

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Effects of post isometric relaxation technique on pain, range of motion and quality of life in patients with gastrocnemius trigger points

#### Protocol summary

##### Study aim

To compare the effects of Post Isometric Relaxation Technique on Pain, Range of Motion and Quality Of Life in Patients with Gastrocnemius Trigger Points

##### Design

Randomized Controlled Trial; single-blinded; on 40 samples; parallel groups; randomized by computer-generated method and further concealed envelop method used for allocation in the group. In the envelope, 1 will be code for the control group and 2 will be code for the experimental group.

##### Settings and conduct

The study will be conducted at the Department of Physical Therapy DHQ Hospital Layyah. The study will be single-blinded. The assessor will unaware of the treatment given to either group.

##### Participants/Inclusion and exclusion criteria

Inclusion Criteria: Age is between 25-55 years. Both gender 49 Long standing workers (at least 3-5 hours of standing work including 5- min seated rest breaks and a 30-min lunch break) Pre-diagnosed patients of calf pain NPRS scoring  $\leq 4$  The presence of at least one trigger point in unilateral gastrocnemius muscles. Jump sign positive. Exclusion Criteria: Analgesic intake in the past 48 hours Individuals who are already involved in any exercise program for lower extremity Had a previous history of lateral malleolar, bi malleolar or calcaneal fracture that would affect their gait pattern or strength of the gastrocnemius Current pregnancy

##### Intervention groups

Experimental Physical Therapy Group (B): Group B will be given Post isometric Relaxation along with routine physical therapy including hot packs, range of motion exercises, static stretching, and strengthening exercises of the gastrocnemius muscle. This will be given up to three sessions per week. Post Isometric Relaxation, Static Stretching, and strengthening exercises will be provided in three repetitions per session. Each treatment session will have 40-45 minutes duration.

#### Main outcome variables

pain, range of motion, and Quality of Life

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20210321050752N2**

Registration date: **2023-03-06, 1401/12/15**

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

Last update: **2023-03-06, 1401/12/15**

Update count: **0**

##### Registration date

2023-03-06, 1401/12/15

##### Registrant information

##### Name

Muhammad Waqas

##### Name of organization / entity

The University of Lahore

##### Country

Pakistan

##### Phone

+92 42 36532841

##### Email address

drwaqasfayyaz@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2022-12-07, 1401/09/16

##### Expected recruitment end date

2023-05-07, 1402/02/17

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

**Trial completion date**  
empty

**Scientific title**  
Effects of post isometric relaxation technique on pain, range of motion and quality of life in patients with gastrocnemius trigger points

**Public title**  
Effects of post isometric relaxation technique in patients with gastrocnemius trigger points

**Purpose**  
Treatment

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
Age is between 25-55 years Both gender Long standing workers (at least 3-5 hours of standing work including 5-min seated rest breaks and a 30-min lunch break) Pre diagnosed patients of calf pain Numeric pain rating scale (NPRS) scoring  $\leq 4$  The presence of at least one trigger point in unilateral gastrocnemius muscles. Jump sign positive. (While compressing the Myofascial Trigger Point, carefully examined the subject's reaction. A positive jump sign was defined as the subject withdrawing from palpation, wincing, or producing any pain related vocalization)  
**Exclusion criteria:**  
Analgesic intake in past 48 hours Individuals who are already involved in any exercise program for lower extremity Had a previous history of lateral malleolar, bi malleolar or calcaneal fracture that would affect their gait pattern or strength of the gastrocnemius Current pregnancy

**Age**  
From **22 years** old to **55 years** old

**Gender**  
Both

**Phase**  
N/A

**Groups that have been masked**  

- Outcome assessor

**Sample size**  
Target sample size: **40**

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

**Randomization description**  
Patients were randomized by using the computer-generated method and further concealed envelop method is used for allocation in the group. In the envelop, 1 will be code for the control group and 2 will be code for the experimental group.

**Blinding (investigator's opinion)**  
Single blinded

**Blinding description**  
Assessor will only assess the patient at baseline and after follow-up for treatment outcomes. Assessor safe the data for follow-up and will not share it with any therapist or patient. At any stage, the assessor is unaware of the treatment and control group. The study was single-blinded. The assessor was unaware of the

treatment given to either groups 1 or 2.

**Placebo**  
Not used

**Assignment**  
Parallel

**Other design features**

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

The rules and regulations set by the ethical committee of The University of Lahore will be followed.

##### Street address

RAIWIND ROAD CAMPUS: 1-Km, Raiwind Road, Near Thokar Niaz Big, Lahore

##### City

Lahore

##### Postal code

5400

#### Approval date

2022-12-07, 1401/09/16

#### Ethics committee reference number

REC-UOL-270-12-2022

## Health conditions studied

### 1

#### Description of health condition studied

Pain in limb

#### ICD-10 code

M79.6

#### ICD-10 code description

Pain in limb, hand, foot, fingers and toes

## Primary outcomes

### 1

#### Description

Pain

#### Timepoint

Data will be collected at baseline, 4th week and 8th week (follow-up).

#### Method of measurement

Numeric pain rating scale to measure pain

### 2

#### Description

Quality of Life

#### Timepoint

Data will be collected at baseline, 4th week and 8th week (follow-up).

**Method of measurement**

Quality of life is measured by Short Form-12 (SF-12).

**3****Description**

Range of Motion

**Timepoint**

Data will be collected at baseline, 4th week and 8th week (follow-up).

**Method of measurement**

Range of motion is measured by universal goniometer.

**Secondary outcomes**

empty

**Intervention groups****1****Description**

Experimental Physical Therapy Group (B):Group B will be given Post isometric Relaxation along with routine physical therapy including hot pack, range of motion exercises, static stretching and strengthening exercises of gastrocnemius muscle .This will be given upto three sessions per week. Post IsometricRelaxation, Static Stretching and strengthening exercises will provided in three repetitions per session. Each treatment session will have 40-45 minutes duration.

**Category**

Rehabilitation

**2****Description**

Control group: Routine Physical Therapy Group (A):The routine physical therapy will include hot pack, range of motion exercises, static stretching and strengthening exercises of gastrocnemius muscle .This will be given upto three sessions per week. Hot Pack will be used for 8 minutes in each session. Static Stretching and strengthening exercises will provided into three repetitions per session. Each treatment session will have 30-35 minutes duration.

**Category**

Rehabilitation

**Recruitment centers****1****Recruitment center****Name of recruitment center**

DHQ Hospital layyah

**Full name of responsible person**

Khurram Mehmod

**Street address**

DHQ layyah college road,layyah punjab

**City**

Layyah

**Postal code**

31200

**Phone**

+92 344 4535304

**Email**

mehmookhulam8@gmail.com

**Sponsors / Funding sources****1****Sponsor****Name of organization / entity**

Self Supported

**Full name of responsible person**

Sania Naz

**Street address**

Major moor chubara road layyah

**City**

Layyah

**Postal code**

31200

**Phone**

+92 304 4407035

**Email**

sania.naz642@gmail.com

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

No

**Title of funding source**

Self Supported

**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**

Other

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

The University of Lahore

**Full name of responsible person**

Muhammad Waqas

**Position**

Lecturer

**Latest degree**

Master

**Other areas of specialty/work**

Physiotherapy

**Street address**

St# 76, H#09 Muhala Sirajpura Darogawala Shalamar Town Lahore

**City**

Lahore  
**Province**  
Punjab  
**Postal code**  
54840  
**Phone**  
+92 323 5043603  
**Email**  
drwaqasfayyaz@gmail.com  
**Web page address**  
<https://faculty.uol.edu.pk/Faculty/11621/Muhammad%20Waqas>

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
The University of Lahore  
**Full name of responsible person**  
Muhammad Waqas  
**Position**  
Lecturer  
**Latest degree**  
Master  
**Other areas of specialty/work**  
Physiotherapy  
**Street address**  
St# 76, H#09 Muhala Sirajpura Darogawala Shalamar Town Lahore  
**City**  
Lahore  
**Province**  
Punjab  
**Postal code**  
54840  
**Phone**  
009232350436033  
**Email**  
drwaqasfayyaz@gmail.com  
**Web page address**  
<https://faculty.uol.edu.pk/Faculty/11621/Muhammad%20Waqas>

## Person responsible for updating data

### Contact

**Name of organization / entity**  
The University of Lahore  
**Full name of responsible person**  
Muhammad Waqas  
**Position**  
Lecturer  
**Latest degree**  
Master  
**Other areas of specialty/work**  
Physiotherapy  
**Street address**

St# 76, H#09 Muhala Sirajpura Darogawala Shalamar Town Lahore

**City**  
Lahore  
**Province**  
Punjab  
**Postal code**  
54840  
**Phone**  
+92 323 5043603  
**Email**  
drwaqasfayyaz@gmail.com  
**Web page address**  
<https://faculty.uol.edu.pk/Faculty/11621/Muhammad%20Waqas>

## Sharing plan

### Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

### 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

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

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

Numeric pain rating scale will be used for the assessment of pain and Quality of life-related data.

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

6 months after publication.

### To whom data/document is available

academic and clinical research writers.

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

Never without permission.

### From where data/document is obtainable

From Muhammad Waqas through mail id. drwaqasfayyaz@gmail.com or through a Researchgate account.  
[https://www.researchgate.net/profile/Muhammad-Waqas-26?ev=hdr\\_xprf](https://www.researchgate.net/profile/Muhammad-Waqas-26?ev=hdr_xprf)

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

From Muhammad Waqas through mail id. drwaqasfayyaz@gmail.com or through a Researchgate account.  
[https://www.researchgate.net/profile/Muhammad-Waqas-26?ev=hdr\\_xprf](https://www.researchgate.net/profile/Muhammad-Waqas-26?ev=hdr_xprf)

### Comments