

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jun 2026

The effect of three different resistance training program with and without blood flow restriction on some indices of hypertrophy, sarcopenia and physical function in elderly women

Protocol summary

Study aim

The effect of three different training programme with and without blood flow restriction on hypertrophy, sarcopenia and functional performance in elderly women

Design

In this study, 40 healthy elderly women were selected based on inclusion criteria and randomly divided into 4 groups (3 training group and 1 control).

Settings and conduct

The study will be conducted in a gym in Mashad. The subjects will train three session per week for 10 weeks under the supervision of an experienced trainer. Pre-test and post-test will perform blind.

Participants/Inclusion and exclusion criteria

Inclusion criteria: age range from 60 to 70 yr., lack of regular physical activity or exercise training, lack of medication, lack of orthopedic problems

Intervention groups

The intervention groups are included: 1- strength training with vascular occlusion (strength training in upper and lower extremities under condition that proximal portion of the arms and leg were occluded with elastic band), 2- strength training without vascular occlusion (typical strength training, 4 sets with repetition of 30,15,15,15), 3- hypertrophic strength training (traditional strength training, 4 sets with repetition of 8-12), 4- control (lack of any regular exercise training or physical activity)

Main outcome variables

Plasma level of CAF and P3NP, Muscle strength and endurance

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20171027037031N1**

Registration date: **2018-04-15, 1397/01/26**

Registration timing: **retrospective**

Last update: **2018-04-15, 1397/01/26**

Update count: **0**

Registration date

2018-04-15, 1397/01/26

Registrant information

Name

Akram Sharifi Moghadam

Name of organization / entity

Hakim Sabzevari University

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Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-01-05, 1396/10/15

Expected recruitment end date

2018-03-11, 1396/12/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of three different resistance training program with and without blood flow restriction on some indices of hypertrophy, sarcopenia and physical function in

elderly women

Public title

the effect of exercise training on muscle strength and endurance in elderly women

Purpose

Supportive

Inclusion/Exclusion criteria**Inclusion criteria:**

elderly women no CVD, diabetes, epilepsy, cancer no orthopedic problems no medication

Exclusion criteria:

hypertension

Age

From **60 years** old to **70 years** old

Gender

Female

Phase

N/A

Groups that have been masked

- Participant
- Care provider
- Outcome assessor
- Data analyser

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

we will assign number to each subjects and will use table of random numbers

Blinding (investigator's opinion)

Single blinded

Blinding description

The subjects, testers and statistics specialist will blind about the grouping.

Placebo

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee of Sabzevar University of Medical Sciences

Street address

Deputy of Research and Technology, Next to the road police, Sabzevar University of Medical Sciences

City

sabzevar

Province

Razavi Khorasan

Postal code

9613873136

Approval date

2017-11-06, 1396/08/15

Ethics committee reference number

IR.Medsab.1396.97

Health conditions studied**1****Description of health condition studied**

aging

ICD-10 code

R54

ICD-10 code description

Age-related physical debility

Primary outcomes**1****Description**

Plasma concentration of CAF that is measured using ELISA kit

Timepoint

Before and after 10 weeks exercise training

Method of measurement

ELISA commercial kit

2**Description**

Plasma concentration of P3NP that is measured using ELISA kit

Timepoint

Before and after 10 weeks exercise training

Method of measurement

ELISA commercial kit

3**Description**

muscle strength

Timepoint

Before and after 10 weeks exercise training

Method of measurement

Using hand grip dynamometer

Secondary outcomes

empty

Intervention groups**1****Description**

Intervention group: exercise training

Category

Rehabilitation

2

Description

Control group: daily physical activity, no exercise training

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Hakim Sabzevari University

Full name of responsible person

Akram Sharifi Moghadam

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Sponsors / Funding sources

1

Sponsor

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Full name of responsible person

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Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Hakim Sabzevari University

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

HakimSabzevari University

Full name of responsible person

Dr. Mohammadreza Hamedinia

Position

Professor

Latest degree

Ph.D.

Other areas of specialty/work

Sport Medicine

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

No more information available

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Not applicable

Analytic Code

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

The informed consent will be submitted as an attachment to the thesis

When the data will become available and for how long

The data will be unlimited available after paper publication

To whom data/document is available

All people have access to the data.

Under which criteria data/document could be used

There is no limit to data access.

From where data/document is obtainable

To receive the data, one has to contact supervisor

What processes are involved for a request to access data/document

The request must be submitted to the supervisor by email and the data will be available within a maximum of one week

Comments