

Clinical Trial Protocol

Iranian Registry of Clinical Trials

28 Jun 2026

Comparative effectiveness of 8 week resistance training and creatine supplementation on control of cell apoptosis in middle-aged men

Protocol summary

Summary

Aim: In this study, we aim to investigate the possible effect of short and long-term creatine supplementation and resistance training on serum markers of apoptosis after acute exercise. Methods: The participants include 30 volunteers middle-aged men with a history of resistance training. Then they randomly divide to creatine and placebo group. A double-blind research design (for all groups: subjects, researchers and analyzers) was employed. Following 7 days of creatine supplementation (20 g/day), on day 8, subjects begin consuming 5 g/day of creatine for 8 weeks. The subjects train resistance exercise (three times a week) during study. Following 7 days and 2 months, subjects perform an acute exercise testing includes 4 sets of 8 reps and 6 stations at 80% of one repetition maximum. Blood tests obtain on prior to supplementation loading and after 7 days and 2-months (immediate follow acute exercise testing on day 8 and day 68), for the measurement of the serum caspase-3, protein p-53, caspase-8, caspase-9, caspase-12 and IGF-1 concentrations.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015091112386N2**

Registration date: **2015-10-20, 1394/07/28**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2015-10-20, 1394/07/28

Registrant information

Name

Hassan Faraji

Name of organization / entity

Islamic Azad University, Mariwan Branch

Country

Iran (Islamic Republic of)

Phone

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Recruitment status

Recruitment complete

Funding source

Islamic Azad University, Marivan Branch, Vice Chancellor for research of Islamic Azad University, Marivan Branch

Expected recruitment start date

2015-10-01, 1394/07/09

Expected recruitment end date

2016-02-01, 1394/11/12

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparative effectiveness of 8 week resistance training and creatine supplementation on control of cell apoptosis in middle-aged men

Public title

Effect of training and creatine supplementation on cell apoptosis

Purpose

Other

Inclusion/Exclusion criteria

Inclusion criteria: males; nonathletic; aged 40-70 years; healthy; without consume any anti-inflammatory supplementation (during 6 months prior the study).
Exclusion criteria: smoking; acute and chronic diseases such as diabetes; renal failure, atherosclerosis and

hypertension, muscular injury and dystrophy, uncontrolled intake of oxidative and anti-inflammatory drugs supplements and stimulants (during the study).

Age

From **40 years** old to **70 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)

Double blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Kurdistan University of Medical Sciences, Ethics Committee of Kurdistan University of Medical Science

Street address

NO 23, College of Kurdistan University of Medical Sciences, the lower the Quds Hospital, Pasdaran Street, Sanandaj

City

Sanandaj

Postal code

66177-13446

Approval date

2015-08-23, 1394/06/01

Ethics committee reference number

MUK.REC.1394.131A

Health conditions studied

1

Description of health condition studied

Encounter exercise for healthy admintation

ICD-10 code

Z02

ICD-10 code description

Examination and encounter for administrative purposes

Primary outcomes

1

Description

Caspase-3

Timepoint

pre study, immediately after acute test following one week with or without creatine loading, immediately after acute test following 8 week with or without creatine loading

Method of measurement

ELISA

2

Description

Caspase-8

Timepoint

pre study, immediately after acute test following one week with or without creatine loading, immediately after acute test following 8 week with or without creatine loading

Method of measurement

ELISA

3

Description

Caspase-9

Timepoint

pre study, immediately after acute test following one week with or without creatine loading, immediately after acute test following 8 week with or without creatine loading

Method of measurement

ELISA

4

Description

Caspase-12

Timepoint

pre study, imminently after acute test following one week with or without creatine loading, imminently after acute test following 8 week with or without creatine loading

Method of measurement

ELISA

5

Description

IGF-1

Timepoint

pre study, immediately after acute test following one week with or without creatine loading, immediately after acute test following 8 week with or without creatine loading

Method of measurement

ELISA

6

Description

p-53

Timepoint

pre study, imminently after acute test following one week with or without creatine loading, imminently after acute test following 8 week with or without creatine loading

Method of measurement

ELISA

Secondary outcomes

1

Description

Lactate

Timepoint

pre study, immediately after acute test following one week with or without creatine loading, immediately after acute test following 8 week with or without creatine loading

Method of measurement

ELISA

Intervention groups

1

Description

Control group: Maltodextrin supplementation every day 20 grams (4 times 5 gm) for one week, then every day 5 grams for 8 weeks

Category

Placebo

2

Description

Intervention group: Creatine supplementation every day 20 grams (4 times 5 gm) for one week, then every day 5 grams for 8 weeks

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Islamic Azad University, Marivan Branch

Full name of responsible person

Hassan Faraji

Street address

City

Marivan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University, Marivan Branch, Vice Chancellor for research of Islamic Azad University, Ma

Full name of responsible person

Abdollah Shaeisteh

Street address

No 35, Delavar Alley, Azadi St, Marivan

City

Marivan

Grant name

11385

Grant code / Reference number

225

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

Yes

Title of funding source

Islamic Azad University, Marivan Branch, Vice Chancellor for research of Islamic Azad University, Ma

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

Univerity of Kurdistan

Full name of responsible person

Rahman Rahimi

Position

Assistant Professor

Other areas of specialty/work

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Other areas of specialty/work

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Other areas of specialty/work

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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