

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

09 Jun 2026

### The effects of conjugated linoleic acid supplementation on, maximum oxygen consumption, resistance exercise, body composition and blood pressure in men.

#### Protocol summary

##### Summary

In this randomized, double-blind, placebo-controlled trial, 80 healthy men (20-27 years old students living in our University dorm who eat same food as the University serves) will randomly be assigned into two groups. One group will receive 3.2 g active conjugated linoleic acids daily as 4 capsules (each 1 g containing 80% or 0.8 g active conjugated linoleic acids) for two months. The conjugated linoleic acids capsules consists of two main isomers: cis-9, trans-11 CLAs and trans-10, cis-12 triglyceride type. Second group will similarly receive 4 capsules daily (soyflower oil) as placebo, during this two months. The objective is, to investigate the effect of conjugated linoleic acids on endurance exercise, resistance exercise, body composition and blood pressure in healthy men. At baseline and endpoint of the intervention, maximal oxygen consumption, ventilatory thresholds will measure in bruce test (Cosmed, Fitmate, Italy). Muscular strength will measure by Hand grip. Body weight, body fat mass, and lean body mass will measure by BIA method (Body state, Quadsan 4000, Multi scan 5000). Abdominal fat will measure with viscan (abdominal fat analyzer). The systolic (SBP) and diastolic blood pressure (DBP) will measure after five minutes rest. Then the measurements will be entered in SPSS (17.0) and analyzed using this software to compare two groups in order to investigate the effect of CLA on the above parameters.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT201204159472N2**  
Registration date: **2012-10-27, 1391/08/06**  
Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2012-10-27, 1391/08/06

##### Registrant information

###### Name

Naheed Aryaeian

###### Name of organization / entity

Iran University of Medical Sciences

###### Country

Iran (Islamic Republic of)

###### Phone

+98 21 8670 4750

###### Email address

aryaeian.n@iums.ac.ir

##### Recruitment status

###### Recruitment complete

##### Funding source

Tehran University of Medical Sciences, School of public health- research affaires and educational affaires

##### Expected recruitment start date

2012-10-22, 1391/08/01

##### Expected recruitment end date

2013-02-19, 1391/12/01

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

The effects of conjugated linoleic acid supplementation on, maximum oxygen consumption, resistance exercise, body composition and blood pressure in men.

##### Public title

The effect of conjugated linoleic acid supplementation on exercise performance

**Purpose**

Other

**Inclusion/Exclusion criteria**

Inclusion criteria: Participants must be male and the student of Tehran University of Medical Science; Age range must be 20-27 years; at least from 2 months ago Living in dormitories and stay more than 3 months; willingness to cooperate; Typically use distributed food in the dormitory and the university; BMI range must be 20-27; fat mass must be less than 25%; Moderate caffeine consumer. Not affected by Cardiovascular disease, musculoskeletal disorders or metabolic disease; No allergic to metals; No cigarette smoking hookah pipe and ... More than once a month; Resting systolic blood pressure less than 140 or diastolic less than 90; No consumption doping drugs, supplements and drugs; No sports injuries that can affect a person's physical performance; physical activity based on individual physical activity questionnaire ipaq be low or moderate. exclusion criteria: Inability to reach the respiratory gas exchange ratio equal to 1 in the final exercise test; Any use of supplements during the study; Unwillingness to cooperate in research; Failure to correct use of supplements (use supplement less than 80 percent); Any change in diet or physical activity daily rate during the study.

**Age**

From **20 years** old to **27 years** old

**Gender**

Male

**Phase**

3

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **80**

**Randomization (investigator's opinion)**

Randomized

**Randomization description****Blinding (investigator's opinion)**

Triple blinded

**Blinding description****Placebo**

Used

**Assignment**

Parallel

**Other design features****Secondary Ids**

empty

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

Ethics committee in research of Tehran university of Medical Sciences

**Street address**

Tehran University of Medical Sciences, Ghods St., Keshavarz Blvd, Tehran, Iran

**City**

Tehran

**Postal code**

14174

**Approval date**

2012-07-30, 1391/05/09

**Ethics committee reference number**

91-01-27-16706-59730

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

healthy volunteers

**ICD-10 code**

Z01.9, Z00

**ICD-10 code description**

Special examination, unspecified, General examination and investigation of persons without complaint and reported diagnosis

**Primary outcomes****1****Description**

Maximum oxygen consumption

**Timepoint**

before intervention, two month after intervention

**Method of measurement**

fitmate

**2****Description**

time to exhaustion

**Timepoint**

before intervention and two month after intervention

**Method of measurement**

fitmate

**3****Description**

Running Distance

**Timepoint**

before intervention and two month after intervention

**Method of measurement**

treadmil

**4****Description**

Muscle strength

**Timepoint**

before intervention and two month after intervention

**Method of measurement**

hand grip

## 5

### **Description**

weight

### **Timepoint**

before intervention and two month after intervention

### **Method of measurement**

scale

## 6

### **Description**

Waist

### **Timepoint**

before intervention and two month after intervention

### **Method of measurement**

tape measure

## 7

### **Description**

abdominal fat

### **Timepoint**

before intervention and two month after intervention

### **Method of measurement**

viscan

## 8

### **Description**

% fat mass

### **Timepoint**

before intervention and two month after intervention

### **Method of measurement**

bioelectrical impedance analysis

## 9

### **Description**

% free fat mass

### **Timepoint**

before intervention and two month after intervention

### **Method of measurement**

bioelectrical impedance analysis

## 10

### **Description**

systolic blood pressure

### **Timepoint**

before intervention and two month after intervention

### **Method of measurement**

manometer

## 11

### **Description**

diastolic blood pressure

### **Timepoint**

before intervention and two month after intervention

### **Method of measurement**

manometer

## **Secondary outcomes**

empty

## **Intervention groups**

### 1

#### **Description**

The control group take 3 capsules daily

#### **Category**

Placebo

### 2

#### **Description**

intervention group take 3 capsules daily

#### **Category**

Other

## **Recruitment centers**

### 1

#### **Recruitment center**

##### **Name of recruitment center**

Enghlab dormitory

##### **Full name of responsible person**

Dr. Nhid Aryaeian

##### **Street address**

Enghlab dormitory, Enghlab square, Tehran

##### **City**

Tehran

## **Sponsors / Funding sources**

### 1

#### **Sponsor**

##### **Name of organization / entity**

Vice-chancellor for research, Tehran University of Medical Sciences

##### **Full name of responsible person**

Dr. Akbar Fotouhi

##### **Street address**

Tehran University of Medical Sciences, Ghods St., Keshavarz Blvd, Tehran, Iran.

##### **City**

Tehran

#### **Grant name**

#### **Grant code / Reference number**

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

Yes

#### **Title of funding source**

Vice-chancellor for research, Tehran University of Medical Sciences

#### **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**  
Tehran University of Medical Sciences  
**Full name of responsible person**  
Milad Tajmanesh  
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Master student  
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## Person responsible for scientific inquiries

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## Person responsible for updating data

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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*