

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Effects of Core Muscles Strengthening Exercises With Routine Physical Therapy on Trunk Balance and Functional Mobility in Stroke Patients: A Randomized Controlled Trial

#### Protocol summary

##### Study aim

To compare the effects of core muscles strengthening exercises with routine physical therapy on trunk balance and functional mobility in stroke patients.

##### Design

Single blinded, Randomized controlled trial

##### Settings and conduct

Mubarak Medical Complex

##### Participants/Inclusion and exclusion criteria

Inclusion Criteria: 1) Patients who has the first on set of ischemic stroke. 2) Age between 40-60 years. 3) Medically stable, understand and follow simple verbal instructions. 4) Both male and female with chronic stroke (6 months post stroke). 5) MMSE > 24 Exclusion Criteria: 1) Patients who could not communicate (severe aphasia). 2) Participants having neglect of paretic limb 3) Participants with severe spasticity (modified ash worth scale score >3). 4) Patient having visual and sensory deficit. 5) If patient had a neurological disease affecting balance other than stroke, such as cerebellar disease, Parkinson's disease or vestibule disease.

##### Intervention groups

All the participant who came to physiotherapy department was considered and screened for chronic phase of stroke. 74 patients were allotted in two groups i.e.; group A(RPT) and group B(RPT+ Core strengthening exercises) via lottery method, 37 in each group. Consider the inclusion and exclusion criteria before concerning them in study. Both groups will receive the routine physical therapy. Patient in A group will be treated by routine physical therapy and in B group with routine physical therapy plus core strengthening exercises. Dosage:- 30 minutes RPT in both groups and core strengthening exercises with 7-10 repetitions for 15-20 minutes with adequate rest interval in experimental group. □ Duration: - Four sessions/week (alternative days) and treatment last for 8 weeks.

#### Main outcome variables

1: Trunk Balance 2: Functional Mobility

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20211116053070N1**

Registration date: **2021-12-20, 1400/09/29**

Registration timing: **registered\_while\_recruiting**

Last update: **2021-12-20, 1400/09/29**

Update count: **0**

##### Registration date

2021-12-20, 1400/09/29

##### Registrant information

##### Name

Iqra Nadeem

##### Name of organization / entity

University of Sargodha

##### Country

Pakistan

##### Phone

+92 48 3219551

##### Email address

iqra.nadeem@uos.edu.pk

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2021-10-28, 1400/08/06

##### Expected recruitment end date

2022-04-28, 1401/02/08

##### Actual recruitment start date

empty

**Actual recruitment end date**

empty

**Trial completion date**

empty

**Scientific title**

Effects of Core Muscles Strengthening Exercises With Routine Physical Therapy on Trunk Balance and Functional Mobility in Stroke Patients: A Randomized Controlled Trial

**Public title**

Effects of Core Muscles Strengthening Exercises With Routine Physical Therapy on Trunk Balance and Functional Mobility in Stroke Patients: A Randomized Controlled Trial

**Purpose**

Treatment

**Inclusion/Exclusion criteria****Inclusion criteria:**

Patients who has the first on set of ischemic stroke Age between 40-60 years. Medically stable, understand and follow simple verbal instructions Both male and female with chronic stroke (6 months post stroke). MMSE > 24

**Exclusion criteria:**

Patients who could not communicate (severe aphasia). Participants having neglect of paretic limb Participants with severe spasticity (modified ash worth scale score >3) Patient having visual and sensory deficit If patient had a neurological disease affecting balance other than stroke, such as cerebellar disease, Parkinson's disease or vestibular disease

**Age**

From **40 years** old to **60 years** old

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

- Participant
- Outcome assessor

**Sample size**

Target sample size: **74**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

A total no. of 74 participants suffering from stroke fulfilling the inclusion criteria will be recruited to volunteer in this randomized controlled study. Subjects will be randomized into two groups using lottery method.

**Blinding (investigator's opinion)**

Single blinded

**Blinding description**

it will be a single blinded study in which participant/ patients are kept blind for treatment techniques and patients are blind about which group they belong either intervention or control group.

**Placebo**

Not used

**Assignment**

Single

**Other design features****Secondary Ids**

empty

**Ethics committees****1****Ethics committee****Name of ethics committee**

Ethics committee of University of Lahore

**Street address**

House no.85, Umer block Sargodha homes main Fsd road near 49 tail Sargodha

**City**

Sargodha

**Postal code**

40100

**Approval date**

2021-10-27, 1400/08/05

**Ethics committee reference number**

IRB-UOL-FAHS/1007/2021

**Health conditions studied****1****Description of health condition studied**

Stroke population

**ICD-10 code****ICD-10 code description**

ischemic stroke, core strengthening exercise, trunk balance, functional mobility

**Primary outcomes****1****Description**

Trunk balance

**Timepoint**

8 weeks

**Method of measurement**

Trunk Impairment Scale

**Secondary outcomes****1****Description**

Functional Mobility

**Timepoint**

8 weeks

**Method of measurement**

Timed up and Go Test

**Intervention groups**

## 1

### Description

Intervention group: Routine physical therapy + core muscle strengthening exercises for 15-20 minutes (4 sessions per week) for 8 weeks

### Category

Rehabilitation

## 2

### Description

Control group: group A : Routine physical therapy for 30 minutes (4 sessions per week) for 8 weeks

### Category

Rehabilitation

## Recruitment centers

## 1

### Recruitment center

#### Name of recruitment center

Mubarak medical complex, Sargodha

#### Full name of responsible person

Iqra Nadeem

#### Street address

House no. 85, Umer block Sargodha homes Sargodha

#### City

Sargodha

#### Postal code

40100

#### Phone

+92 48 9230783

#### Fax

#### Email

iqranadeem79@yahoo.com

#### Web page address

## Sponsors / Funding sources

## 1

### Sponsor

#### Name of organization / entity

University of Lahore, Lahore

#### Full name of responsible person

Dr sara khawar Butt

#### Street address

Defense Road Campus University College of Medicine & Dentistry: 1-Km, Defence Road, Bhupatian Chowk, Off Raiwind Road, Lahore

#### City

Sargodha

#### Postal code

54792

#### Phone

+92 42 32300865

#### Email

sara.khawar@uipt.uol.edu.pk

#### Grant name

iqra nadeem

#### Grant code / Reference number

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

No

#### Title of funding source

academic support only

#### Proportion provided by this source

20

#### 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

Mubarak medical complex, Sargodha

#### Full name of responsible person

Iqra Nadeem

#### Position

Physiotherapist

#### Latest degree

Master

#### Other areas of specialty/work

Physiotherapy

#### Street address

house no. 85, Umer block Sargodha homes main fsd road near 49 tail Sargodha

#### City

Sargodha

#### Province

Punjab

#### Postal code

40100

#### Phone

+92 324 6461428

#### Email

iqra.nadeem@uos.edu.pk

## Person responsible for scientific inquiries

### Contact

#### Name of organization / entity

University of Lahore, Lahore

#### Full name of responsible person

Dr. Sarah khawar Butt

#### Position

Assistant professor

#### Latest degree

Specialist

#### Other areas of specialty/work

Physiotherapy

#### Street address

Defense Road Campus University College of Medicine & Dentistry: 1-Km, Defence Road, Bhupatian Chowk,

Off Raiwind Road, Lahore

**City**

Lahore

**Province**

Punjab

**Postal code**

54792

**Phone**

+92 42 35963424

**Email**

sara.khawar@uipt.uol.edu.pk

## Person responsible for updating data

**Contact**

**Name of organization / entity**

University of Lahore, Lahore

**Full name of responsible person**

Iqra Nadeem

**Position**

physiotherapist

**Latest degree**

Master

**Other areas of specialty/work**

Physiotherapy

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House # 85, umer block sargodha homes main  
Faisalabad 49 road tail sargodha

**City**

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**Province**

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**Postal code**

40100

**Phone**

+92 48 9230783

**Email**

iqra.nadeem@uos.edu.pk

## Sharing plan

**Deidentified Individual Participant Data Set (IPD)**

Yes - There is 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**

Yes - There is a plan to make this available

**Informed Consent Form**

Yes - There is a plan to make this available

**Clinical Study Report**

Yes - There is a plan to make this available

**Analytic Code**

Yes - There is a plan to make this available

**Data Dictionary**

Undecided - It is not yet known if there will be a plan to make this available

**Title and more details about the data/document**

EFFECTS OF CORE MUSCLES STRENGTHENING  
EXERCISES WITH ROUTINE PHYSICAL THERAPY ON  
TRUNK BALANCE AND FUNCTIONAL MOBILITY IN STROKE  
PATIENTS: A RANDOMIZED CONTROLLED TRIAL

**When the data will become available and for how long**

Study is completed after 6 months and become available after its publication

**To whom data/document is available**

person in academic institute. Patient data will not be shown

**Under which criteria data/document could be used**

under the usage with terms in which journal is accessed /processed for publication it could be used in request

**From where data/document is obtainable**

+923246461428 from the University office and Responsible supervisor and from journal we will process in future

**What processes are involved for a request to access data/document**

can be on call or mail It will be only used in confidential way for improving research and benefit of humanity

**Comments**

data can be provided on request