

Clinical Trial Protocol

Iranian Registry of Clinical Trials

20 Jun 2026

Evaluation of effect of aerobic exercise on the leptin/adiponectin ratio in COPD patients

Protocol summary

Study aim

evaluation of effect of aerobic exercise on the leptin/adiponectin ratio in COPD patients in Kerman If aerobic exercise activity increases the Leptin/Adiponectin ratio and respiratory function in patients with COPD, regular aerobic exercise can be recommended to improve respiratory function in these patients.

Design

This study was conducted on 22 patients with COPD, patients randomly divided into two groups of 11 people. Control group and sports activities group.

Settings and conduct

The program for aerobic exercise in this study uses Treadmill, 3 times per week for 8 weeks, and the duration of physical activity per session is between 30 and 40 minutes based on the patient's ability. Prior to each patient, an incremental test is performed During exercise, SaO₂ patients are continuously controlled and in the event of fatigue and inability of the patient to interrupt exercise. If the SaO₂ drops to less than 88%, the patient receives oxygen and if the hypoxia is not corrected, the activity is discontinued and the patient is excluded from the study. The blood sample was taken before and after exercise, and the Leptin and Adiponectin levels were measured and Leptin/Adiponectin ratio was measured and compared before and after exercise.

Participants/Inclusion and exclusion criteria

Patients with COPD and body mass index of 19 to 24 non-patients with other medical problems, such as heart disease, including myocardial infarction, myocardial ischemia, cardiac arrhythmia, chronic diseases of the liver, kidney, digestive, musculoskeletal, and central nervous system.

Intervention groups

control group: with out sport activity Sport activity group: treadmill is used 3 times a week for 8 weeks and lasts for 30 to 40 minutes depending on the patient's

ability.

Main outcome variables

Adiponectin ; Leptin

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190127042514N1**

Registration date: **2019-03-28, 1398/01/08**

Registration timing: **retrospective**

Last update: **2019-03-28, 1398/01/08**

Update count: **0**

Registration date

2019-03-28, 1398/01/08

Registrant information

Name

Halimeh Kameshki

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 34 3281 8065

Email address

halimeh.kameshki@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-11-22, 1397/09/01

Expected recruitment end date

2018-12-22, 1397/10/01

Actual recruitment start date

2018-11-22, 1397/09/01

Actual recruitment end date

2019-01-21, 1397/11/01
Trial completion date
2019-09-21, 1398/06/30

Scientific title
Evaluation of effect of aerobic exercise on the leptin/adiponectin ratio in COPD patients

Public title
Effect of aerobic exercise on the leptin/adiponectin ratio

Purpose
Supportive

Inclusion/Exclusion criteria
Inclusion criteria:
COPD patient BMI:19-24
Exclusion criteria:
Cardiovascular diseases include recent myocardial infarction, myocardial ischemia, cardiac arrhythmia), chronic liver diseases kidney diseases digestive diseases musculoskeletal, and central nervous system disorders

Age
From **40 years** old to **60 years** old

Gender
Male

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **22**
Actual sample size reached: **22**

Randomization (investigator's opinion)
N/A

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 Kerman University of Medical Sciences

Street address

Ibn Sina Ave., Jahad Blvd

City

kerman

Province

Kerman

Postal code

7619813159

Approval date

2019-03-18, 1397/12/27

Ethics committee reference number

IR.KMU.AH.REC.1397.173

Health conditions studied

1

Description of health condition studied

Chronic Obstructive Pulmonary Disease

ICD-10 code

J44

ICD-10 code description

Other chronic obstructive pulmonary disease

Primary outcomes

1

Description

serum Adiponectin levels

Timepoint

Blood samples were taken from patients before and after exercise, and their Adiponectin levels were measured and Leptin/Adiponectin ratios measured and compared before and after exercise.

Method of measurement

blood sample

2

Description

serum leptin levels

Timepoint

Blood samples were taken from patients before and after exercise, and their leptin levels were measured and Leptin/Adiponectin ratios measured and compared before and after exercise.

Method of measurement

blood sample

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: The program for aerobic exercise in this study is using treadmill 3 times per week for 8 weeks and the duration of physical activity per session is between 30 and 40 minutes based on the patient's ability.

Category

Rehabilitation

2

Description

Control group: No sporting intervention

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Afzalipour Hospital

Full name of responsible person

Dr Rostam Yazdani

Street address

Afzalipour Hospital, Emam Khomeini Highway

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Province

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Postal code

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Phone

+98 34 3132 8000

Email

dr Yazdani@yahoo.com

Web page address

<http://www.kmu.ac.ir/fa/ah>

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Kerman University of Medical Sciences

Full name of responsible person

Dr Davoud Kalanter

Street address

Ibn Sina Ave ,Jahad Blvd

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13555-76169

Phone

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Email

a.alinaghi.langari@gmail.com

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Kerman University of Medical Sciences

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

Kerman University of Medical Sciences

Full name of responsible person

Dr Rostam Yazdani

Position

Consultant

Latest degree

Subspecialist

Other areas of specialty/work

Internal Medicine

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Latest degree

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Other areas of specialty/work

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Email

Person responsible for updating data

Contact

Name of organization / entity

Kerman University of Medical Sciences

Full name of responsible person

Ahmad Alinaghi Langari

Position

Student

Latest degree

A Level or less

Other areas of specialty/work

Internal Medicine

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Email

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document
article**When the data will become available and for how long**

Get started since 1399

To whom data/document is available

For researchers at university institutes

Under which criteria data/document could be used

In order to facilitate future research

From where data/document is obtainable

dr yazdani

What processes are involved for a request to access data/document

Research Council Letter

Comments