Impact of prolonged exercise on cardiovascular function in healthy older humans: a pilot study

Published: 28-02-2014
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To examine the impact of prolonged (walking) exercise on cardiac and vascular function in older humans

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Cardiac disorders, signs and symptoms NEC
Study type	Observational non invasive

Summary

ID

NL-OMON38041

Source
ToetsingOnline

Brief title
Exercise in older humans

Condition

- Cardiac disorders, signs and symptoms NEC

Synonym
cardiovascular disease

Research involving
Human

Sponsors and support

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

Intervention

Keyword: cardiovascular disease, exercise, older humans

Outcome measures

Primary outcome

Diastolic/systolic cardiac function (measured using echocardiography) and

vascular function (measured as brachial artery flow-mediated dilation and pulse

wave velocity) are primary outcome parameters.

Secondary outcome

Pulmonary function (spirometry), muscle function and cardiac troponin will be

included as secondary outcome parameters.

Study description

Background summary

Rationale: Walking represents a moderate-intensity exercise, which can be performed for several hours. This makes (prolonged) walking exercise suitable for various (clinical) populations and is frequently performed by older individuals. Prolonged, strenuous exercise in healthy young subjects represents a strong physiological strain. For example, strenuous exercise leads to acute impairments in cardiac and vascular function in healthy young populations. To date, relatively little is known about the acute impact of prolonged, moderate-intensity exercise on cardiovascular, pulmonary and muscular responses in older humans.

Study objective

To examine the impact of prolonged (walking) exercise on cardiac and vascular function in older humans

Study design

Observational study

Study burden and risks

Walking is not associated with serious health risks. Actually, regular physical activity such as walking exercise protects against cardiovascular disease/risk. Furthermore, our primary outcome measures relate to non-invasive measurement of cardiac, and vascular function. Our secondary outcome measures will be determined from a venous blood sample (i.e. cardiac troponin), which is associated with a minor risk for haemorrhage (5%) or the non-invasive spirometry (pulmonary function), respectively.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

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

Inclusion criteria

- In preparation for the Nijmegen 4-Day Marches 2014
- Older than 60 years

Exclusion criteria

- History of cardiovascular or cerebrovascular complication (e.g. myocardial infarction, cerebrovascular accident)
- History of (preventive) cardiac surgery (e.g. coronary artery bypass surgery, percutaneous coronary intervention)
- Younger than 60 years

Study design

Design

Study type: Observational non invasive

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Prevention

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	06-05-2014
Enrollment:	20
Type:	Actual

Ethics review

Approved WMO

Date:	28-02-2014
Application type:	First submission
Review commission:	CMO regio Arnhem-Nijmegen (Nijmegen)

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
CCMO	NL47480.091.13

Study results

Date completed: 09-05-2014

Actual enrolment: 14

Summary results
Trial is onging in other countries