Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 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 participates includes 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

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Iran (Islamic Republic of)

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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 distrophy, 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 Sceinces, Ethics Committee of Kurdistan University of Medical Sceinc

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
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Position
Assistant Professor
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