Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Sep 2026

The effect of combined aerobic exercise and barley β-glucan on lipid profile and blood glucose of women with diabet type two

Protocol summary

Summary

The main purpose of this study is to investigate the effect of combined aerobic exercise and barley β-glucan on lipid profile and blood glucose of women with diabet type two. Design and method of study: This study is an interventional and not blinded research. Twenty- four female volunteers, with age average 49 years fasting blood glucose between 110- 280 mg.dL-1 are selected purposefully and after completion of questionnaires, are selected and randomly (based on random numbers table) will be divided into three groups of 8 participants: aerobic training with diet, diet and control groups. The group diet use one number bread with 4 gram barley every day for 12 week. The aerobic training with diet group in addition to participate in weekly group sessions for diet (barley bread) took part advanced walking session aerobic training program with intensity 60-70 pertcent of maximal heart rate; 2 to 3 times in week and the duration of each time was 20-60 minutes in 12 week. In the control group, activity is not performed regularly. Inclusion Criteria: Suffering from type 2 diabetes; blood glucose between 110- 280 mg.dL-1. Exclusion criteria: any acute disease during the study period; Absence from a training protocol session. Primary outcome: the blood glucose, triglyceride, cholesterol, LDL and HDL will be evaluated 24 hours before and 48 hours after training program.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017041933542N1**
Registration date: **2017-11-08, 1396/08/17**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2017-11-08, 1396/08/17

Registrant information

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Fatemeh Mokhtari
Name of organization / entity
University of Isfahan
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Iran (Islamic Republic of)
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Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Isfahan University

Expected recruitment start date

2012-12-05, 1391/09/15

Expected recruitment end date

2013-03-05, 1391/12/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of combined aerobic exercise and barley β-glucan on lipid profile and blood glucose of women with diabet type two

Public title

Effects of exercise and consumption of barley bread on type 2 diabetes

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion Criteria: suffering from type 2 diabetes; blood glucose between 110- 280 mg.dL-1 Exclusion criteria: any acute disease during the study period; Absence from a training protocol session

Age
From **35 years** old to **50 years** old

Gender
Female

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **24**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics Committee of Esfahan university

Street address
Isfahan University, Hezar jarib St, Isfahan

City
Esfahan

Postal code

Approval date
2012-11-30, 1391/09/10

Ethics committee reference number
IR.MUI.REC.1391.4.001

Health conditions studied

1

Description of health condition studied
Type 2 diabetes

ICD-10 code
E11

ICD-10 code description
Non-insulin-dependent diabetes mellitus

Primary outcomes

1

Description
Glucose blood

Timepoint
Before and after 12 weeks of intervention

Method of measurement
Blood test

2

Description
Lipid profiles (TG, TC, HDL-C and LDL-C)

Timepoint
Before and after 12 weeks of intervention

Method of measurement
Blood test

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group 1: The aerobic training with diet group in addition to participate in weekly group sessions for diet (barley bread) took part advanced walking session aerobic training program with intensity 60-70 pertcent of maximal heart rate; 2 to 3 times in week and the duration of each time was 20-60 minutes in 12 week.

Category
Other

2

Description
Intervention group 2: The group diet use one number bread with 4 gram barley every day for 12 week.

Category
Other

3

Description
Control group: In the control group, activity is not performed regularly.

Category
Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Charity of Hazrat Vale Asr

Full name of responsible person
Fatemeh Mokhtari

Street address
Jabal Ameli St, Kozeh Square, khomeini Shahr

City
Khomeini Shahr

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice chancellor for research, Esfahan University
Full name of responsible person
Dr Fahimeh Esfarjani
Street address
Isfahan University, Hezar jarib St, Isfahan
City
Esfahan
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, Esfahan University
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
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Web page address

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