximum of 30 minutes five days a week moderate intensity

Exclusion criteria

Wheelchair bound, use of dementia targeted nutritional supplements (e.g. Souvenaird) within the last three months, severe cardiovascular problems that limit physical activity, brain trauma, epilepsy, progressive or terminal disease, severe depression, history of alcoholism, severe visual problems, severe auditory problems, problems with the Dutch language and mental incompetence

Study design

Design

Study type:	Interventional
Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Single blinded (masking used)

Control:	Active

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	01-09-2015
Enrollment:	171
Type:	Actual

IPD sharing statement

Plan to share IPD: Undecided

Ethics review

Positive opinion

Date:	07-10-2015
Application type:	First submission

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
NTR-new	NL5348
NTR-old	NTR5581
Other	NL//METc : 52581.091.15// 20115-1857

Study results