# Clinical Trial Protocol
# Iranian Registry of Clinical Trials

13 Nov 2026

## Effects of a Diaphragmatic Stretching on Pulmonary Functions, Exercise Tolerance and Quality's of Life in Covid-19 Survivors

## Protocol summary

**Study aim**
The aim of this study is to determine effectiveness of diaphragmatic stretching for improving pulmonary function, exercise tolerance and quality of life in Covid 19 survivors

**Design**
Quasi experimental study design

**Settings and conduct**
Subjects are single blinded

**Participants/Inclusion and exclusion criteria**
COVID-19 survivors (i.e., diagnosed with COVID-19, have had respiratory illness and discharged from the hospital 6 weeks ago) Aged 35 years or above Gender (Male and Female) No medical diagnosis of psychiatric illness Stated willingness to comply with all study procedures and availability for the duration of the study Ability of participant to understand and the willingness to sign a written informed consent document. Hemoglobin of 9.0 gm/dl or higher COVID-19 Survivor Group documented prior COVID-19 as evidenced by: At least 6 weeks ago since onset of COVID-19 symptoms and no fever for at least 1 week. Participants were excluded if they exhibited. Any person who experienced any back pain or who had experienced any type of illness in the past week were excluded from the study.(35) History of any of the following in the past 14 days: fever > 38.2 degrees Celsius; new or worsening respiratory symptoms (e.g. cough, dyspnea). Subjects were also excluded if they had received any manual therapy within the previous month.(35) Pregnancy Refusal to give consent

**Intervention groups**
Single group

**Main outcome variables**
Spirometry 6MWT Borg Scale SF8 questionnaire

## General information

**Reason for update**

**Acronym**

**IRCT registration information**
IRCT registration number: **IRCT20211224053506N1**
Registration date: **2022-01-19, 1400/10/29**
Registration timing: **retrospective**

Last update: **2022-01-19, 1400/10/29**
Update count: **0**

**Registration date**
2022-01-19, 1400/10/29

**Registrant information**

**Name**
Hafiza Syeda Farah Zahid

**Name of organization / entity**
Ripah international university lahore

**Country**
Pakistan

**Phone**
+92 310 6238453

**Email address**
farahzahid977@gmail.com

**Recruitment status**
**Recruitment complete**

**Funding source**

**Expected recruitment start date**
2021-07-10, 1400/04/19

**Expected recruitment end date**
2021-12-25, 1400/10/04

**Actual recruitment start date**
2021-08-05, 1400/05/14

**Actual recruitment end date**
2021-11-12, 1400/08/21

**Trial completion date**
2022-02-25, 1400/12/06

**Scientific title**
Effects of a Diaphragmatic Stretching on Pulmonary Functions, Exercise Tolerance and Quality's of Life in Covid-19 Survivors

**Public title**
Effect of stretching exercise of diaphragm on lung function
**Purpose**
Treatment
**Inclusion/Exclusion criteria**
**Inclusion criteria:**
COVID-19 survivors (i.e., diagnosed with COVID-19, have had respiratory illness and discharged from the hospital 6 weeks ago) No medical diagnosis of psychiatric illnessStated willingness to comply with all study procedures and availability for the duration of the studyAbility of participant to understand and the willingness to sign a written informed consent document.Hemoglobin of 9.0 gm/dl or higherCOVID-19 Survivor Group documented prior COVID-19 as evidenced by:At least 6 weeks ago since onset of COVID-19 symptoms and no fever for at least 1 week. Aged 35 years or above. Gender (Male and Female)
**Exclusion criteria:**
Participants were excluded if they exhibited.Any person who experienced any back pain or who had experienced any type of illness in the past week were excluded from the study.(35)History of any of the following in the past 14 days: fever > 38.2 degrees Celsius; new or worsening respiratory symptoms (e.g. cough, dyspnea).Subjects were also excluded if they had received any manual therapy within the previous month.(35)Pregnancy Refusal to give consent
**Age**
From **35 years** old to **60 years** old
**Gender**
Both

**Phase**
N/A
**Groups that have been masked**

- Participant

**Sample size**
Target sample size: **53**
Actual sample size reached: **53**
**Randomization (investigator's opinion)**
Not randomized
**Randomization description**
**Blinding (investigator's opinion)**
Single blinded
**Blinding description**
No
**Placebo**
Not used
**Assignment**
Single
**Other design features**

## Secondary Ids

empty

## Ethics committees

**1**

**Ethics committee**
**Name of ethics committee**
Ethics committee of Riphah International University
**Street address**
qasoori chowk near jinnah chowk multan
**City**
lahore
**Postal code**
66000
**Approval date**
2021-07-03, 1400/04/12
**Ethics committee reference number**
022948

## Health conditions studied

**1**

**Description of health condition studied**
Covid 19 survivors
**ICD-10 code**
B97.2
**ICD-10 code description**
Coronavirus as the cause of diseases classified elsewhere

## Primary outcomes

**1**

**Description**
Spirometry
**Timepoint**
1st week, 9th week, 18th week of treatment
**Method of measurement**
spirometer

## Secondary outcomes

**1**

**Description**
6 minute walk test
**Timepoint**
1st week, 9th week and 18th week of treatment
**Method of measurement**
walk test

## Intervention groups

**1**

**Description**
Intervention group:
**Category**
Other

## Recruitment centers

**1**

**Recruitment center**
**Name of recruitment center**
Khawaja farid hospital multan
**Full name of responsible person**
Dr.Shazia
**Street address**
qasoori chowk near jinnah chowk multan
**City**
lahore
**Postal code**
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**Phone**
+92 61 6223119
**Email**
farahzahid977@gmail.com

## Sponsors / Funding sources

**1**

**Sponsor**
**Name of organization / entity**
Riphah international university
**Full name of responsible person**
Dr.Shakeel
**Street address**
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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**
Riphah international university
**Proportion provided by this source**
100
**Public or private sector**
Private
**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**
Riphah international university
**Full name of responsible person**
Dr.Shakeel
**Position**
head of department
**Latest degree**
Ph.D.
**Other areas of specialty/work**
Physiotherapy
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## Person responsible for scientific inquiries

**Contact**
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Qurat ul ain
**Position**
professor
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Master
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## Person responsible for updating data

**Contact**
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Riphah international university
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Farah zahid
**Position**
student
**Latest degree**
Bachelor
**Other areas of specialty/work**
Physiotherapy

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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**
No - There is not a plan to make this available
**Analytic Code**
Not applicable
**Data Dictionary**
Not applicable