Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

Effect of aerobic exercise on cardiorespiratory indexes after discharge in patients improved from Covid-19: a randomized clinical trial

Protocol summary

Study aim
To assess the effect of aerobic exercise on cardiorespiratory indexes after discharge in patients improved from Covid-19

Design
This is a randomized clinical trial, in which 60 eligible patients will be randomly assigned to the intervention and control groups

Settings and conduct
The eligible patients with Covid-19 referring to the Besat Hospital in Hamadan city during the study period will be enrolled in the trial and will be randomly assigned to the intervention and control groups through the drawing of lots.

Participants/Inclusion and exclusion criteria
Inclusion criteria: Age of 18 to 65 years; Discharge after affected with Covid-19; Exclusion criteria: Cardiopulmonary diseases; Any physical disorder

Intervention groups
Intervention group: Post discharge care plus aerobic exercise at home (including stretching movements; sit-ups; push-up; roping) 40 minutes daily for 6 weeks
Control group: Just routine post discharge care

Main outcome variables
Primary outcome: Pulse rate; severity of dyspnea; arterial blood oxygen saturation; fatigue rate

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20120215009014N401**
Registration date: **2021-07-11, 1400/04/20**
Registration timing: **registered_while_recruiting**

Last update: **2021-07-11, 1400/04/20**
Update count: **0**

Registration date
2021-07-11, 1400/04/20

Registrant information

Name
Jalal Poorolajal

Name of organization / entity
Department of Epidemiology & Biostatistics Hamadan University of Medical Sciences

Country
Iran (Islamic Republic of)

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2021-07-06, 1400/04/15

Expected recruitment end date
2021-10-07, 1400/07/15

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Effect of aerobic exercise on cardiorespiratory indexes after discharge in patients improved from Covid-19: a randomized clinical trial

Public title
Effect of aerobic exercise on cardiorespiratory indexes after discharge in patients improved from Covid-19

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Age of 18 to 65 years; Discharge after affected with Covid-19;
Exclusion criteria:
Cardiopulmonary diseases Any physical disorder

Age
From **18 years** old to **65 years** old

Gender
Both

Phase
3

Groups that have been masked
No information

Sample size
Target sample size: **60**

Randomization (investigator's opinion)
Randomized

Randomization description
Random assignment of the patients to the intervention and control groups through the drawing of lots with replacement through simple randomization. To do this, we prepare two sheets and write "intervention" on one sheet and "control" on another. Then, by referring each patient, one of the sheets will be randomly taken and the patient will be assigned to the intervention or control group.

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 Hamadan University of Medical Sciences

Street address
Vice-chancellor for Research and Technology, Hamadan University of Medical Sciences, Shahid Fahmideh Ave

City
Hamadan

Province
Hamadan

Postal code
6517838695

Approval date
2021-06-12, 1400/03/22

Ethics committee reference number
IR.UMSHA.REC.1400.243

Health conditions studied

1

Description of health condition studied
Covid-19

ICD-10 code
U07.1

ICD-10 code description
Covid-19

Primary outcomes

1

Description
Pulse rate

Timepoint
Before intervention and 6 weeks after that

Method of measurement
Using MWT6 device (manufactured by COSMED Co., Italy)

2

Description
Severity of dyspnea

Timepoint
Before intervention and 6 weeks after that

Method of measurement
Using MWT6 device (manufactured by COSMED Co., Italy)

3

Description
Arterial blood oxygen saturation

Timepoint
Before intervention and 6 weeks after that

Method of measurement
Using MWT6 device (manufactured by COSMED Co., Italy)

4

Description
Fatigue rate

Timepoint
Before intervention and 6 weeks after that

Method of measurement
Using Borg index (Borg scale)

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Post discharge care plus aerobic

exercise at home (including stretching movements; sit-ups; push-up; roping) 40 minutes daily for 6 weeks

Category

Treatment - Other

2

Description

Control group: Just routine post discharge care

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Besat Hospital in Hamadan city

Full name of responsible person

Fahimeh Einabadi

Street address

School of Medicine, Hamadan University of Medical Sciences, Shahid Fahmideh Ave.

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Hamedan University of Medical Sciences

Full name of responsible person

Dr. Saeid Bashirian

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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

Hamedan 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

Hamedan University of Medical Sciences

Full name of responsible person

Fahimeh Einabadi

Position

Student of Physiology of Health

Latest degree

Master

Other areas of specialty/work

Physiology

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Hamedan University of Medical Sciences

Full name of responsible person

Dr. Ebrahim Nadi

Position

Internist

Latest degree

Medical doctor

Other areas of specialty/work

Internal Medicine

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Person responsible for updating data

Contact
Name of organization / entity
Hamedan University of Medical Sciences
Full name of responsible person
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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