Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

The effect of concomitant administration of L-arginine and vitamin C supplements on exercise performance and body composition in young athletes

Protocol summary

Study aim

The purpose of this study was to investigate the effect of concomitant administration of L-arginine and vitamin C supplements on improving athletic performance and physical activity in young athletes.

Design

A randomized controlled trial with a factorial, single blind, randomized controlled trial

Settings and conduct

Of the 72 athletes who applied to the Peugeot Club in August and September of 1977, they were given the number one form of cooperation, of which 48 filled out the form of cooperation and then selected the number form according to the criteria given to them. Two (medical-athletic records) were given to fill out and after filling out form number 40, 40 were selected and randomly divided into four groups of 10 supplemented (three groups) and placebo (one group).

Participants/Inclusion and exclusion criteria

Criteria for selecting the statistical population were at least one year of sporting experience, regular exercise and exercise three days a week, male only, age range of 25 to 28 years, no chronic and acute illnesses, no alcohol consumption and no smoking.

Intervention groups

The first group was supplemented with L-arginine, the second group with vitamin C, the third group with vitamin C, and the fourth group with placebo (glucose tablets).

Main outcome variables

the power Power Endurance the balance flexibility Heart rate at rest BMI Waist to hip ratio Basic Metabolism Energy Body fat percentage

General information

Reason for update

Acronym

ال آرژنین و ویتامین

IRCT registration information

IRCT registration number: **IRCT20191005044987N1**
Registration date: **2020-01-27, 1398/11/07**
Registration timing: **retrospective**

Last update: **2020-01-27, 1398/11/07**
Update count: **0**

Registration date

2020-01-27, 1398/11/07

Registrant information

Name

saeed shahmohammadi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 2254 8614

Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-08-18, 1397/05/27

Expected recruitment end date

2018-08-24, 1397/06/02

Actual recruitment start date

2018-08-25, 1397/06/03

Actual recruitment end date

2018-08-31, 1397/06/09

Trial completion date

2018-10-12, 1397/07/20

Scientific title

The effect of concomitant administration of L-arginine and vitamin C supplements on exercise performance and body composition in young athletes

Public title
The effect of L-arginine and vitamin C supplements on exercise performance and body composition

Purpose
Other

Inclusion/Exclusion criteria

Inclusion criteria:
Lack of chronic and acute illnesses Having at least one year of sports experience Do regular exercise and exercise three days a week No alcohol and tobacco use

Exclusion criteria:
Filling the informed consent form

Age
From **25 years** old to **28 years** old

Gender
Male

Phase
3

Groups that have been masked

- Participant

Sample size
Target sample size: **72**
Actual sample size reached: **40**

Randomization (investigator's opinion)
Not randomized

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description
A control group who had taken glucose tablets instead of L-arginine and vitamin C supplements and the researcher knew about the groups, but the participants themselves were unaware of which group they were in.

Placebo
Used

Assignment
Factorial

Other design features
This study has a code of ethics IR.IAU.VARAMIN.REC.1397.019.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
دانشگاه آزاد اسلامی واحد ورامین_پیشوا

Street address
pasdaran

City
tehran

Province
Tehran

Postal code
1668644139

Approval date
2018-05-22, 1397/03/01

Ethics committee reference number
IR.IAU.VARAMIN.REC.1397.019

Health conditions studied

1

Description of health condition studied
Assessment of body composition and physical fitness factors

ICD-10 code
Z70-Z76

ICD-10 code description
XXI Factors influencing health status and contact with health services

Primary outcomes

1

Description
Body compositionIt has traditionally subdivided a two-part model of body weight into fat mass, which is the fat of all body reserves, including the brain, skeleton, and adipose tissue, and lean body mass (FFM) containing water, protein, and minerals. Fat scratches and fat bones divide. Given the complexity of manual computation equations and the need for high skill in subcutaneous fat measurement techniques and for increased ease of doing work in health and sports counseling centers, it is predicted that the body composition index will be calculated by a digital scales device. Good. The system uses a bioelectric resistance method to measure body fat. In this method the tester is placed on the device in such a way that the electrodes are in contact with his or her hands and feet. Then a relatively weak electric current passes through his body and the resistance to the current is measured. The electrical resistance is directly related to the percentage of body water, which is the highest in fat tissue. It can be calculated and when the total body weight is determined, using the various formulas already given to the device, body composition indices (fat percentage, etc.) are digitally displayed on the plate. The display will be displayed.

Timepoint
Pre-test and post-test (after 6 weeks)

Method of measurement
270 in body machine

2

Description
Exercise performance is a combination of desirable genetic traits, motivation, training and proper nutritional practices. Athletes gain competitive advantage and achieve a higher level of health or physical performance of any type of diet or synthetic dietary supplement or

drug. There are unfortunately a bunch of bad information in the area of sports nutrition. Athletes can benefit from nutritional training and interventions to raise awareness, self-efficacy and improve diet. Some of the relevant fitness factors Health and Exercise Using a Station Exercise Program L is different movements in the West, we measured body builders.

Timepoint

Pre-test and post-test (after 6 weeks)

Method of measurement

They were then placed on the treadmill and measured by electrodes for heart rate and displayed on the screen. After 15 minutes of running on the treadmill and general body warming to measure flexibility using the flexibility box provided. We measured individuals in centimeters. We used the lacquer test to measure the equilibrium, and the individuals record was measured in seconds. Long jump test was used to measure power and the record was measured and recorded in cm. To measure the strength of a maximal repetition in the motion of Holter and Scott Foot Holter presses were used. To measure endurance the number of movements performed in one minute in the breech and abdominal movements (lying and sitting) and Swedish swimming were measured in terms of number. After six weeks of supplementation, the same tests were performed again and the records were recorded. Taken.

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: L-arginine

Category

Rehabilitation

2

Description

Intervention group: Vitamin c

Category

Rehabilitation

3

Description

Intervention group: L-arginine and vitamin c

Category

Rehabilitation

4

Description

Control group: Glucose tablets

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Peugeot Club

Full name of responsible person

saeed shahmohammadi

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University

Full name of responsible person

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Grant name

Grant code / Reference number

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

No

Title of funding source

The researcher himself

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
saeedshahmohammadi

Position
-

Latest degree
Master

Other areas of specialty/work
Nutrition

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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
No - There is not a plan to make this available

Informed Consent Form
Yes - There is a plan to make this available

Clinical Study Report
No - There is not a plan to make this available

Analytic Code
No - There is not a plan to make this available

Data Dictionary
No - There is not a plan to make this available

Title and more details about the data/document
Complete thesis file with protocols and attachments

When the data will become available and for how long
Since April 2020

To whom data/document is available
Accredited researchers and universities and scientific centers

Under which criteria data/document could be used
Use slave research in their work and name the slave in the research background and resources.

From where data/document is obtainable
To a university or tutor or researcher

What processes are involved for a request to access data/document
E-mail or call or visit the university or researcher

Comments