

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jul 2026

Effect of online aerobic and breathing exercises on serum level of lysine and ornithine in Chronic Obstructive Pulmonary Disease Patients

Protocol summary

Study aim

Investigating the effect of telerehabilitation on amino acid metabolism

Design

A prospective pre-experimental design based on one group pre-test and post-test

Settings and conduct

Patients with COPD undergo regular online aerobic supervised exercises for eight weeks, three times a week, 60 minutes per session with moderate intensity. Serum levels of lysine and ornithine in arterial plasma and physical fitness parameters are measured before and after the intervention in each patient.

Participants/Inclusion and exclusion criteria

1. Men patients with COPD
2. Providing informed consent
3. Absence of special disease and recent surgery and hospitalization

Intervention groups

8-weeks aerobic and breathing exercises through online platforms

Main outcome variables

Serum levels of lysine and ornithine

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20201205049609N1**

Registration date: **2023-07-11, 1402/04/20**

Registration timing: **retrospective**

Last update: **2023-07-11, 1402/04/20**

Update count: **0**

Registration date

2023-07-11, 1402/04/20

Registrant information

Name

Nazanin Shahabi Nezhad

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 34 3212 1282

Email address

n.shahabi@kmu.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-01-01, 1400/10/11

Expected recruitment end date

2022-07-23, 1401/05/01

Actual recruitment start date

2022-01-21, 1400/11/01

Actual recruitment end date

2022-06-20, 1401/03/30

Trial completion date

empty

Scientific title

Effect of online aerobic and breathing exercises on serum level of lysine and ornithine in Chronic Obstructive Pulmonary Disease Patients

Public title

Investigating the effect of online exercise training on the serum level of amino acids

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Male COPD patients Stable condition

Exclusion criteria:

Age

From **40 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 24

Actual sample size reached: 24

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Single

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

Ebn-e-Sina St.,Jahad Blvd., Kernan,Iran

City

Kerman

Province

Kermanshah

Postal code

7619813159

Approval date

2022-02-22, 1400/12/03

Ethics committee reference number

IR.KMU.AH.REC.1400.362

Health conditions studied

1

Description of health condition studied

Chronic Obstructive Pulmonary Disease Patients (copd)

ICD-10 code

Z82.5

ICD-10 code description

Family history of asthma and other chronic lower respiratory diseases

Primary outcomes

1

Description

serum level of amino acid

Timepoint

Before and after 8 weeks of intervention

Method of measurement

high-performance liquid chromatography

Secondary outcomes

1

Description

Physical fitness parameters

Timepoint

Before and after 8 weeks of intervention

Method of measurement

fitness tests

Intervention groups

1

Description

Intervention group: male COPD patients Selected patients with Chronic Obstructive Pulmonary Disease (COPD) undergo regular online aerobic supervised exercises for eight weeks, three times a week, 60 minutes per session with moderate intensity. The exercise focuses on diaphragmatic strengthening breathing which is called "Diaphragmatic Breathing Exercise". Serum levels of lysine and ornithine in arterial plasma, anthropometric parameters, and physical fitness parameters will analyze before and after the intervention in each patient. The amino acid concentrations are measured by ion-exchange, high-pressure liquid chromatography with fluorometric detection.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Afzalipour hospital

Full name of responsible person

Rostam Yazdani

Street address

Imam Khomeini Highway, Next to the Shahid bahonar uni, Afzalipor medical education center, Kerman, Iran

City

Kerman

Province

Kerman

Postal code

7616913355

Phone

+98 34 3132 8000

Email

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Kerman University of Medical Sciences

Full name of responsible person

Rostam yazdani

Street address

Kerman University of Medical Sciences, Medical University Campus, Haft-Bagh Highway, Kerman, Iran

City

Kerman

Province

Kerman

Postal code

7616913555

Phone

+98 34 3132 5829

Email

VCR@KMU.AC.IR

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

Rostam Yazdani

Position

Associate professor

Latest degree

Subspecialist

Other areas of specialty/work

Internal Medicine

Street address

Imam Khomeini Highway, Next to Shahid Bahonar University, Afzalipur Medical Education Center, Kerman, Iran

City

Kerman

Province

Kerman

Postal code

7616913355

Phone

31328000

Email

drryazdani@yahoo.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

Kerman University of Medical Sciences

Full name of responsible person

Rostam Yazdani

Position

Associate professor

Latest degree

Subspecialist

Other areas of specialty/work

Internal Medicine

Street address

Imam Khomeini Highway, Next to Shahid Bahonar University, Afzalipur Medical Education Center, Kerman, Iran

City

Kerman

Province

Kerman

Postal code

7616913355

Phone

31328000

Email

drryazdani@yahoo.com

Person responsible for updating data

Contact

Name of organization / entity

Kerman University of Medical Sciences

Full name of responsible person

Rostam Yazdani

Position

Associate professor

Latest degree

Subspecialist

Other areas of specialty/work

Internal Medicine

Street address

Imam Khomeini Highway, Next to Shahid Bahonar University, Afzalipur Medical Education Center, Kerman, Iran

City

Kerman

Province

Kerman

Postal code

7616913355

Phone

31328000

Email

drryazdani@yahoo.com

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

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

Data Dictionary

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