

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### The Effect of Six Weeks of Exercise Snacking and Turmeric Supplement on Hepatic Enzymes of People with Non-Alcoholic Fatty Liver Disease

#### Protocol summary

##### Study aim

To identify the effect of six weeks of exercise snacking and turmeric supplement on hepatic enzymes and fatty liver grade of people with non alcoholic fatty liver disease

##### Design

Clinical trial with control group, factorial design, single blinded, phase 3 on 40 patients. Randomization was done by an 8-sided dice.

##### Settings and conduct

After attending Dr. Samimi's office, participants will enter to the study, if they meet the requirements, and will be assigned to the either Exercise Snacking, Turmeric Supplement, Exercise Snacking and Turmeric Supplement, or Control group, randomly. They will be observed for six weeks and pretest and post test will be taken from them. This study is single blinded and the statistician and data analyst is not aware of the interventions.

##### Participants/Inclusion and exclusion criteria

The criteria for the study is being diagnosed with non alcoholic fatty liver disease and not having regular exercise and not taking turmeric supplement during a month prior to the starting date of the study.

##### Intervention groups

Intervention Group 1: Exercise Snacking: High intensity short intervals of bodyweight exercise lasting about 5 minutes, three times a day, three days a week for 6 weeks. The exercises are as follows: First day: Jumping Jacks, High Knee Taps, Burpee. Second day: Air Squats, Push Ups, Skater Hops. Third day: Seal Jacks, Squat Kicks, Calf Raises. Intervention Group 2: Turmeric Supplement: One curcumin tablet (450 milligrams) daily to be taken with food, Produced by Dineh Inc, for 6 weeks. Intervention Group 3: Exercise Snacking and Turmeric Supplement for 6 weeks. Control Group: Without any interventions

##### Main outcome variables

Alkaline phosphatase; Aspartate transaminase; Alanine

transaminase; Fatt liver grade

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20230225057528N1**

Registration date: **2023-04-23, 1402/02/03**

Registration timing: **registered\_while\_recruiting**

Last update: **2023-04-23, 1402/02/03**

Update count: **0**

##### Registration date

2023-04-23, 1402/02/03

##### Registrant information

##### Name

Behzad Gudarzi

##### Name of organization / entity

Imam Khomieni International University

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 6552 4357

##### Email address

s993172008@edu.ikiu.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2023-04-04, 1402/01/15

##### Expected recruitment end date

2023-05-20, 1402/02/30

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

**Trial completion date**

empty

**Scientific title**

The Effect of Six Weeks of Exercise Snacking and Turmeric Supplement on Hepatic Enzymes of People with Non-Alcoholic Fatty Liver Disease

**Public title**

The Effect of Exercise and Turmeric on non alcoholic Fatty Liver Disease

**Purpose**

Treatment

**Inclusion/Exclusion criteria****Inclusion criteria:**

People with non alcoholic fatty liver disease who have not taken turmeric supplement or regular exercise in the last month.

**Exclusion criteria:****Age**

No age limit

**Gender**

Both

**Phase**

3

**Groups that have been masked**

- Data analyser

**Sample size**

Target sample size: 40

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

An 8-sided dice will be used for randomization. two numbers will be assigned to each groups and the dice will be rolled for each patient, and given the number on the dice, the participants will be in one of the four groups of Exercise Snacking, Turmeric Supplement, Exercise Snacking and Turmeric Supplement, and Control.

**Blinding (investigator's opinion)**

Single blinded

**Blinding description**

Blood test analysis and sonogram will be sent to the the statistician via office clerk. The results will be entered to SPSS and they will be labeled as 1, 2, 3, 4 for three intervention groups and one control group (that only the clerk will know of) and they will be analyzed by the statistician. Therefore, the statistician is not aware of the allocation of the interventions to the participants.

**Placebo**

Not used

**Assignment**

Factorial

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

empty

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

Research ethics committees of Qazvin University of Medical Sciences

**Street address**

Research and Technology Department, Maveddat Street, First Alley, Shahid Beheshti boulevard

**City**

Qazvin

**Province**

Qazvin

**Postal code**

3415613911

**Approval date**

2023-02-22, 1401/12/03

**Ethics committee reference number**

IR.QUMS.REC.1401.322

**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**

Alanine transaminase

**Timepoint**

Prior to the intervention and one week after the intervention

**Method of measurement**

Blood test, Hitachi 912 Chemistry Analyzer

**2****Description**

Aspartate transaminase

**Timepoint**

Prior to the intervention and one week after the intervention

**Method of measurement**

Blood test, Hitachi 912 Chemistry Analyzer

**3****Description**

alkaline phosphatase

**Timepoint**

Prior to the intervention and one week after the intervention

**Method of measurement**

Blood test, Hitachi 912 Chemistry Analyzer

## 4

### **Description**

Fatty liver grade

### **Timepoint**

Prior to the intervention and one week after the intervention

### **Method of measurement**

Ultrasound

## **Secondary outcomes**

empty

## **Intervention groups**

### 1

#### **Description**

Intervention Group 1: Exercise Snacking: High intensity short intervals of bodyweight exercise lasting about 5 minutes, three times a day, three days a week for 6 weeks. The exercises are as follows: First day: Jumping Jacks, High Knee Taps, Burpee. Second day: Air Squats, Push Ups, Skater Hops. Third day: Seal Jacks, Squat Kicks, Calf Raises.

#### **Category**

Treatment - Drugs

### 2

#### **Description**

Intervention Group 2: Turmeric Supplement, (450 milligram) produced by Dineh Inc, One tablet daily with food for six weeks

#### **Category**

Lifestyle

### 3

#### **Description**

Intervention group 3: Turmeric Supplement and Exercise Snacking. Exercise Snacking: High intensity short intervals of bodyweight exercise lasting about 5 minutes, three times a day, three days a week for 6 weeks. The exercises are as follows: First day: Jumping Jacks, High Knee Taps, Burpee. Second day: Air Squats, Push Ups, Skater Hops. Third day: Seal Jacks, Squat Kicks, Calf Raises. Turmeric Supplement, (450 milligram) produced by Dineh Inc, One tablet daily with food for six weeks

#### **Category**

Lifestyle

### 4

#### **Description**

Control group: No intervention

#### **Category**

N/A

## **Recruitment centers**

## 1

### **Recruitment center**

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

Dr. Samimi's Office

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

Rasoul Samimi

#### **Street address**

Dr Farzam's Lab, Second Floor, South Naderi Street

#### **City**

Qazvin

#### **Province**

Qazvin

#### **Postal code**

3521456987

#### **Phone**

+98 28 3322 0100

#### **Email**

dr.samimi@qums.ac.ir

## **Sponsors / Funding sources**

### 1

#### **Sponsor**

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

Imam Khomeini International University

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

Majid Ghadiri

##### **Street address**

Imam Khomeini International University

##### **City**

Qazvin

##### **Province**

Qazvin

##### **Postal code**

۳۵۱۴۸۹۶۸۱۸

##### **Phone**

+98 28 3390 1144

##### **Email**

ghadiri@eng.ikiu.ac.ir

##### **Web page address**

<http://ikiu.ac.ir/members/?id=211&lang=0>

#### **Grant name**

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

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

Yes

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

Imam Khomeini International University

#### **Proportion provided by this source**

100

#### **Public or private sector**

Public

#### **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**

Imam Khomieni International University

**Full name of responsible person**

Behzad Gudarzi

**Position**

Student

**Latest degree**

Master

**Other areas of specialty/work**

Sport Medicine

**Street address**

No. 80, 13th Shaqayeq Street

**City**

Andhisheh Phase 1

**Province**

Tehran

**Postal code**

3354395917

**Phone**

+98 21 6552 4357

**Fax****Email**

s993172008@edu.ikiu.ac.ir

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## Person responsible for updating data

### Contact

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## Person responsible for scientific inquiries

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**Full name of responsible person**

Behzad Gudarzi

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**Latest degree**

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## Sharing plan

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

Undecided - It is not yet known if there will be a plan to make this available

**Study Protocol**

Undecided - It is not yet known if there will be 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**

Undecided - It is not yet known if there will be 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**

Not applicable

**Data Dictionary**

Not applicable