

Clinical Trial Protocol

Iranian Registry of Clinical Trials

22 Sep 2026

The effect of resistance training with two maximum and sub-maximal intensities on immune system subcategories and blood coagulation factors in non-athletic men

Protocol summary

Study aim

The effect of resistance training with two maximum and sub-maximal intensities on immune system subcategories and blood coagulation factors in inactive men

Design

One group will complete resistance training with two sub maximal and maximal intensities exercises in two weeks interval

Settings and conduct

All subjects will be present in the sports hall of the Sarab Islamic university and will complete two resistance training with two weeks intervals separately. In each step, fasting blood samples were taken before, immediately, 2 hour, 24 hour, 48 hour and 72 hour after two maximal and submaximal intensities resistance exercise

Participants/Inclusion and exclusion criteria

Inclusion and exclusion criteria in the research included: age, Do not use caffeine, alcohol, tobacco and antioxidant supplements and not having any history of any diseases affecting hematologic factors such as high muscle damage and anti-inflammatory drugs

Intervention groups

Resistance training with two sub maximal and maximal intensities

Main outcome variables

Prevent from high inflammatory and coagulation factors response in inactive male students

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20181114041655N2**
Registration date: **2018-12-21, 1397/09/30**

Registration timing: **retrospective**

Last update: **2018-12-21, 1397/09/30**

Update count: **0**

Registration date

2018-12-21, 1397/09/30

Registrant information

Name

Ameneh Pourrahim Ghouroghchi

Name of organization / entity

Mohaghegh-e-Ardabili University

Country

Iran (Islamic Republic of)

Phone

+98 45 3150 5647

Email address

a.pourrahim@uma.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-11-26, 1397/09/05

Expected recruitment end date

2018-12-16, 1397/09/25

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of resistance training with two maximum and sub-maximal intensities on immune system subcategories and blood coagulation factors in non-athletic men

Public title

The effect of resistance training intensity on immunity and coagulation factors in non-athletic men

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

No use caffeine, alcohol, tobacco, tobacco and antioxidant supplements

Exclusion criteria:

History of any illness affecting blood hematology such as high muscle damage and anti-inflammatory drugs

Age

From **20 years** old to **22 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **20**

More than 1 sample in each individual

Number of samples in each individual: **12**

6 time before and after each exercise

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Single

Other design features

Semi-experimental

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Ardabil University of Medical Sciences

Street address

University Blv

City

Ardabil

Province

Ardabil

Postal code

5619911367

Approval date

2018-11-13, 1397/08/22

Ethics committee reference number

IR.ARUMS.REC.1397.125

Health conditions studied

1

Description of health condition studied

The effect of resistance training intensity on immune system indicators and blood coagulation factors in inactive men

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Maximal resistance training

Timepoint

Maximal resistance training

Method of measurement

Percent of One Maximum Repetition

2

Description

Submaximal resistance training

Timepoint

Submaximal resistance training

Method of measurement

Percent of One Maximum Repetition

Secondary outcomes

1

Description

Subcategories immune system

Timepoint

before, immediately, 2 hour, 24 hour, 48 hour, 72 hour after exercise

Method of measurement

Number and percentage of leukocytes were measured using cell counters CBC-MAC cell counter (KX-21)).

2

Description

Platelets

Timepoint

before, immediately, 2 hour, 24 hour, 48 hour, 72 hour after exercise

Method of measurement

With an auto-analyzer device (Sysmex K-1000 Japan) was measured.

3

Description

Factor VIII

Timepoint

before, immediately, 2 hour, 24 hour, 48 hour, 72 hour after exercise

Method of measurement

With an auto-analyzer device (Sysmex K-1000 Japan) was measured.

Intervention groups**1****Description**

Intervention group: First intervention group resistance training with moderate intensity 60 percent of One Maximum Repetition

Category

N/A

2**Description**

Intervention group: Second intervention group resistance training with maximal intensity 85 percent of One Maximum Repetition

Category

N/A

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

University of Mohaghegh Ardabili

Full name of responsible person

Ameneh Pourrahim

Street address

University Blvd

City

Ardabil

Province

Ardabil

Postal code

5619911367

Phone

+98 45 3150 5647

Email

a.pourrahim@uma.ac.ir

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

The University of Mohaghegh

Full name of responsible person

Ameneh Pourrahim Ghouroughchi

Street address

University Blvd

City

Ardabil

Province

Ardabil

Postal code

5619911367

Phone

+98 45 3150 5647

Email

a.pourrahim@uma.ac.ir

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

The University of Mohaghegh

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**

Mohaghegh University

Full name of responsible person

Ameneh Pourrahim Ghouroughchi

Position

Associate professor

Latest degree

Ph.D.

Other areas of specialty/work

Sport Physiology

Street address

University Blvd

City

Ardabil

Province

Ardabil

Postal code

5619911367

Phone

+98 45 3150 5647

Email

a.pourrahim@uma.ac.ir

Person responsible for scientific inquiries**Contact****Name of organization / entity**

Mohaghegh university

Full name of responsible person

Ameneh Pourrahim Ghouroughchi

Position

Associate professor

Latest degree

Ph.D.

Other areas of specialty/work

sport physiology

Street address

University Blvd

City

Ardabil

Province

Ardabil

Postal code

5619911367

Phone

+98 45 3150 5647

Email

a.pourrahim@uma.ac.ir

+98 45 3150 5647

Email

a.pourrahim@uma.ac.ir

Sharing plan**Deidentified Individual Participant Data Set (IPD)**

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

The effect of resistance training with two maximum and sub-maximal intensities on immune system indicators and blood coagulation factors in inactive men

When the data will become available and for how long

After printing the article 99

To whom data/document is available

General

Under which criteria data/document could be used

Prevent

From where data/document is obtainable

Internet

What processes are involved for a request to access data/document

Search

Comments**Person responsible for updating data****Contact****Name of organization / entity**

The University of Mohaghegh

Full name of responsible person

Ameneh Pourrahim Ghouroughchi

Position

Associate professor

Latest degree

Ph.D.

Other areas of specialty/work

Sport physiology

Street address

University Blvd

City

Ardabil

Province

Ardabil

Postal code

5619911367

Phone