Healthy Aging: aerobic exercise, strength training and dementia.

Published: 10-11-2010
Last updated: 19-03-2025

The objective is to investigate the effects of a combined strength and aerobic exercise program on cognition, physical functioning, social functioning and ADL.

Ethical review	Approved WMO
Status	Completed
Health condition type	Dementia and amnestic conditions
Study type	Interventional

Summary

ID

NL-OMON36410

Source
ToetsingOnline

Brief title
Healthy Aging and Dementia

Condition

- Dementia and amnestic conditions

Synonym
Alzheimer's Disease, dementia

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Groningen
Source(s) of monetary or material Support: Ministerie van OC&W

Intervention

Keyword: cognition, dementia, exercise, fitness

Outcome measures

Primary outcome

The primary study parameters are the differences between cognition (memory and executive functioning) between pre-, post-, and delayed post measurement.

Secondary outcome

The secondary study parameters are the differences between physical test performances, ADL questionnaires and affective functioning questionnaires between pre-, post-, and delayed post measurement.

Study description

Background summary

Dementia presents a major public health problem that impacts people*s ability to maintain cognitive, physical and social function. There are indications that physical activity can enhance cognition in older people with dementia. However, the number of studies is limited, the outcomes ambiguous and only studies with aerobic exercise programs were performed. This study focuses on the effects of combined strength and aerobic exercise in older people with dementia to evaluate the theory that there are stronger effects on cognition, physical functioning, ADL and social funtioning in comparison with an aerobic exercise program and controls who recieve social visits.

Study objective

The objective is to investigate the effects of a combined strength and aerobic exercise program on cognition, physical functioning, social functioning and ADL.

Study design

The study design is a randomized clinical trial. After pre-stratification on MMSE score, the participants will be randomized over three groups: combined strength and aerobic exercise, aerobic exercise only, control intervention (social visits). Measurements will take place, blinded for group, before the intervention (pretest), after the 10 weeks intervention (posttest) and at

follow-up 10 weeks after the posttest.

Intervention

The intervention consists of a supervised physical exercise program which will be offered for 30 minutes a day, five days a week, during 10 weeks. The combined strength and aerobic group walk on 3 days per week and perform strength training on 2 days per week. The aerobic group will walk on 5 days per week. The controls receive social visits with the same frequency and duration.

Study burden and risks

Burden for the participants are the exercise program, as well as the physical test battery and neuropsychological test battery which are performed three times with 10 weeks in between. The total test battery takes approximately 65 minutes per session for each participant and 20 minutes for healthcare personnel. Exercises and tests are safe and feasible in frail older people with dementia. All activities in this study are within the range of normal activities of daily life. Participants are provided with individual supervision. Therefore, the risks involved in this study are even less than the normal risks of daily life. All groups receive the same amount of social interaction. Supervised activities that are performed in physical active groups are the same as in activities of daily live.

Contacts

Public
Universitair Medisch Centrum Groningen

Antonius Deusinglaan 1
9713AV Groningen
NL
Scientific
Universitair Medisch Centrum Groningen

Antonius Deusinglaan 1
9713AV Groningen
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

The patient will be included if he/she is diagnosed with dementia, is mobile with or without using an assistive walking device and has a Mini Mental State Examination (MMSE) score between 10 and 22 (range MMSE = 0-30) (n=153). In addition, 30 participants with MCI/mild dementia and a MMSE score between 23-27 will be included.

Exclusion criteria

Participants are excluded if the patient has a MMSE score < 10 or > 22, are not able to perform the Timed Up & Go Test, are wheelchair bound, have cardiovascular problems (e.a. severe high blood pressure or cardiac problems), have problems with the Dutch language, have a history of alcoholism, have severe visual problems, have severe auditive problems.

Study design

Design

Study type:	Interventional
Intervention model:	Other
Allocation:	Randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Treatment

Recruitment

NL

Recruitment status:	Completed
Start date (anticipated):	01-02-2011
Enrollment:	183
Type:	Actual

Ethics review

Approved WMO Date:	10-11-2010
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)
Approved WMO Date:	06-12-2011
Application type:	Amendment
Review commission:	METC Universitair Medisch Centrum Groningen (Groningen)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

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

ID: 22579
Source: NTR
Title:

In other registers

Register	ID
CCMO	NL32037.042.10
OMON	NL-OMON22579