

Clinical Trial Protocol

Iranian Registry of Clinical Trials

28 Jun 2026

Effect of Coenzyme Q10 on serum levels of inflammatory markers, liver enzymes, leptin and adiponectin in patients with non alcoholic fatty liver disease

Protocol summary

Summary

The purpose of this study was to investigate the effect of Coenzyme Q10 on serum levels of inflammatory markers, liver enzymes, leptin, adiponectin in patients with non alcoholic fatty liver disease. This Controlled, double-blind, randomized clinical trial was performed on 40 patients. Patients were randomly divided into 2 groups: The case and control group received CoQ10 supplement (100 mg per day) and starch (100 mg per day) as placebo respectively, for 3 months. Variables including anthropometric indicators, blood pressure, inflammatory markers, liver enzymes, fasting blood sugar and lipid profile were measured before and after of intervention.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013071313984N1**

Registration date: **2013-12-18, 1392/09/27**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2013-12-18, 1392/09/27

Registrant information

Name

Farnaz Farsi

Name of organization / entity

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Of Medical Sciences

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Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Ahvaz Jondishapur University
of Medical Sciences

Expected recruitment start date

2012-05-15, 1391/02/26

Expected recruitment end date

2013-01-12, 1391/10/23

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of Coenzyme Q10 on serum levels of inflammatory
markers, liver enzymes, leptin and adiponectin in
patients with non alcoholic fatty liver disease

Public title

Non alcoholic fatty liver disease and Coenzyme Q10

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: 19-59 years old patient with non
alcoholic fatty liver disease Exclusion criteria: Patients
who have diabetes, cardiovascular, kidney and other
hepatic diseases; Pregnant or lactating women; Smoking;
Alcohol consumption; Use of dietary supplements.

Age

From **19 years** old to **59 years** old

Gender

Both

Phase

2

Groups that have been masked

No information

Sample size

Target sample size: 40

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Secondary ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Ahvaz Jundishapur University of Medical Sciences

Street address

Jondishapur University Of Medical Sciences, Golestan Ave. Ahvaz

City

Ahvaz

Postal code

6165777696

Approval date

2012-04-29, 1391/02/10

Ethics committee reference number

ETH-493

Health conditions studied

1

Description of health condition studied

Non Alcoholic Fatty liver Disease

ICD-10 code

K76.0

ICD-10 code description

Fatty (change of) liver, not elsewhere classified

Primary outcomes

1

Description

Aspartate aminotransferase

Timepoint

Before intervention and 3 months after intervention

Method of measurement

Photometric

2

Description

Alanine aminotransferase

Timepoint

Before intervention and 3 months after intervention

Method of measurement

Photometric

3

Description

Interlukine-6

Timepoint

Before intervention and 3 months after intervention

Method of measurement

ELISA

4

Description

hs-CRP

Timepoint

Before intervention and 3 months after intervention

Method of measurement

ELISA

5

Description

Gamma-glutamyl transpeptidase

Timepoint

Before intervention and 3 months after intervention

Method of measurement

Photometric

6

Description

TNF- α

Timepoint

Before intervention and 3 months after intervention

Method of measurement

ELISA

7

Description

Adiponectin

Timepoint

Before intervention and 3 months after intervention

Method of measurement

ELISA

8

Description

Leptin

Timepoint

Before intervention and 3 months after intervention

Method of measurement

ELISA

9

Description

Fasting blood sugar

Timepoint

Before intervention and 3 months after intervention

Method of measurement

Photometric

10

Description

LDL-C

Timepoint

Before intervention and 3 months after intervention

Method of measurement

undirected method with Friedewald

11

Description

Total cholesterol

Timepoint

Before intervention and 3 months after intervention

Method of measurement

Photometric

12

Description

HDL-C

Timepoint

Before intervention and 3 months after intervention

Method of measurement

Enzymatic

13

Description

Triglyceride

Timepoint

Before intervention and 3 months after intervention

Method of measurement

Photometric

14

Description

VLDL

Timepoint

Before intervention and 3 months after intervention

Method of measurement

TG/5

Secondary outcomes

1

Description

Hip circumference

Timepoint

Before intervention and 3 months after intervention

Method of measurement

Meter

2

Description

Waist circumference

Timepoint

Before intervention, 3 month after intervention

Method of measurement

Meter

3

Description

Blood pressure

Timepoint

Before intervention and 3 month after intervention

Method of measurement

Blood Pressure Monitor

4

Description

Body mass index

Timepoint

Before intervention and 3 months after intervention

Method of measurement

Body weight in kilograms divided by height squared in meters

5

Description

Body weight

Timepoint

Before intervention and 3 months after intervention

Method of measurement

Digital scale

Intervention groups

1

Description

Intervention group: daily consumption of 100 milligram coenzyme Q10 supplement for 3 months

Category

Treatment - Drugs

2

Description

Control group: daily consumption of 100 milligram starch for 3 months

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Gastroenterology Clinic of Imam Khomeini Hospital

Full name of responsible person

Farnaz Farsi

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Web page address

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, Ahvaz Jondishapur University Of Medical Sciences

Full name of responsible person

Majid Karandish

Street address

Ahvaz Jondishapur University Of Medical Sciences, Golestan Ave. Ahvaz

City

Ahvaz

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, Ahvaz Jondishapur 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

School of Paramedicine, Ahvaz Jondishapur University Of Medical Sciences

Full name of responsible person

Farnaz Farsi

Position

Ms. in Nutrition sciences

Other areas of specialty/work

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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