Clinical Trial Protocol
Iranian Registry of Clinical Trials

19 Sep 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

Country
Iran (Islamic Republic of)

Phone
+98 51 4401 2750

Email address
a.sharifimoghadam@hsu.ac.ir

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
Street address
Hakim Univ. Tohid Shahr, Sabzevar
City
Sabzevar
Province
Razavi Khorasan
Postal code
9617976487
Phone
+98 51 4401 2755
Fax
+98 51 4401 2755
Email
a.sharifimoghadam@hsu.ac.ir
Web page address
https://www.hsu.ac.ir

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Hakim Sabzevari University
Full name of responsible person
Dr. Mohammadreza Hamedinia
Street address
Tohid Shahr
City
Sabzevar
Province
Razavi Khorasan
Postal code
9617976487
Phone
+98 51 4401 2750
Fax
+98 51 4401 2750
Email
a.sharifimoghadam@hsu.ac.ir
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
Street address
Tohod Shahr
City
Sabzevar
Province
Razavi Khorasan
Postal code
9617976487
Phone
+98 51 4401 2750
Fax
+98 51 4401 2750
Email
mrhamedi1350@gmail.com

Person responsible for scientific inquiries

Contact
Name of organization / entity
Hakim Sabzevari University
Full name of responsible person
Dr. Mohammadreza Hamedinia
Position
Professor
Latest degree
Ph.D.
Other areas of specialty/work
Sport Medicine
Street address
Tohid Shahr
City
Sabzevar
Province
Razavi Khorasan
Postal code

9617976487

Phone
+98 51 4401 2750

Email
mrhamedi1350@gmail.com

Web page address
http://www.hsu.ac.ir/sport/

Person responsible for updating data

Contact

Name of organization / entity
Hakim Sabzevari University

Full name of responsible person
Akram Sharifi Moghadam

Position
PhD Student

Latest degree
Master

Other areas of specialty/work
Physiology

Street address
Tohid Shahr

City
Sabzevar

Province
Razavi Khorasan

Postal code
9617976487

Phone
+98 51 4401 2750

Fax
+98 51 4401 2750

Email
a.sharifimoghadam@hsu.ac.ir

Web page address
http://www.hsu.ac.ir/sport/

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 inform 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