

A double-blind placebo-controlled trial of the effect of perindopril on muscle strength and functional capacity in older people

Submission date 25/01/2005	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 31/03/2005	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
Last Edited 21/05/2018	Condition category Musculoskeletal Diseases	<input type="checkbox"/> Individual participant data

Plain English summary of protocol

Background and study aims

Recent research suggests that a medicine called perindopril that is commonly used in patients with heart problems could have a beneficial effect on muscle function. An improvement in muscle function means that less effort is needed with day to day activities and that exercise ability may improve. Perindopril has not been tested in a trial to see if giving perindopril does indeed improve physical function. The aim of this study is therefore to find out if perindopril improves walking distance and quality of life in older people with functional impairment.

Who can participate?

Older people over the age of 65 years with some dependence in activities of daily living

What does the study involve?

The study lasts for 20 weeks. At the start of the study, participants are randomly allocated to take either perindopril or matching placebo (dummy) capsules once a day for the 20 weeks of the study. Participants are assessed at the start of the study, at 10 weeks and at 20 weeks. Each visit lasts one and a half hours. At each visit, participants undergo some or all of the following depending on which visit it is: a heart scan (echo scan), blood pressure measurement, blood sample, walking test, test of ability to get out of a chair, and questionnaires about quality of life and everyday function. Participants are also asked to wear a device on their belt (an accelerometer) during the day for a week, to measure how active they are.

What are the possible benefits and risks of participating?

Those who receive the perindopril might improve their muscle function and ability to exercise (if the medication works). Perindopril can uncommonly cause an upset stomach, dizziness or kidney problems with increases in blood levels of potassium. Participants' blood and blood pressure are monitored to minimise the risks.

Where is the study run from?

Ninewells Hospital and Medical School (UK)

When is the study starting and how long is it expected to run for?

August 2003 to February 2006

Who is funding the study?

Chief Scientist Office (UK)

Who is the main contact?

Prof. Marion McMurdo

Contact information

Type(s)

Scientific

Contact name

Prof Marion McMurdo

Contact details

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Additional identifiers

Protocol serial number

CZB/4/88

Study information

Scientific Title

A double-blind placebo-controlled trial of the effect of perindopril on muscle strength and functional capacity in older people

Study objectives

Physical function and exercise capacity decline with age and are a major source of disability in older people. Recent evidence suggests a potential role for the renin-angiotensin system in modulating muscle function. We sought to examine the effect of the angiotensin converting enzyme (ACE) inhibitor perindopril on physical function in elderly people with functional impairment who had no heart failure or left ventricular systolic dysfunction.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Tayside Committee on Medical Research Ethics, 2003, ref: 196/02

Study design

Randomised controlled trial

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Sarcopenia

Interventions

Perindopril or placebo given for a period of 20 weeks

Intervention Type

Drug

Phase

Not Applicable

Drug/device/biological/vaccine name(s)

Perindopril

Primary outcome(s)

Change in the 6-minute walking distance over the 20 weeks

Key secondary outcome(s)

1. Changes in muscle function
2. Daily activity levels
3. Self-reported function
4. Health-related quality of life

Completion date

06/02/2006

Eligibility

Key inclusion criteria

Older people over the age of 65 years with some dependence in activities of daily living

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Senior

Sex

All

Key exclusion criteria

1. Without left ventricular systolic dysfunction
2. Already receiving an angiotensin converting enzyme (ACE) inhibitor or an angiotensin II inhibitor
3. Contraindication to ACE inhibitors
4. Unable to give informed consent

Date of first enrolment

06/08/2003

Date of final enrolment

06/02/2006

Locations

Countries of recruitment

United Kingdom

Scotland

Study participating centre

Ninewells Hospital and Medical School

Dundee

United Kingdom

DD1 9SY

Sponsor information

Organisation

Chief Scientist Office of the Scottish Executive Health Department (UK)

ROR

<https://ror.org/01bw7zm61>

Funder(s)

Funder type

Government

Funder Name

Chief Scientist Office (ref: CZB/4/88)

Alternative Name(s)

CSO

Funding Body Type

Government organisation

Funding Body Subtype

Local government

Location

United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

The protocol is available from the authors on request but is not available online. Study data are available for non-commercial, bona-fide academic analyses in collaboration with the authors; decisions on data access will be made between the investigators and the Sponsor (University of Dundee). Participant consent for unrestricted sharing of individual participant data was not obtained. Contact for data sharing: Dr Catrina Forde (c.forde@dundee.ac.uk).

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	09/10/2007		Yes	No
Basic results		16/05/2018	16/05/2018	No	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes