

Clinical Trial Protocol

Iranian Registry of Clinical Trials

21 Jul 2026

The effect of six weeks combined aerobic and resistance exercise training on some liver function parameters in Middle-aged men with non-alcoholic fatty liver disease.

Protocol summary

Summary

The purpose of this research is investigation of effect of six weeks combined aerobic and resistance training on some liver function parameters in Middle-aged men with non-alcoholic fatty liver disease. In this semi-experimental research, 16 Middle-aged men with non-alcoholic fatty liver disease randomly divide into two groups of exercise training and control. The exercise training program consisted of six weeks and three sessions per week combined of aerobic and resistance training. Body weight, BMI, blood levels of AST and ALT, Liver ultrasound, Vo2max, Waist-to-hip ratio, and body fat assessing at baseline and after six weeks. Data analyzing using analysis of covariance (ANCOVA) with dependent variable at baseline as covariate.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017011821258N2**

Registration date: **2017-02-19, 1395/12/01**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2017-02-19, 1395/12/01

Registrant information

Name

Hojjatollah Siavoshy

Name of organization / entity

The University of Nahavand

Country

Iran (Islamic Republic of)

Phone

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Email address

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Recruitment status

Recruitment complete

Funding source

Islamic Azad University of Boroujerd

Expected recruitment start date

2014-12-31, 1393/10/10

Expected recruitment end date

2016-01-01, 1394/10/11

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of six weeks combined aerobic and resistance exercise training on some liver function parameters in Middle-aged men with non-alcoholic fatty liver disease.

Public title

Effects of exercise on nonalcoholic fatty liver disease

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: 1. non-alcoholic fatty liver disease; 2. males; 3. having the age range of 45-30 years old.

Exclusion criteria: 1. under the age of 30 years ; 2. age over 45 years old; 3. patients with cardiovascular disease; 4. patients with high blood pressure; 5. patients who have studied interoperability; 6. patients with musculoskeletal disorders; 7. people with Medical ban to participate in sports activities; 8. alcohol consumption.

Age

From **30 years** old to **45 years** old

Gender

Male

Phase

N/A

Groups that have been masked*No information***Sample size**Target sample size: **16****Randomization (investigator's opinion)**

Randomized

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

Single blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

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

Hamedan University of Medical Sciences and Health Services

Street address

Hamedan University of Medical Sciences and Health Services

City

Hamedan

Postal code**Approval date**

2017-01-18, 1395/10/29

Ethics committee reference number

IR.UMSHA.REC.1395.466

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

Nonalcoholic fatty liver disease (NAFLD)

ICD-10 code

K76.0

ICD-10 code description

Nonalcoholic fatty liver disease (NAFLD)

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

Blood Alanine Aminotransferase Enzyme (ALT)

Timepoint

Baseline and final (6th week)

Method of measurement

Blood samples test

2**Description**

Blood Aspartate Aminotransferase Enzyme (AST)

Timepoint

Baseline and final (6th week)

Method of measurement

Blood samples test

3**Description**

Liver fats

Timepoint

Baseline and final (6th week)

Method of measurement

Liver ultrasound

4**Description**

Body weight

Timepoint

Baseline and final (6th week)

Method of measurement

Digital balance

5**Description**

Body mass index

Timepoint

Baseline and final (6th week)

Method of measurement

Weight (kg) divided by square of height (m)

6**Description**

Maximum oxygen uptake

Timepoint

Baseline and final (6th week)

Method of measurement

Rockport Fitness Walking Test

7**Description**

Waist-to-hip ratio (WHR)

Timepoint

Baseline and final (6th week)

Method of measurement

Waist circumference divided by hip circumference

8**Description**

Body fat percent

Timepoint

baseline and final (6th week)

Method of measurement

Measurement of skin fold thickness

Secondary outcomes

empty

Intervention groups**1****Description**

The intervention group participants performed six weeks and three sessions per week combined of aerobic and resistance training that Including: 60-90 minutes aerobic exercise With an intensity of 45-75% of maximum heart rate (At first, with 45 percent of maximum heart rate that gradually increased up to 75 percent of maximum heart rate) on the bike and elliptical trainer, and resistance training that Includes: 3 sets with 8-12 repetition, with 50% of one repetition maximum (At first, with 50 percent of one repetition maximum that gradually increased up to 75 percent of one repetition maximum) and bench press, squat, curl (to strengthen the both of upper and lower body), and knee extension.

Category

Lifestyle

2**Description**

The control group participants continued with their usual activities, which may have included leisure and sporting activities but did not include a progressive resistance and aerobic training program.

Category

Lifestyle

Recruitment centers**1****Recruitment center****Name of recruitment center**

Laboratories of Asadabad city in Hamadan Province

Full name of responsible person**Street address**

Laboratories of Asadabad city in Hamadan Province

City

Asadabad

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Islamic Azad University of Boroujerd

Full name of responsible person

Mohammad Ali Samavati Sharif

Street address

Islamic Azad University of Boroujerd

City

Boroujerd

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Islamic Azad University of Boroujerd

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**

Bu Ali Sina University of Hamadan

Full name of responsible person

Mohammad Ali Samavati Sharif

Position

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Other areas of specialty/work**Street address**

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Person responsible for updating data

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Phone

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