

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Comparative effects of Post Isometric Relaxation and Strain Counterstrain Technique on Pain, Range of Motion and Functional Activities among individuals with Gastrocnemius Tightness

Protocol summary

Study aim

To Compare the effects of post isometric relaxation and strain-counterstrain technique on pain, Range of motion and functional activities among individuals with gastrocnemius tightness.

Design

Single blinded randomized clinical trial with parallel assignment of 44 participants to two groups equally.

Settings and conduct

The study will be conducted at Arif Memorial Teaching Hospital. Outcome assessor will be kept blind.

Participants/Inclusion and exclusion criteria

Inclusion Criteria: Participants from age group of 18-40 who present with gastrocnemius tightness. Patients with positive silfverskiold test. Exclusion Criteria: Systemic disease causing musculoskeletal issue. Any other type of connection tissue disorder. With history of neurological disorder. Having recent lower limb or spine fracture causing change in gait pattern.

Intervention groups

Group A: Participants of group A received exercise post isometric relaxation exercise, 3 times a week for 4 weeks. Group B: Participants of group B received strain-counterstrain technique, 3 times a week for 4 weeks.

Main outcome variables

Pain: The intensity of pain will be measured by the numeric pain rating scale [NPRS]. Range of motion: ROM will be measured using a Universal Goniometer. Functional activities: Functional activities will be examined by foot functional index.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20220701055331N4**

Registration date: **2024-06-15, 1403/03/26**

Registration timing: **prospective**

Last update: **2024-06-15, 1403/03/26**

Update count: **0**

Registration date

2024-06-15, 1403/03/26

Registrant information

Name

Ifra Zulqarnain Awan

Name of organization / entity

Rashid Latif Medical College

Country

Pakistan

Phone

+92 333 4975431

Email address

ifra.awan@rlmc.edu.pk

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2024-06-20, 1403/03/31

Expected recruitment end date

2024-11-20, 1403/08/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparative effects of Post Isometric Relaxation and Strain Counterstrain Technique on Pain, Range of Motion and Functional Activities among individuals with

Gastrocnemius Tightness

Public title

Comparative effects of Post Isometric Relaxation and Strain Counterstrain Technique on Pain, Range of Motion and Functional Activities among individuals with Gastrocnemius Tightness

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Both male and female Participants between age of 18-40 years with gastrocnemius tightness Patients with positive silfverskiold test

Exclusion criteria:

Patients with Any Systemic disease Patients with any other type of connection tissue disorder Patients With history of neurological disorder Patients Having recent lower limb or spine fracture causing change in gait pattern

Age

From **18 years** old to **40 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **44**

Randomization (investigator's opinion)

Randomized

Randomization description

Randomization will be done with random computer number generator. Assign unique identification numbers to participants, then use a reliable software tool to generate a list of random numbers. Match these numbers to participant IDs and allocate individuals to different study groups based on the sorted random numbers. Ensure that the randomization process is concealed and documented for transparency and integrity.

Blinding (investigator's opinion)

Single blinded

Blinding description

It will be a Single blinded study. outcome assessor will be blind to the intervention received by the participants. To achieve single blinding, the outcome assessor is not informed about the treatment allocation of the participants and remains unaware of which group received the intervention being studied.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Institutional Review Board of Rashid Latif Medical College, Lahore.

Street address

35-KM Ferozepur Road Lahore

City

Lahore

Postal code

54600

Approval date

2023-12-25, 1402/10/04

Ethics committee reference number

IRB/2023/136

Health conditions studied

1

Description of health condition studied

Gastrocnemius tightness

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Pain

Timepoint

Before intervention and 4 weeks after intervention

Method of measurement

Numeric pain rating scale

2

Description

Range of motion

Timepoint

Before intervention and 4 weeks after intervention

Method of measurement

Universal goniometer

3

Description

Functional activities

Timepoint

Before intervention and 4 weeks after intervention

Method of measurement

Foot functional index

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group A: post isometric relaxation:
Participants of group A received post isometric relaxation exercise, 3 times a week for 4 weeks.

Category

Rehabilitation

2

Description

Intervention group B: strain-counterstrain technique:
Participants of group B received strain-counterstrain technique, 3 times a week for 4 weeks.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Arif Memorial Teaching Hospital

Full name of responsible person

Dr. Ifra Zulqarnain Awan

Street address

35-km ferozepur road Lahore

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

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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?

Yes

Title of funding source

Rashid Latif Medical College

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

Rashid Latif Medical College

Full name of responsible person

Aimen Tahir

Position

Physiotherapist

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

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Person responsible for updating data

Contact

Name of organization / entity
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City
Lahore
Province

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

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

Analytic Code

No - There is not a plan to make this available

Data Dictionary

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