

Clinical Trial Protocol

Iranian Registry of Clinical Trials

21 Jul 2026

Comparison of aerobic and resistance training on interleukin-18 and c-reactive protein in elderly men

Protocol summary

Summary

The purpose of this study is to compare the effect of 12 week aerobic and resistance training on the levels of Interleukin-18 and C - reactive protein in elderly men. For this, 30 old men were chosen after medical screening. Subjects were purposely chosen and randomly divide to 3 groups as aerobic exercise (n=10), resistance exercise (n=10) and control (n=10). Then the first blood sample was taken and height, weight and BMI were measured and calculated. Exercise groups implemented the exercise programs for 12 weeks and three non-consecutive sessions per week (aerobic groups exercised on treadmill in 50-70% of the reserve heart rate, resistance exercise were implemented in 40-70% severity with one maximum repetition). 24 hours after the last training session all variables were measured as pre -test. For comparing pre and post -test data, t-test independent and for comparing the groups, one way anova test and tukey test were used.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013031612827N1**
Registration date: **2013-11-07, 1392/08/16**
Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2013-11-07, 1392/08/16

Registrant information

Name

Bijan Kabir

Name of organization / entity

Islamic Azad University, Khorasgan

Country

Iran (Islamic Republic of)

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Email address

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Recruitment status

Recruitment complete

Funding source

Investigator

Expected recruitment start date

2012-04-15, 1391/01/27

Expected recruitment end date

2012-07-24, 1391/05/03

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of aerobic and resistance training on interleukin-18 and c- reactive protein in elderly men

Public title

Comparison of aerobic and resistance training on interleukin-18 and c- reactive protein in elderly men

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: male, 65 to 80 years, without experience of regular physical activity in one year before beginning of the study. Exclusion criteria: history of cardiovascular diseases, cancer, high blood pressure, diabetes, thyroid disease, addiction to any smoking, alcohol and narcotic substances.

Age

From **65 years** old to **80 years** old

Gender

Male

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: 30

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 was performed on a treadmill.
Resistance exercise with gym apparatus was performed.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee Isfahan University of Medical sciences

Street address

Bldg.4, Isfahan University of Medical sciences

City

Isfahan

Postal code

81745-319

Approval date

2013-09-01, 1392/06/10

Ethics committee reference number

184/پ/12/4/م

Health conditions studied

1

Description of health condition studied

Elderly

ICD-10 code

R54

ICD-10 code description

Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified

Primary outcomes

1

Description

Interleukin-18

Timepoint

Before and after 12 weeks of intervention

Method of measurement

ELISA kit for Interleukin-18

2

Description

Body Mass Index

Timepoint

Before and after 12 weeks of intervention

Method of measurement

Weight divided by height squared

3

Description

Weight

Timepoint

Before and after 12 weeks of intervention

Method of measurement

Weight meter Seca

4

Description

C-reactive protein

Timepoint

Before and after 12 weeks of intervention

Method of measurement

Nephelometric method

Secondary outcomes

empty

Intervention groups

1

Description

Intervention 1: The intervention group followed an aerobic exercise program for 12 weeks. This program includes warm up with stretching and then walking on a treadmill speed is increased. This one hour 3 times a week Was. In the final 10 minutes of exercise treadmill speed was gradually reduced cooling time.

Category

Other

2

Description

Intervention 3: Daily life no regular physical activity in the control group

Category

Other

3

Description

Intervention 2: The intervention group followed an

resistance exercise program for 12 weeks. Resistance training protocol consisted of 3 sessions per week, 9 stations, 3 sets 8-12 repetitions in each station, intensity 40-70% of one repetition maximum, rest between sets 1 min and between stations 2 min, duration of main training 50 min per each session.

Category

Other

Recruitment centers**1****Recruitment center****Name of recruitment center**

Jahandidegan Society of Shahrekord

Full name of responsible person

Mrs. Amiri

Street address

Alley 13, Mellat ST

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Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Islamic Azad University, Khorasgan (Isfahan)

Full name of responsible person

Farzaneh Taghian

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Daneshgah Blvd, Arghavanieh St., East Jay St.,

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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

Islamic Azad University, Khorasgan (Isfahan)

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 of Medical Sciences

Full name of responsible person

Keihan Ghatre Samani (PhD)

Position

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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