

Clinical Trial Protocol

Iranian Registry of Clinical Trials

02 Jul 2026

Effects of sequence order of combined training (resistance and endurance) on some inflammatory markers in aged women

Protocol summary

Summary

The main purpose of this study is to investigate Effects of sequence order of combined training (resistance and endurance) on some inflammatory markers in aged 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 will be measure the weight, height, body mass index, body fat percentage and Blood sample To determine the concentration of glucose, insulin, serum levels of adiponectin, homocysteine and C-Reactive Protein. To calculate insulin resistance will be used HOMA-IR formula. Training programs will be perform for eight week, 3 times per week. Endurance training program Include a cycle ergometer 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 pre-test.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015041519995N4**

Registration date: **2015-04-21, 1394/02/01**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2015-04-21, 1394/02/01

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

Effects of sequence order of combined training (resistance and endurance) on some inflammatory markers in aged women

Public title

Effects of sequence order of combined training in aged 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

Endurance training is done on a cycle ergometer and strength training with bodybuilding devices.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Shahrekord University

Street address

Rahbar Blvd, Shahrekord

City

Shahrekord

Postal code

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 Inflamm-aging

ICD-10 code

R54

ICD-10 code description

Senility

Primary outcomes

1

Description

adiponectin

Timepoint

Before and after 8 weeks of intervention

Method of measurement

ELISA kit for adiponectin

2

Description

homocysteine

Timepoint

Before and after 8 weeks of intervention

Method of measurement

ELISA kit for homocysteine

3

Description

C-Reactive Protein

Timepoint

Before and after 8 weeks of intervention

Method of measurement

ELISA kit for C-Reactive Protein

Secondary outcomes

1

Description

Fasting glucose

Timepoint

Before and after 8 weeks of intervention

Method of measurement

ELISA kit for Fasting glucose

2

Description

Insulin

Timepoint

Before and after 8 weeks of intervention

Method of measurement

ELISA kit for Insulin

3

Description

Insulin resistance

Timepoint

Before and after 8 weeks of intervention

Method of measurement

The insulin resistance index by the (HOMA-IR) formula.

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

Rahbar Blvd, Shahrekord

City

Shahrekord

Postal code

Phone

+98 38 3232 4401

Fax

Email

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, of Sport Physiology/Associate Professor

Other areas of specialty/work

Street address

Rahbar Blvd, Shahrekord

City

Shahrekord

Postal code

Phone

+98 38 3232 4401

Fax

Email

md.faramarzi@gmail.com

Web page address

Person responsible for updating data

Contact

Name of organization / entity

Shahrekord University

Full name of responsible person

Zahra Mardanpour Shahrekordi

Position

MSc, Exercise Physiology

Other areas of specialty/work

Street address

Rahbar Blvd, Shahrekord

City

Shahrekord

Postal code

Phone

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Fax

Email

Web page address

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