

Clinical Trial Protocol

Iranian Registry of Clinical Trials

26 Jun 2026

The effect of Quercetin supplementation on the response of C-reactive protein, Interleukin 6 and Creatine kinase after a boring swimming session in teenage girls.

Protocol summary

Study aim

The effect of Quercetin supplementation on some inflammatory factors and Creatine kinase in swimmer girls

Design

This study is a parallel, double-blind clinical trial. The sample size includes 20 elite female swimmers in Tehran. People are divided into two groups of 10 people. They take 500 mg of quercetin or placebo supplements daily for 14 days, morning and night. After 14 days, all participants take a boring swim test. People then do a crawl swim equal to or greater than 85 percent of their maximum heart rate until they are tired. Blood samples are collected immediately after exercise. .

Settings and conduct

Due to the fact that the starch powder and quercetin supplements are placed in exactly the same capsule, participants and researchers are not aware of the type of supplement they receive. The test is done in Shahrbanoo private pool. Blood sampling is done by the blood sampling expert of Rastegarian laboratory.

Participants/Inclusion and exclusion criteria

14 to 16 years old girls swimmers who are physically healthy (no history of any cardiovascular disease, no history of any specific disease or neuropsychiatric illness), no allergies to drugs and medications, no dietary supplements, medication regimen in the last 3 months, at least 3 years of professional swimming experience.

Intervention groups

Athletes after filling in the individual consent form to participate in the study are randomly divided into two groups of 10. Intervention group (14 days of quercetin supplementation) control group (14 days of taking placebo capsules).

Main outcome variables

Interleukin 6, C-reactive protein, Creatine kinase

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200804048307N1**

Registration date: **2020-09-21, 1399/06/31**

Registration timing: **retrospective**

Last update: **2020-09-21, 1399/06/31**

Update count: **0**

Registration date

2020-09-21, 1399/06/31

Registrant information

Name

Ensieh Ahmadpour

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 2257 7532

Email address

ncahadpour47@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-07-30, 1399/05/09

Expected recruitment end date

2020-08-15, 1399/05/25

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of Quercetin supplementation on the response of C-reactive protein, Interleukin 6 and Creatine kinase after a boring swimming session in teenage girls.

Public title

Effect of Quercetin supplementation on inflammatory and Creatinine kinase responses after a swimming session in girls

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

Willingness to participate in the study
Female gender
Age range 14 to 16 years old
Do not use antioxidant supplements and anti-inflammatory drugs in the last 6 months
At least 3 years of swimming experience

Exclusion criteria:

Failure to sign informed consent
Injury
Smoking and alcohol
History of cardiovascular and respiratory diseases

Age

From **14 years** old to **16 years** old

Gender

Female

Phase

3

Groups that have been masked

- Participant
- Investigator

Sample size

Target sample size: **20**

Randomization (investigator's opinion)

Not randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Starch powder and Quercetin supplement are placed inside the capsules of the same shape. Participants and researchers are not aware of the type of capsule received. As a result, the study is performed in a double-blind manner.

Placebo

Used

Assignment

Parallel

Other design features

The medical team is expected to be present at the pool site during the swim test.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research Ethics Committee of the Institute of Physical Education and Sports Science

Street address

No. 3, Fifth Alley, Mir Emad St., Ostad Motahhari St.

City

Tehran

Province

Tehran

Postal code

1587958711

Approval date

2020-07-28, 1399/05/07

Ethics committee reference number

IR.SSRC.REC.1399.044

Health conditions studied

1

Description of health condition studied

Girls Swimmers

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Creatine Kinase

Timepoint

Before taking the supplement, 14 days after taking the supplement, after a boring swim

Method of measurement

Pars Azmon Laboratory Kits No. 90004 Using Autoanalyzer (USA)

2

Description

C-reactive protein

Timepoint

Before taking the supplement, 14 days after taking the supplement, after a boring swim

Method of measurement

Biosystem kits, made in Spain

3

Description

Interleukin 6

Timepoint

Before taking the supplement, 14 days after taking the supplement, after a boring swim

Method of measurement

Eliza kit made by the French company Diaclone

Secondary outcomes

1

Description

Maximum oxygen consumption(VO2max)

Timepoint

Before performing boring swimming

Method of measurement

Cooper test (2400 meters in 12 minutes) and using the formula

Intervention groups

1

Description

Intervention group: Includes ten swimmers who take Quercetin supplements in the form of 500 mg capsules for two days, morning and night. During this period, they continue their normal life.(Solgar Quercetin , made in the USA).

Category

Prevention

2

Description

Control group: includes ten swimmers who take placebo capsules for 14 days in the form of capsules containing starch in the morning and night. During this period, they continue their normal life. (Daro Gostar placebo capsules, made in Iran)

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Shahrbanoo cultural and sports complex

Full name of responsible person

Ensieh Ahmadpour

Street address

Niloufar alley, Azadi street, Shahr ziba squer

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1487765681

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University

Full name of responsible person

Sina Forouzes

Street address

Shohada Hesarak Boulevard, University Square, at the end of Sattari Highway

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Province

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Postal code

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Phone

+98 21 4486 9827

Email

Basic_fa@srbiau.ac.ir

Grant name

Grant code / Reference number

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

No

Title of funding source

Vice Chancellor for Research, Faculty of Literature, Tehran University of Research Sciences

Proportion provided by this source

100

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

Persons

Person responsible for general inquiries

Contact

Name of organization / entity

Islamic Azad University

Full name of responsible person

Ensieh Ahmadpour

Position

University professor

Latest degree

Master

Other areas of specialty/work

Physiology

Street address

Unit 4, No. 14, Farvardin Alley, Delbkhah Crossroads, Pasdaran Street

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Islamic Azad University

Full name of responsible person

Mandana Gholami

Position

Associate Professor

Latest degree

Ph.D.

Other areas of specialty/work

Exercise physiology

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Person responsible for updating data

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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

Not applicable

Title and more details about the data/document

All data after unidentifiable individuals

When the data will become available and for how long

3 months after the publication of the article

To whom data/document is available

Participants in the study can be informed of the results and documentation in detail to know how the intervention works so that they can use the protocols if they are useful. Researchers can also access documents to use the results in similar research.

Under which criteria data/document could be used

The use of data for citation with reference to the source is unrestricted.

From where data/document is obtainable

Send Ensieh Ahmadpour an email

ncahmadpour47@gmail.com

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

Applicants will send an e-mail with the subject of the request to the address mentioned. As soon as they receive the e-mail, a form will be sent to them that the details of the people and the reason for their request will be recorded in this form. The documents will be provided to people as a PDF file.

Comments