Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of calisthenics exercise versus circuit training on pulmonary function, Cardiorespiratory fitness and chest expansion in chronic stroke patients

Protocol summary

Study aim
The aim of this study is to find the potential benefits of these exercises in promoting overall physical health and functional recovery in individuals who have experienced a stroke.

Design
Randomized Clinical Trial

Settings and conduct
Tariq Hospital Lahore

Participants/Inclusion and exclusion criteria
Inclusion Criteria • Age between 35-55 years • Both male and female gender • History of Ischemic Stroke • Patient with Hemiplegia • Patient 6 months after stroke consider chronic • Berg balance scale value greater than 45 • Hemodynamically stable • Stable medical and Musculoskelton condition allowing physical activity Exclusion Criteria • Stroke patient with flaccid paralysis • Cognitive Impairment • Patient with cardiothoracic surgery • Uncontrolled hypertension • Sever joints disease such as OA, RA and Gout. • Any other neurological disease • Chronic pulmonary disease like COPD

Intervention groups
Group A: Experimental Group will receive Calisthenics Exercises. Group B: Experiment Group will receive Circuit Tanning..

Main outcome variables
Cardiorespiratory Fitness Chest Expansion Pulmonary Functions

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20191117045462N17**
Registration date: **2024-07-20, 1403/04/30**
Registration timing: **prospective**

Last update: **2024-07-20, 1403/04/30**
Update count: **0**

Registration date
2024-07-20, 1403/04/30

Registrant information

Name
Wajeeha Zia

Name of organization / entity
Riphah International University

Country
Pakistan

Phone
+92 42 35126110

Email address
wajeeha_z@yahoo.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2024-08-01, 1403/05/11

Expected recruitment end date
2025-01-01, 1403/10/12

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Effects of calisthenics exercise versus circuit training on pulmonary function, Cardiorespiratory fitness and chest expansion in chronic stroke patients

Public title

Effects of calisthenics exercise versus circuit training on pulmonary function, Cardiorespiratory fitness and chest expansion in chronic stroke patients

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Age between 35-55 years Both male and female gender History of Ischemic Stroke Patient with Hemiplegia Patient 6 months after stroke consider chronic Berg balance scale value greater than 45 Hemodynamically stable Stable medical and Musculoskelton condition allowing physical activity

Exclusion criteria:
Stroke patient with flaccid paralysis Cognitive Impairment Patient with cardiothoracic surgery Uncontrolled hypertension Sever joints disease such as OA, RA and Gout Any other neurological disease Chronic pulmonary disease like COPD

Age
From **35 years** old to **55 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Investigator

Sample size
Target sample size: **66**

Randomization (investigator's opinion)
Randomized

Randomization description
Convenient sampling technique will be used to recruit the chronic stroke patients in the study and then they will be divided into two groups by simple random sampling through sealed opaque enveloped. Label as 1 group A and 2 for group b

Blinding (investigator's opinion)
Single blinded

Blinding description
Investigator will be blind and assessment will be done by 2nd therapist who will not be involved in treatment and data analysis

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ripah collage of rehabilitation and Allied health sciences

Street address
M block Gulberg 3

City
Lahore

Postal code
54660

Approval date
2024-01-07, 1402/10/17

Ethics committee reference number
RCR&AHS/REC/MS-CPPT

Health conditions studied

1

Description of health condition studied
Chronic Stroke Patients

ICD-10 code

ICD-10 code description
I67.9

Primary outcomes

1

Description
Pulmonary Functions

Timepoint
Pre and post Treatment

Method of measurement
Spirometry

2

Description
Cardiorespiratory fitness

Timepoint
pre and post treatment

Method of measurement
6 mint walk test

3

Description
chest expansion

Timepoint
pre and post treatment

Method of measurement
Cirtometry

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group:

Category

Rehabilitation

2

Description
Intervention group:
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Ripah collage of rehabiliation and allied health sciences
Full name of responsible person
Ahmed Javed
Street address
M block Gulberg 3
City
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Postal code
54660
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+92 314 4829984
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punjabian189@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Ripah International University
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?
No
Title of funding source
Person
Proportion provided by this source
1
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
Persons

Person responsible for general inquiries

Contact
Name of organization / entity
Ripah International University
Full name of responsible person
Muhammed Ahmed Javed
Position
Student
Latest degree
Master
Other areas of specialty/work
Physiotherapy
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD
no further information

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