

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

The effect of eight weeks of selected aerobic and resistance training on myokine profile of patients improved from COVID-19

Protocol summary

Study aim

Examining the impact of eight weeks of selected aerobic and resistance training on myokine profile of patients improved from COVID-19

Design

Clinical trial has three groups of selected aerobic exercises, selected resistance exercises and control group

Settings and conduct

Among the improved female patients from Covid 19 who declare their readiness by recall, 33 people were selected based on inclusion criteria and voluntarily and in a simple random method in three groups of selected aerobic exercises, selected resistance training groups. And will be in the control group. The aerobic training group performed exercises with an intensity of 50 to 70% of the maximum oxygen consumption and the resistance training group performed exercises with an intensity of 40 to 75% of a maximum repetition, for 8 weeks and three sessions per week located in the gym of Islamic Azad University, Abadan Branch will run. In order to determine the levels of research variables, all subjects will be present in the laboratory between 8 am and 10 am the day before the start of the exercise program to take a blood sample. The training groups will then participate in the training protocol. 48 hours After the last training session, all subjects will participate in blood sampling in the same pre-test conditions.

Participants/Inclusion and exclusion criteria

Inclusion criteria: recovered individuals from COVID-19; Women between the ages of 20 and 45; Non-consumption of alcohol and tobacco; No other medical problems. Exclusion criteria: pregnancy, exercise during the past year and taking medication

Intervention groups

Aerobic exercise group: Exercise with an intensity of 50 to 70% of maximum heart rate, Resistance exercise group: Exercise with an intensity of 40 to 75% of a maximum repetition and control group: None of these

interventions receives exercise.

Main outcome variables

Irisin: FGF21 and follistatin

General information

Reason for update

Change in sampling method

Acronym

IRCT registration information

IRCT registration number: **IRCT20220209053982N1**

Registration date: **2022-03-14, 1400/12/23**

Registration timing: **prospective**

Last update: **2022-07-02, 1401/04/11**

Update count: **2**

Registration date

2022-03-14, 1400/12/23

Registrant information

Name

Parisa Amiri farsani

Name of organization / entity

Islamic Azad University, Abadan Branch

Country

Iran (Islamic Republic of)

Phone

+98 61 5353 1938

Email address

parisaamirif@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-04-09, 1401/01/20

Expected recruitment end date

2022-04-16, 1401/01/27

Actual recruitment start date

empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
The effect of eight weeks of selected aerobic and resistance training on myokine profile of patients improved from COVID-19

Public title
"The effect of aerobic and resistance training on patients improved from COVID-19"

Purpose
Supportive

Inclusion/Exclusion criteria
Inclusion criteria:
People recovering from COVID-19 Women in the age range of 20 to 45 years No other medical problems including cardiovascular disease, chronic liver, kidney, gastrointestinal disease, immune deficiency, chronic inflammatory disease and metabolic diseases Lack of muscle, joint and orthopedic problems that prevent exercise
Exclusion criteria:
Pregnancy Having been active in sports for the past year taking medication

Age
From **20 years** old to **45 years** old

Gender
Female

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **33**

Randomization (investigator's opinion)
Randomized

Randomization description
First, in Abadan and Khorramshahr counties, and then among the people who announce their readiness, 33 people are selected voluntarily based on the inclusion criteria and are randomly divided into three groups. In the simple random method, each person is assigned a number, then the folded sheets, which include the number of each person, are placed in a container, and based on the lottery, the above numbers are arranged in three groups of selected aerobic exercises (11 people).), Selected resistance exercises (11 people) and the control group (11 people).

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Other

Other design features
First, the sample individuals are selected voluntarily based on the inclusion criteria and then randomly

divided into three groups: aerobic training, resistance training and control.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Abadan University of Medical Sciences

Street address

The beginning of 30 meters of Zolfaghari

City

Abadan

Province

Khuzestan

Postal code

6319811154

Approval date

2022-02-06, 1400/11/17

Ethics committee reference number

IR.ABADANUMS.REC.1400.152

Health conditions studied

1

Description of health condition studied

COVID-19

ICD-10 code

U07.1

ICD-10 code description

COVID-19 disease

Primary outcomes

1

Description

Plasma levels of irisin

Timepoint

One day before the start of training protocols and forty-eight hours after the last training session

Method of measurement

Special irisin measurement kit

2

Description

Plasma levels of FGF21

Timepoint

One day before the start of training protocols and forty-eight hours after the last training session

Method of measurement

Special FGF21 measurement kit

3

Description

Plasma levels of folistatin

Timepoint

One day before the start of training protocols and forty-eight hours after the last training session

Method of measurement

Special follicatin measurement kit

Secondary outcomes

1

Description

Body mass index: It is a suitable measure for estimating the health of a person's weight according to height.

Timepoint

Before and after the intervention

Method of measurement

By calculating height and weight

2

Description

Maximum oxygen consumption: is the maximum amount of oxygen consumed by a person per kilogram of body weight in one minute.

Timepoint

Before and after the intervention

Method of measurement

Rockport Walk Test

Intervention groups

1

Description

Aerobic exercise group: Exercises including running with an intensity of 50 to 70% of maximum heart rate, three sessions per week for eight weeks located in the gym of the Islamic Azad University, Abadan Branch.

Category

Rehabilitation

2

Description

Resistance training group: Exercises including eight movements of chest press, squat, forearm, leg press, back arm, front thigh, boat and back with intensity of 40 to 75% of a maximum repetition, three sessions per week for eight weeks in the gym Islamic Azad University, Abadan Branch will be implemented.

Category

Rehabilitation

3

Description

Control group: does not receive any of these training interventions and their status will be followed up by phone and in person.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Improved patients from Kovid 19 of Abadan and Khorramshahr counties who announce their readiness by

Full name of responsible person

Parisa Amiri Farsani

Street address

Khorramshahr University of Marine Sciences and Technology

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Abadan University of Medical Sciences

Full name of responsible person

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Grant name

Grant code / Reference number

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

Yes

Title of funding source

Abadan 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

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1477893855

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Person responsible for general inquiries**Contact****Name of organization / entity**

Islamic Azad University, Science and Research Branch of Tehran

Full name of responsible person

Parisa Amiri Farsani

Position

Researcher

Latest degree

Master

Other areas of specialty/work

Sport physiology

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Tehran

Province

Tehran

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