

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 2026

EFFECTS OF MYOFASCIAL RELEASE VERSUS STATIC STRETCHING IN CALF MUSCLES SORENESS IN RUNNERS ON FLEXIBILITY AND PERFORMANCE

Protocol summary

Study aim

To compare effects of myofascial release and static stretching in improving flexibility and performance of calf muscle in runners.

Design

The study groups are myofascial release and static stretching. study conducted in phase 1. sample size is 30 which is calculated by online software epitool. the study is randomized clinical trial in which groups are randomized by using random number table method. study is double blinded in which participant, investigator, physiotherapist and outcome assessors are masked. the allocation was concealed.

Settings and conduct

The data was collected from Punjab university sports complex and wapda sports complex Lahore Pakistan. the participants are unaware of which treatment is given, investigator and physiotherapist are unaware of study groups and outcome assessors are unaware of results and treatment techniques. so they are blinded during data collection.

Participants/Inclusion and exclusion criteria

Runners who have at least 5 years athletic practice, power leg, do not have previous surgery of lower limb and no injury in past 2 months are included. athletes having heart disease, deep vein thrombosis, leg injury, wound on calf muscles, knee pain, knee fracture are excluded.

Intervention groups

There are two intervention groups. in one group myofascial release technique which include direct pressure and slow sweeping pressure is applied for 2 minute with interval of 1 minute and in other group static stretching is applied for 30 seconds with 15 seconds interval.

Main outcome variables

Pain was assessed by using Numeric Pain Rating Scale. Data was collected by Knee to wall test, Sit and reach test, Single leg standing heel raise test and Single leg

hop for distance.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20210725051979N1**

Registration date: **2021-08-20, 1400/05/29**

Registration timing: **registered_while_recruiting**

Last update: **2021-08-20, 1400/05/29**

Update count: **0**

Registration date

2021-08-20, 1400/05/29

Registrant information

Name

Ifra Javed

Name of organization / entity

Riphah International University Lahore campus

Country

Pakistan

Phone

+92 42 58737431

Email address

ifrajaved41@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-05-05, 1400/02/15

Expected recruitment end date

2021-09-02, 1400/06/11

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

EFFECTS OF MYOFASCIAL RELEASE VERSUS STATIC STRETCHING IN CALF MUSCLES SORENESS IN RUNNERS ON FLEXIBILITY AND PERFORMANCE

Public title

Effects of interventional techniques in calf muscle soreness in runners

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Players who have at least 5 years' athletic practice
Runners Healthy individual Power leg No previous history of lower limb surgical procedure In past 2 months no history of lower limb injury

Exclusion criteria:

Athletes having heart disease Leg injury Wound on calf muscles Sprain and strain of ankle Knee pain Knee Fracture Deep vein thrombosis

Age

From **20 years** old to **40 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Care provider
- Investigator
- Outcome assessor
- Data analyser

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

simple randomization method is used. individuals are randomized in two groups by using random number table method. stratified randomization is done. allocation was concealed.

Blinding (investigator's opinion)

Double blinded

Blinding description

athletes who are participated in the study are unaware of which treatment is given. investigator is unaware of study groups. physiotherapist who is giving treatment is unaware of other treatment technique that is given to other group. data collectors are unaware of readings of other groups. outcome assessors do not know the result of other group.

Placebo

Not used

Assignment

Other

Other design features

the study conducted was randomized clinical trial

Secondary Ids

empty

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

Ethics committee of Riphah International University

Street address

28-M Quaid-e-Azam industrial estate, Kot lakhpath, Lahore Pakistan

City

Lahore

Postal code

54000

Approval date

2021-06-15, 1400/03/25

Ethics committee reference number

REC/RCR & AHS/20/0403

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

Healthy runners

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

Flexibility and performance

Timepoint

Before intervention and after intervention

Method of measurement

Flexibility is measured by using knee to wall test and sit and reach test. performance is measured by single leg heel raise test and single leg hop for distance.

Secondary outcomes

empty

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

Intervention group 1: "Myofascial release"

Category

Rehabilitation

2**Description**

Intervention group 2: Static stretching

Category

Rehabilitation

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

Riphah International University

Full name of responsible person

Dr shakil ur rehman

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Lahore Pakistan**City**

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Web page address**Sponsors / Funding sources****1****Sponsor****Name of organization / entity**

Riphah International University Lahore

Full name of responsible person

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Street address28-M Quaid-e-Azam industrial estate, Kot lakhpath,
Lahore Pakistan**City**

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Email

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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

Riphah International University Lahore

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**

Riphah International University Lahore

Full name of responsible person

IFRA

Position

Student

Latest degree

Master

Other areas of specialty/work

Physiotherapy

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Latest degree

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Other areas of specialty/work

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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

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