

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### The effect of sequence order of combined training (resistance and endurance) on strength, aerobic capacity and body composition in older women

#### Protocol summary

##### Summary

The main purpose of this study is to investigate the effect of sequence order of combined training (resistance and endurance) on strength, aerobic capacity and body composition in older women. This study is a quasi-experimental research, 60 retired elderly woman of Education select purposely and randomly place into four groups of 15 subjects: endurance plus strength training, strength plus endurance training, interval concurrent training and control groups then the weight, height, body mass index, body fat percentage, maximum strength and maximal oxygen uptake be measure. Training programs will be perform for eight week, 3 times per week. Endurance training program Include a cycle ergo-meter and strength training program Include several upper and lower body workout. Forty-eight hours after the last training session all variables will be measured as per-test.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2014111819995N1**  
Registration date: **2014-12-25, 1393/10/04**  
Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2014-12-25, 1393/10/04

##### Registrant information

##### Name

Zahra Mardanpour Shahrekordi

##### Name of organization / entity

Shahrekord University

##### Country

Iran (Islamic Republic of)

##### Phone

+98 38 3232 4401

##### Email address

banitalebi@lit.sku.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Investigator

##### Expected recruitment start date

2014-03-07, 1392/12/16

##### Expected recruitment end date

2014-04-07, 1393/01/18

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

The effect of sequence order of combined training (resistance and endurance) on strength, aerobic capacity and body composition in older women

##### Public title

The effect of sequence order of combined training (resistance and endurance) on the body performance of older women

##### Purpose

Diagnostic

##### Inclusion/Exclusion criteria

Inclusion criteria: female; 58 to 70 years; without experience of regular physical activity in one year before beginning of the study; the level of physical and mental health Exclusion criteria: history of cardiovascular diseases; cancer; high blood pressure; diabetes; thyroid

disease; addiction to any smoking, alcohol and narcotic substances; Hormonal disorders; kidney or liver disease; surgery any medical intervention affecting the experimental results

#### Age

From **58 years** old to **70 years** old

#### Gender

Female

#### Phase

N/A

#### Groups that have been masked

*No information*

#### Sample size

Target sample size: **60**

#### Randomization (investigator's opinion)

Randomized

#### Randomization description

#### Blinding (investigator's opinion)

Single blinded

#### Blinding description

#### Placebo

Not used

#### Assignment

Parallel

#### Other design features

Aerobic training perform on a cycle ergomete and Resistance exercise with gym apparatus.

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Shahrekord University

##### Street address

Rahbar Blvd, Shahrekord

##### City

Shahrekord

##### Postal code

8818634141

#### Approval date

2014-03-06, 1392/12/15

#### Ethics committee reference number

190/579 م پ

## Health conditions studied

### 1

#### Description of health condition studied

Relationship of sequence order of combined training (resistance and endurance) on strength, aerobic capacity and body composition in older women

#### ICD-10 code

R54

#### ICD-10 code description

Senility

## Primary outcomes

### 1

#### Description

Maximum strength

#### Timepoint

Before and after 8 weeks of intervention

#### Method of measurement

By use 1 Repetition Maximum formul

### 2

#### Description

Maximal oxygen uptake

#### Timepoint

Before and after 8 weeks of intervention

#### Method of measurement

Modified Bruce treadmill test

### 3

#### Description

Body fat percent

#### Timepoint

Before and after 8 weeks of intervention

#### Method of measurement

Using calipers Base Line

### 4

#### Description

Weight

#### Timepoint

Before and after 8 weeks of intervention

#### Method of measurement

Weight meter Seca

### 5

#### Description

Height

#### Timepoint

Before and after 8 weeks of intervention

#### Method of measurement

Using a height gauge model Saros

### 6

#### Description

Body Mass Index (BMI)

#### Timepoint

Before and after 8 weeks of intervention

#### Method of measurement

Weight divided by height squared

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

The endurance plus strength training group follow an combined training program for 8 weeks Who in the first do endurance training program and then 2 minutes of rest do strength training program.

#### Category

Other

### 2

#### Description

The strength plus endurance training group follow an combined training program for 8 weeks Who in the first do strength training program and then 2 minutes of rest do endurance training program.

#### Category

Other

### 3

#### Description

The interval training group do rotating E plus S plus E plus S plus E plus S training programs , so that's the strength and endurance program was divided into three parts.

#### Category

Other

### 4

#### Description

The control group do not any regular physical activity in Daily life.

#### Category

Other

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Department of Education region 1 of Shahrekord city

##### Full name of responsible person

##### Street address

##### City

Shahrekord

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Shahrekord University

##### Full name of responsible person

Dr Ebrahim Banitalebi

##### Street address

Rahbar Blvd, Shahrekord

##### City

Shahrekord

##### Grant name

##### Grant code / Reference number

##### Is the source of funding the same sponsor organization/entity?

Yes

##### Title of funding source

Shahrekord University

##### Proportion provided by this source

100

##### Public or private sector

empty

##### Domestic or foreign origin

empty

##### Category of foreign source of funding

empty

##### Country of origin

##### Type of organization providing the funding

empty

## Person responsible for general inquiries

#### Contact

##### Name of organization / entity

Shahrekord University

##### Full name of responsible person

Dr Ebrahim Banitalebi

##### Position

Ph.D of Sport Physiology/Assistant Professor

##### Other areas of specialty/work

##### Street address

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Banitalebi@lit.sku.ac.ir

##### Web page address

## Person responsible for scientific inquiries

#### Contact

##### Name of organization / entity

Shahrekord University

##### Full name of responsible person

Dr Mohammad Faramarzi

##### Position

Ph.D Sport Physiology

##### Other areas of specialty/work

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## Person responsible for updating data

### Contact

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Shahrekord University  
**Full name of responsible person**  
Zahra Mardanpour Shahrekordi  
**Position**  
MSc, Applied Exercise Physiology  
**Other areas of specialty/work**  
**Street address**  
Rahbar Blvd, Shahrekord  
**City**  
Shahrekord  
**Postal code**  
**Phone**

## Sharing plan

### Deidentified Individual Participant Data Set (IPD)

*empty*  
**Study Protocol**  
*empty*  
**Statistical Analysis Plan**  
*empty*  
**Informed Consent Form**  
*empty*  
**Clinical Study Report**  
*empty*  
**Analytic Code**  
*empty*  
**Data Dictionary**  
*empty*