

Clinical Trial Protocol

Iranian Registry of Clinical Trials

12 Sep 2026

Effect of whey protein on liver enzymes after intense eccentric contraction

Protocol summary

Summary

The objective of this study is to determine the effect of whey protein supplementation on Aspartate aminotransferase (AST) and Alkaline phosphates (ALP) as liver enzymes during muscle soreness induced by resistance exercise. Participants are non-athletes and no smoker. Subjects are 28 untrained boy students (78 ± 12 kg) and are divided glutamine (3 times/ 0.4 g per kg of body weight) and placebo groups by randomly. Blood samples will be taken before, immediately after and 24, 48 and 72 h after an intense resistance exercise session consist of leg eccentric contraction and analyzed for AST and ALP activity.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017052911979N4**

Registration date: **2017-06-09, 1396/03/19**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2017-06-09, 1396/03/19

Registrant information

Name

Mojtaba Eizadi

Name of organization / entity

Islamic Azad University, Saveh Branch

Country

Iran (Islamic Republic of)

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+98 42 33342

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Recruitment status

Recruitment complete

Funding source

Islamic Azad University, Saveh Branch, Saveh, Iran

Islamic Azad University, Islamshahr Branch, Tehran, Iran

Expected recruitment start date

2015-11-22, 1394/09/01

Expected recruitment end date

2015-11-27, 1394/09/06

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of whey protein on liver enzymes after intense eccentric contraction

Public title

The changes pattern of Aspartate Aminotransferase and Alkaline Phosphatase during delayed muscle soreness induced by resistance exercise in response to whey protein supplementation in sedentary boy students

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Inactive or non-trained; None smoker; None alcoholic; lack weight fluctuations more than One kilogram of over the last 6 months; No diet; No history of chronic diseases such as asthma, diabetes, cardiovascular disease, epilepsy, seizure, etc. Exclusion criteria: Medications or nutritional supplements during the study; Temporary illness such as fever, chills or diarrhea and inability to continue the study at any time of the implementation study

Age

From **18 years** old to **24 years** old

Gender

Male

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: 28

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

Islamic Azad University, Saveh Branch

Street address

Department of Exercise Physiology, Islamic Azad University, University town, Saveh

City

saveh

Postal code

3919715179

Approval date

2013-02-26, 1391/12/08

Ethics committee reference number

224

Health conditions studied

1

Description of health condition studied

nutrition

ICD-10 code

R74.0

ICD-10 code description

Elevation of levels of transaminase and lactic acid dehydrogenase [LDH]

Primary outcomes

1

Description

Aspartate Amino transferase (AST)

Timepoint

before exercise, 0, 24, 48 and 72 hours after exercise test

Method of measurement

U/L

2

Description

alkaline phosphatase (ALP)

Timepoint

before exercise, 0, 24, 48 and 72 hours after exercise test

Method of measurement

U/L

Secondary outcomes

empty

Intervention groups

1

Description

Whey protein supplementation for experimental group (0.4 g per 1 kg of body weight, 1 time daily for 3 days, oral, Solubility in water

Category

Treatment - Drugs

2

Description

Maltodextrin for placebo group, (0.4 g per 1 kg of body weight, 1 time daily for 3 days, oral, Solubility in water

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Islamic Azad University, Saveh Branch, Iran

Full name of responsible person

Mojtaba Eizadi

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Islamic Azad University, University town, Iran

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University, Saveh Branch

Full name of responsible person

Anoosh Eghdami

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Islamic Azad University, University town, Iran
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 saveh
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
 Yes
Title of funding source
 Islamic Azad University, Saveh Branch
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

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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