Clinical Trial Protocol
Iranian Registry of Clinical Trials

02 Nov 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 myokin 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 folistatin

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

Khouzestan

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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Abadan and Khorramshahr
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Khouzestan
Postal code
6316953111
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Email
parisaamirif@yahoo.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Abadan University of Medical Sciences
Full name of responsible person
Massoud Torabpour
Street address
The beginning of 30 meters of Zolfaghari
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Abadan
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6319811154
Phone
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Email
info@abadanums.ac.ir
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

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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No. 16, Arghavan Alley, Professors' Alley, University of Marine Sciences and Technology, Ali Ibn Abitaleb Boulevard
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Person responsible for updating data

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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