

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Comparative effects of Carlo Perfetti Method and Proprioceptive Neuromuscular Facilitation technique on upper limb motor function in patients with subacute stroke

#### Protocol summary

##### Study aim

To evaluate the effect of Carlo Perfetti Method on improving the upper extremity motor function in subacute stroke patients.

##### Design

The study design will be the Randomized clinical trial design

##### Settings and conduct

Allied Hospital Faisalabad, District Head Quarter Hospital Faisalabad and Faisal Hospital Faisalabad.

##### Participants/Inclusion and exclusion criteria

The inclusion criteria will be the patient age range from 40 to 80 years, will include both genders: male and female, Patients with Modified Ashworth scale value is 2, patients having Mini-mental scale score >24, the Motricity index score should be < 99 and MCA Stroke confirmed with MRI. The exclusion criteria will be the patients who are already seeking any physiotherapy treatment, Having any wound or inflammation on upper extremity, Unstable medical condition, Any peripheral nerve injury before stroke and Before stroke any upper limb musculoskeletal functional impairments.

##### Intervention groups

Group A will be treated by the Carlo Perfetti Method and Group B will be treated by the Proprioceptive Neuromuscular Facilitation technique (PNF).

##### Main outcome variables

Motor function of upper limb, Spasticity

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20230530058341N1**

Registration date: **2023-09-27, 1402/07/05**

Registration timing: **prospective**

Last update: **2023-09-27, 1402/07/05**

Update count: **0**

##### Registration date

2023-09-27, 1402/07/05

##### Registrant information

###### Name

Hafsa Naz

###### Name of organization / entity

The University of Faisalabad

###### Country

Pakistan

###### Phone

+92 41 8868326

###### Email address

clinical.trainer.339@tuf.edu.pk

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2023-09-28, 1402/07/06

##### Expected recruitment end date

2023-12-10, 1402/09/19

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Comparative effects of Carlo Perfetti Method and Proprioceptive Neuromuscular Facilitation technique on upper limb motor function in patients with subacute stroke

##### Public title

Comparative effects of Carlo Perfetti Method and

Proprioceptive Neuromuscular Facilitation technique on upper limb motor function in patients with subacute stroke

#### **Purpose**

Treatment

#### **Inclusion/Exclusion criteria**

##### **Inclusion criteria:**

Age range from 40 to 80 years Both genders: male and female Modified Ashworth scale 2 Mini-mental scale > 24 Motricity index scale < 99 MCA Stroke confirmed with MRI

##### **Exclusion criteria:**

Already seeking any physiotherapy treatment Having any wound or inflammation on upper extremity Unstable medical condition Any peripheral nerve injury Before stroke any upper limb musculoskeletal functional impairments

#### **Age**

From **40 years** old to **80 years** old

#### **Gender**

Both

#### **Phase**

3

#### **Groups that have been masked**

- Participant

#### **Sample size**

Target sample size: **32**

#### **Randomization (investigator's opinion)**

Randomized

#### **Randomization description**

Randomization will be done with Lottery method and by the help of computerized generator, allocations will be done to randomly allocate the participants in two groups.

#### **Blinding (investigator's opinion)**

Single blinded

#### **Blinding description**

Participants will not know if they will be allocated in Carlo Perfetti Method group or in Proprioceptive Neuromuscular Facilitation Technique group for the Treatment.

#### **Placebo**

Not used

#### **Assignment**

Parallel

#### **Other design features**

## **Secondary Ids**

empty

## **Ethics committees**

### **1**

#### **Ethics committee**

##### **Name of ethics committee**

Ethics Committee of The University of Faisalabad

##### **Street address**

West Canal Road, Faisalabad

##### **City**

Faisalabad

##### **Postal code**

37610

##### **Approval date**

2023-03-24, 1402/01/04

##### **Ethics committee reference number**

TUF/DR/SA/MSPP/2023/242

## **Health conditions studied**

### **1**

#### **Description of health condition studied**

Stroke

##### **ICD-10 code**

Z82.3

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

Family history of stroke

## **Primary outcomes**

### **1**

#### **Description**

Spasticity

#### **Timepoint**

At baseline, after second week of treatment, after fourth week of treatment, after sixth week of treatment, after eighth week of treatment and after tenth week of treatment

#### **Method of measurement**

Modified Ashworth Scale

## **Secondary outcomes**

### **1**

#### **Description**

Motor function of upper extremity

#### **Timepoint**

At baseline, after second week of treatment, after fourth week of treatment, after sixth week of treatment, after eighth week of treatment and after tenth week of treatment

#### **Method of measurement**

Motricity Index Scale

### **2**

#### **Description**

Arm motor performance and movement quality

#### **Timepoint**

At baseline, after second week of treatment, after fourth week of treatment, after sixth week of treatment, after eighth week of treatment and after tenth week of treatment

#### **Method of measurement**

Motor Evaluation Scale for Upper Extremity

## Intervention groups

### 1

#### Description

Intervention group: Carlo Perfetti Method; As part of the treatment process, the patient will be blindfolded and the physical therapist will begin to passively move the patient's involved limb. The therapist will then ask the patient to sense and guess the movement of the limb that will be performed by the therapist. To further enhance the rehabilitation process, the therapist will use a pattern of lines drawn on a page and will ask the patient to trace those lines with their hand, either actively or passively. This exercise will help to improve the patient's proprioception, which is their sense of body position and movement. By tracing the lines with their hand, the patient will be able to get a better sense of their limb's position and movement, which can be helpful in improving their coordination and motor function.

#### Category

Rehabilitation

### 2

#### Description

Intervention group: Proprioceptive Neuromuscular Facilitation Technique; In this group, the participants will be given the Rhythmic Initiation technique of Proprioceptive Neuromuscular Facilitation (PNF) technique. This technique will involve progressively transitioning from passive range of motion to active resisted movements of the limb. During the rehabilitation process, a series of movements will be performed, starting with voluntary relaxation and progressing to passive movements, active assisted and active resisted movements before finally transitioning to active movements. Verbal commands will be used to set the pace and rhythm of the movements, and light tracking will be incorporated during the resistive phase to facilitate movement. These exercises are designed to improve motor function and range of motion and are customized to meet the specific needs of the patient. Rhythmic initiation helps in the initiation of the motion and improve the coordination and sense of the motion.

#### Category

Rehabilitation

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Allied Hospital Faisalabad

##### Full name of responsible person

Hafsa Naz

##### Street address

Jail Road adjacent to Faisalabad Medical University,  
Near Sargodha Road, Faisalabad.

##### City

Faisalabad

##### Postal code

38800

##### Phone

+92 41 9210082

##### Fax

+92 41 9210079

##### Email

vcfmuf@gmail.com

##### Web page address

<https://pmc.edu.pk/S-Result.aspx>

### 2

#### Recruitment center

##### Name of recruitment center

District Headquarter Hospital

##### Full name of responsible person

Hafsa Naz

##### Street address

Mall road Faisalabad

##### City

Faisalabad

##### Postal code

38800

##### Phone

+92 41 9200140

##### Fax

+92 41 9200141

##### Email

vcfmuf@gmail.com

##### Web page address

<https://www.businesslist.pk/company/189531/dhq-hospital-civil-hospital>

### 3

#### Recruitment center

##### Name of recruitment center

Faisal Hospital

##### Full name of responsible person

Hafsa Naz

##### Street address

673-A Lower Canal Rd E, Block A People's Colony No  
1, Faisalabad

##### City

Faisalabad

##### Postal code

03822

##### Phone

+92 41 8719677

##### Email

info@faisalhospital.com

##### Web page address

<https://www.faisalhospital.com/>

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

The University of Faisalabad

**Full name of responsible person**

Hafsa Naz

**Street address**

P-526, St no 2, Aslam market, Hajveri town, millat road, Faisalabad

**City**

Faisalabad

**Postal code**

38500

**Phone**

+92 304 1633066

**Email**

hafsanaz020@gmail.com

**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

The University of Faisalabad

**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**

The University of Faisalabad

**Full name of responsible person**

Hafsa Naz

**Position**

Student

**Latest degree**

Bachelor

**Other areas of specialty/work**

Physiotherapy

**Street address**

P-526, St no 2, Aslam market, Hajveri town, millat road, Faisalabad

**City**

Faisalabad

**Province**

Punjab

**Postal code**

38500

**Phone**

+92 41 8848211

**Email**

hafsanaz020@gmail.com

**Person responsible for scientific****inquiries****Contact****Name of organization / entity**

The University of Faisalabad

**Full name of responsible person**

Hafsa Naz

**Position**

Student

**Latest degree**

Bachelor

**Other areas of specialty/work**

Physiotherapy

**Street address**

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**Province**

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**Postal code**

38500

**Phone**

+92 41 8848211

**Email**

clinical.trainer.339@tuf.edu.pk

**Person responsible for updating data****Contact****Name of organization / entity**

The University of Faisalabad

**Full name of responsible person**

Hafsa Naz

**Position**

Student

**Latest degree**

Bachelor

**Other areas of specialty/work**

Physiotherapy

**Street address**

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**City**

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**Province**

Punjab

**Postal code**

38500

**Phone**

+92 41 8848211

**Email**

clinical.trainer.339@tuf.edu.pk

**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**

There is no further information

**Study Protocol**

Yes - There is 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**

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

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

The Study Protocol will be followed, The Statistical Analysis Plan will be used, Informed Consent Form will be

taken from participants, it will be a Clinical Study Report.

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

The data will be available after six months.

**To whom data/document is available**

The data will be available for all the researchers and the Institutes.

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

Data will be shared for more clinical research.

**From where data/document is obtainable**

The Data will be shared via Email addresses.

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

After the Research is being published.

**Comments**