

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 2026

The effect of Glutamine supplementation on muscle damage markers after Eccentric resistance exercise in untrained men

Protocol summary

Summary

The overall objective of the project: determining the amino acid glutamine supplementation on indices of muscle damage after eccentric resistance exercise in untrained men. Methods: this study is experimental subjects young male student volunteers normal weight (BMI between 19 and 25) University of Applied Sciences are Persepolis sport activities, dietary supplements, not drugs and painkillers and diet plans follow a specific pattern. In the case of the 7 days before the test, each of the above criteria are not respected subjects excluded from the study. A week before the test and after completing health questionnaires and consent form, the subject during a meeting with the means and methods of measure are introduced. At the same session, making Weight and height which, as the record of the meeting and recorded in knee extension subject to. Prior to the training program to measure fasting subjects index case (the enzyme creatine kinase) cc 5 of venous blood from the forearm to get , motion range as measured by a goniometer and also muscle pain perception index by 6 - point scale (PAS) Shylaja (2003) will be evaluated, subjects drank his drink for 30 minutes after eating , then start doing the exercise protocol to damage to the muscle . Supplement for 1 / 0 g glutamine per kg of body weight (Karen pharmaceutical company) was combined with 300 ml of water and placebo groups Maltv dextrin (Karen pharmaceutical company) the amount of water used to be ∞ . Delayed Onset Muscle Soreness (DOMS) and muscle damage in the muscles of the lower body with the knee extended, with about 70% 1RM weights similar research project LarocheDain (2005) be cause [6] . 24 and 48 hours after eccentric activity, an index of blood (CK), plus perceptions of muscle pain and range of motion should be evaluated again making .

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2014040810826N7**

Registration date: **2014-07-26, 1393/05/04**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2014-07-26, 1393/05/04

Registrant information

Name

Azadeh Nadjarzadeh

Name of organization / entity

Shahid Sadoughi University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Individual & National Olympic Academy

Expected recruitment start date

2014-02-20, 1392/12/01

Expected recruitment end date

2014-04-21, 1393/02/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of Glutamine supplementation on muscle damage markers after Eccentric resistance exercise in

untrained men

Public title

The effect of Glutamine supplementation on muscle damage markers

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: men; non athletes; non-smokers with normal BMI and age between 20 to 30 years old.

Exclusion criteria: being athlete; smoking; an abnormal BMI (under weight - overweight and obesity) and non-compliance with conditions such as changes in diet during the study; taking drug or certain supplements and age less than 20 years over 30 years old.

Age

From **20 years** old to **30 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **80**

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

Shahid Sadooghi University of Medical Sciences

Street address

Shahid Sadooghi University of Medical Sciences,
Imam Hossein Square

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Postal code

8944157963

Approval date

2014-02-08, 1392/11/19

Ethics committee reference number

223114/17/پ

Health conditions studied

1

Description of health condition studied

Muscle damage

ICD-10 code

M-63

ICD-10 code description

Disorders of muscle in diseases classified elsewhere

Primary outcomes

1

Description

Serum creatine kinase enzyme

Timepoint

Zero, 24 and 48 hours after intervention

Method of measurement

Level of enzyme activity by photometric method.

2

Description

Muscle pain perception

Timepoint

Zero, 24 and 48 hours after intervention

Method of measurement

Pain is measured using a scale numbered graphics PAS

3

Description

Range of motion

Timepoint

Zero, 24 and 48 hours after intervention

Method of measurement

Goniometer Lafayette

Secondary outcomes

empty

Intervention groups

1

Description

0.1 grams of glutamine per kg of body weight (Karen pharmaceutical company) was combined with 300 ml of water

Category

Prevention

2

Description

Maltodextrin Placebo group of 0.1 grams per kilogram of body weight, which is combined with 300 ml of water.

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Academic University - Applied Club

Full name of responsible person

Dr. Vajihollah Cheshmesari

Street address

Tehran Highway, 25th st., Azadegan Boulevard,
Kurdistan

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

National Olympic Academy

Full name of responsible person

Dr. Mohammad Reza Sharif

Street address

Enghelab Sports Complex, Seul st.

City

Tehran

Grant name

ندارد

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

Yes

Title of funding source

National Olympic Academy

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

Shahid Sadooghi University of Medical Sciences

Full name of responsible person

Hadi Atarod

Position

Student of Medicine

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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