

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

15 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

###### Country

Iran (Islamic Republic of)

###### Phone

+98 51 4401 2750

###### Email address

a.sharifmoghadam@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

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**Sponsors / Funding sources**

**1**

**Sponsor**

**Name of organization / entity**

Hakim Sabzevari University

**Full name of responsible person**

Dr. Mohammadreza Hamedinia

**Street address**

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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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Hakim Sabzevari University

**Full name of responsible person**

Akram Sharifi Moghadam

**Position**

PhD Student

**Latest degree**

Master

**Other areas of specialty/work**

Physiology

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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**