

Clinical Trial Protocol

Iranian Registry of Clinical Trials

07 Jul 2026

Comparison of the effect a period of consumption Allicin and Silybum Marianum supplementation with four weeks wrestling selective training on some of the indicators of muscle damage in trained wrestlers

Protocol summary

Study aim

The effect a period of consumption Allicin and Silybum Marianum supplementation with four weeks wrestling selective training on some of the indicators of muscle damage in trained wrestlers

Design

Initially, The subjects will be selected purposeful and voluntary. Then, they were randomly divided into 3 groups: Exercise + Allicin Supplement (11 subjects), Exercise + Supplementation of silybium marianum (11 subjects) and Exercise + Placebo Starch(11 subjects). A clinical trial with a control group, with parallel groups, two Blind, randomized

Settings and conduct

33 wrestlers of the Qom province. A clinical trial with a control group, two Blind including participant, researcher. Prior to the commencement of the study, supplementary canisters and placebo can be marked by a person other than the researcher.

Participants/Inclusion and exclusion criteria

Entry requirements: At least one championship title has been gained at the provincial level. Wrestlers who have had a continuous training record of at least five years. Conditions of failure to enter: Use of anti-inflammatory drugs and vitamin supplements. Disorders that increase with supplementation of garlic (such as platelet problems, gastritis, hypotension, inflammation of the oral mucosa)

Intervention groups

Intervention group: First, 24 hours after blood sampling, the subjects will receive 3 tablets 300 mg containing 1/1 mg of allicin each day for one month made in Isfahan Pharmaceutical Company. Intervention group: Second, 24 hours after blood sampling, the subjects will receive 3 tablets containing 140 mg of silybium marianum each day for one month. Control group: Third, 24 hours after blood sampling, the subjects will receive 3 tablets

containing Starch each day for one month.

Main outcome variables

Lactate dehydrogenase, Creatine phosphokinase, Aspartate aminotransferase, Alanine aminotransferase

General information

Reason for update

Acronym

CPK,LDH,AST,ALT

IRCT registration information

IRCT registration number: **IRCT20180618040131N1**

Registration date: **2018-08-13, 1397/05/22**

Registration timing: **retrospective**

Last update: **2018-08-13, 1397/05/22**

Update count: **0**

Registration date

2018-08-13, 1397/05/22

Registrant information

Name

Mehdi Sharifian

Name of organization / entity

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-07-23, 1397/05/01

Expected recruitment end date

2018-08-06, 1397/05/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the effect a period of consumption Allicin and Silybum Marianum supplementation with four weeks wrestling selective training on some of the indicators of muscle damage in trained wrestlers

Public title

The effect Allicin and Silybum Marianum on indicators of muscle damage

Purpose

Prevention

Inclusion/Exclusion criteria**Inclusion criteria:**

Wrestlers who have had a continuous training record of at least five years. At least one championship title has been gained at the provincial level.

Exclusion criteria:

Use of anti-inflammatory drugs and vitamin supplements
Disorders that increase with supplementation of garlic (such as platelet problems, gastritis, hypotension, inflammation of the oral mucosa)

Age

From **15 years** old to **20 years** old

Gender

Male

Phase

4

Groups that have been masked

- Participant
- Investigator

Sample size

Target sample size: **33**

Randomization (investigator's opinion)

Randomized

Randomization description

First, it is purposeful and selective and then randomly
The methodology will be such that one of the members of the research team (other than the researcher and participants) will be present at the Qom Clubs and will provide names, records, and contact details of all athletes who are active. Then, from among these people, those who have 5 years of history of the wrestling and at least one title at the provincial level competitions will be selected and they will be invited by telephone to attend the club. The wrestlers will be assigned a number if they have criteria for entering the study and have a willingness to participate in the study. Then, by a research member (other than the researcher and participants), using the Random allocation rule, a set of numbers to Group A will be assigned to a group B and a set to the C group. The goal is to prevent any anticipation of future allocations from participants and researchers. For example, in this study with a sample size of 33 people, the balls that has the same weight and shape (33

numbers) are drawn into a container, and each of the letters A, B, C has 11 balls (three groups of letters) placed in the other container. Then, randomly, from each container, a number and a letter are left out of the container without replacement, and the resulting sequence is recorded. Akarca et al. Used this method in their random assignment.

Blinding (investigator's opinion)

Double blinded

Blinding description

Prior to the commencement of the study, supplementary canisters and placebo can be marked by a person other than the researcher so that the knowledge of the researcher and the learners about the type of capsules received is not taken into consideration. The supplement and placebo will be administered under the supervision of the same person (he is a doctor). Which also monitors the subjects.

Placebo

Used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Institutional Research Ethics Committee Islamic Azad University Boroujerd-Branch

Street address

Navab Square, Imam Khomeini Complex (Imam Khomeini), Borujerd Town

City

Borujerd

Province

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Postal code

6915136335

Approval date

2018-06-08, 1397/03/18

Ethics committee reference number

IR.IAU.B.REC.1397.008

Health conditions studied**1****Description of health condition studied**

Serum markers of muscle injury

ICD-10 code**ICD-10 code description****Primary outcomes**

1

Description

Compare differences in the values of CPK change in different groups

Timepoint

At the beginning of the study (before the intervention) and one month after taking supplements and exercise (one hour after training, 24 hours (fasting) and 36 (fasting).

Method of measurement

Autoanalyzer selectra I made in poland, centrifuge(hermel z310- germany), The kits and chemicals required will also be supplied by Iran's Pars Test Company.

2

Description

Compare differences in the values of LDH change in different groups

Timepoint

At the beginning of the study (before the intervention) and one month after taking supplements and exercise (one hour after training, 24 hours (fasting) and 36 (fasting).

Method of measurement

Autoanalyzer selectra I made in poland, centrifuge(hermel z310- germany), The kits and chemicals required will also be supplied by Iran's Pars Test Company.

3

Description

Compare differences in the values of AST change in different groups

Timepoint

At the beginning of the study (before the intervention) and one month after taking supplements and exercise (one hour after training, 24 hours (fasting) and 36 (fasting).

Method of measurement

Autoanalyzer selectra I made in poland, centrifuge(hermel z310- germany), The kits and chemicals required will also be supplied by Iran's Pars Test Company.

4

Description

Compare differences in the values of ALT change in different groups

Timepoint

At the beginning of the study (before the intervention) and one month after taking supplements and exercise (one hour after training, 24 hours (fasting) and 36 (fasting).

Method of measurement

Autoanalyzer selectra I made in poland, centrifuge(hermel z310- germany), The kits and chemicals required will also be supplied by Iran's Pars Test Company.

Secondary outcomes

1

Description

Score Muscle soreness

Timepoint

Measurement of muscular soreness At the beginning of the study (before the intervention) and one month after taking supplements and exercise (one hour after training, 24 hours (fasting) and 36 (fasting).supplementation of allicin and silibium marianum

Method of measurement

Borg Pain Questionnaire

Intervention groups

1

Description

Intervention group: first, 24 hours after blood sampling, the subjects received 3 tablets 300 mg containing 1/1 mg of allicin for one month each day made in Isfahan Pharmaceutical Company. Pills will be put in powder form in the capsule.

Category

Prevention

2

Description

Intervention group: second, 24 hours after blood sampling, the subjects received 3 tablets containing 140 mg of silybium maryanum for one month each day made in Isfahan Pharmaceutical Company. Pills will be put in powder form in the capsule.

Category

Prevention

3

Description

Control group:Third, 24 hours after blood sampling, the subjects received 3 tablets containing Starch. Pills will be put in powder form in the capsule

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Qom Sports Clubs

Full name of responsible person

Mohammad Hasani

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Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

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Full name of responsible person

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Web page address<http://www.iaub.ac.ir/persian/FaAssistPajohesh.aspx>**Grant name**

Mohammad Reza Moazami Goodarzi (Research Vice-Presidency -Islamic Azad University of Borujerd)

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

Yes

Title of funding source

Islamic Azad University

Proportion provided by this source

1

Public or private sector

Private

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**

Islamic Azad University

Full name of responsible person

Mehdi Sharifian

Position

Sessional instructor

Latest degree

Master

Other areas of specialty/work

Sport physiology

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Person responsible for scientific inquiries**Contact****Name of organization / entity**

Islamic Azad University

Full name of responsible person

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Latest degree

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Other areas of specialty/work

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

Yes - There is 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

Yes - There is 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

Comparison of the effect a period of consumption Allicin and Silybum Marianum supplementation with four weeks wrestling selective training on some of the indicators of muscle damage in trained wrestlers. Due to limited and controversial studies, the possible synergistic effect of these two antioxidants and the lack of access to the studied on the effects of silymarin and allicin supplementation and sporting activity necessitate that the effect of Allicin and Silybum Marianum supplementation on some of the serum indicators of injury Muscle (Phosphocreatine kinase-lactate dehydrogenase-alanine Aminotransferase- Aspartate aminotransferase) after one month, selected exercises are carried out in male wrestlers who have been practicing. so that coaches and sports technicians can relate to the results prevent to some extent the occurrence of undesirable signs and symptoms and the cost of double treatment costs.

When the data will become available and for how long

Next 3 months

To whom data/document is available

By giving the resources to all people is allowed.

Under which criteria data/document could be used

By giving the resources

From where data/document is obtainable

Email researcher m-sharifian@iau-arak.ac.ir

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

Email researcher m-sharifian@iau-arak.ac.ir

Comments

Doctor will also monitor this study, and capsules, supplements will be provided from the pharmacy.