

Clinical Trial Protocol

Iranian Registry of Clinical Trials

17 Jul 2026

The effect of low glycemic index diet on body composition and fatigue in amateur strength athletes

Protocol summary

Study aim

The effect of low glycemic index diet on body composition and fatigue factors in amateur strength athletes

Design

A clinical trial with a control group, with parallel groups, a blind strain, randomized, on 38 athletes, was used to randomize the randomized block allocation of the RAS software.

Settings and conduct

This study was conducted on strength athletes in bodybuilding in one of the clubs in Yazd city; The athletes were explained how to conduct the study and the study process, and a guide file was provided to all the athletes, which included the items that should not be used in their diet in the case group, and the study process including blood tests, measurements in the control group. The anthropometric measurements, the start and end time of the study were explained.

Participants/Inclusion and exclusion criteria

People who wish to enter the study must be in good health, between 20 and 45 years old; If they are professional athletes and use antioxidant supplements, they are not allowed to enter.

Intervention groups

In this study, we measure the effect of removing foods with a high glycemic index from the diet of strength athletes on body composition and fatigue factors.

Main outcome variables

Skeletal muscle mass; Fat mass; Fat percentage; Aspartate amino transferase; Lactate dehydrogenase; Weight; BMI;

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20231126060196N1**

Registration date: **2024-01-20, 1402/10/30**

Registration timing: **retrospective**

Last update: **2024-01-20, 1402/10/30**

Update count: **0**

Registration date

2024-01-20, 1402/10/30

Registrant information

Name

mahdi samavat

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 35 3530 2754

Email address

mahdisamavat3125@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-12-10, 1402/09/19

Expected recruitment end date

2024-01-07, 1402/10/17

Actual recruitment start date

2023-12-10, 1402/09/19

Actual recruitment end date

2024-01-10, 1402/10/20

Trial completion date

empty

Scientific title

The effect of low glycemic index diet on body composition and fatigue in amateur strength athletes

Public title

Effect of low glycemic index diet on body composition and fatigue

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

. Tendency to participate in the study . Amateur athletes
. Age between 20-45 years . Having perfect physical health . Not using antioxidant supplements in the last month

Exclusion criteria:

Using hormones and steroid drugs Using sports supplements to increase strength and energy

Age

From **20 years** old to **45 years** old

Gender

Male

Phase

N/A

Groups that have been masked

- Investigator
- Outcome assessor
- Data analyser

Sample size

Target sample size: **38**

Actual sample size reached: **37**

Randomization (investigator's opinion)

Randomized

Randomization description

The people participating in the study were divided into 2 groups of case (receiver of diet with low glycemic index) and control (regular diet) by random block allocation method and using RAS software, and followed the respective diet for 4 weeks. People who must follow a low glycemic index diet are given a list of prohibited foods during this period.

Blinding (investigator's opinion)

Single blinded

Blinding description

The participants in this study were in a separate group; Both groups were given a file, the case group received a diet and the control group continued with their normal diet and only the study process was explained from beginning to end.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Qazvin University of Medical Sciences

Street address

Qazvin University of medical sciences- Shahid Bahonar Boulevard- Qazvin

City

Qazvin

Province

Qazvin

Postal code

15315-34199

Approval date

2023-11-12, 1402/08/21

Ethics committee reference number

IR.QUMS.REC.1402.216

Health conditions studied

1

Description of health condition studied

Body composition-fatigue factors

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Body Composition

Timepoint

At the beginning of the study and 28 days after the start of the study.

Method of measurement

Body Analysis device

2

Description

Fatigue factors: AST, LDH

Timepoint

At the beginning of the study and 28 days after the start of the study.

Method of measurement

Blood test.

Secondary outcomes

1

Description

Fat mass

Timepoint

At the beginning and 28 days later at the end of the study.

Method of measurement

Inbody 270

2

Description

Fat percentage

Timepoint

At the beginning and 28 days later at the end of the study.

Method of measurement

Inbody 270

3

Description

Skeletal muscle mass

Timepoint

at the beginning and 28 days later at the end of the study

Method of measurement

Inbody 270

4

Description

Weight

Timepoint

At the beginning and 28 days later at the end of the study

Method of measurement

Scale with an accuracy of 50 grams

5

Description

BMI

Timepoint

At the beginning and 28 days later at the end of the study

Method of measurement

Ratio of weight to height to exponentiation 2

6

Description

Abdominal circumference

Timepoint

At the beginning and 28 days later at the end of the study

Method of measurement

Meter

7

Description

hips circumference

Timepoint

At the beginning and 28 days later at the end of the study

Method of measurement

Meter

Intervention groups

1

Description

Intervention group: The intervention group is fully justified at the beginning of the study process and a consent form is obtained; At first, a blood sample will be

taken from them and an analysis and anthropometric measurements will be performed. Finally, the study will be repeated after 28 days. Food record sheets will also be given, which record 3days at the beginning, middle and end of the study. Along with strength training, foods with a high glycemic index, whose list was given to the intervention group, are removed from their diet.

Category

Lifestyle

2

Description

Control group: The control group is fully justified in the beginning of the study process and a consent form is taken; At first, a blood sample will be taken from them and an analysis and anthropometric measurements will be performed. Finally, the study will be repeated after 28 days. Food record sheets will also be given, which record 3days at the beginning, middle and end of the 3-day study.

Category

Lifestyle

Recruitment centers

1

Recruitment center

Name of recruitment center

Qazvin university of medical sciences

Full name of responsible person

Mahdi Samavat

Street address

Qazvin University of medical sciences- Shahid Bahonar Boulevard- Qazvin

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Email

info@qums.ac.ir

Web page address

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Qazvin University of Medical Sciences

Full name of responsible person

Dr Hossein Khadem Haghighian

Street address

Research and Technology Vice-Chancellor, 1st Branch, Maudet Alley, Shahid Beheshti Blvd, Qazvin

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3415613911

Phone
+98 28 3335 0056

Email
researchdpt@qums.ac.ir

Grant name

Grant code / Reference number

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

Title of funding source
Qazvin University of Medical Sciences

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
Qazvin University of Medical Sciences

Full name of responsible person
Mahdi Samavat

Position
Student

Latest degree
Bachelor

Other areas of specialty/work
Nutrition

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Position

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Person responsible for updating data

Contact

Name of organization / entity
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Position
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be a plan to make this available

Study Protocol
Yes - There is a plan to make this available

Statistical Analysis Plan
Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form
Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report
Undecided - It is not yet known if there will be a plan to make this available

Analytic Code
Undecided - It is not yet known if there will be a plan to

make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available

Title and more details about the data/document

There is no further information.

When the data will become available and for how long

There is no further information.

To whom data/document is available

There is no further information.

Under which criteria data/document could be used

There is no further information.

From where data/document is obtainable

There is no further information.

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

There is no further information.

Comments