

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Comparison of active release and active recovery techniques for delayed onset muscle soreness on recovery and fatigue among athletes.

Protocol summary

Study aim

To compare active release and active recovery techniques for delayed onset muscle soreness on recovery and fatigue among athletes.

Design

This study will be a randomized clinical trial.

Settings and conduct

Data will be collected from Pakistan Sports Board.

Participants/Inclusion and exclusion criteria

Inclusion Criteria: • Height range: 165 cm-180 cm • weight range: 60 kg-80 kg; • Healthy • free from cardiovascular diseases, muscle damage and pain, and neurological diseases • Voluntarily participated in the study without any discomfort and sign informed consent. • Have past history of DOMS. • Sprinters, runners.

Exclusion Criteria: • Have had an open wound or inflammatory disease within the last 6 month • Have neurological or muscular disorders that may affect muscle strength • Are with missing limbs • Have a seriously unstable medical condition determined from a physical examination. • Players who are taking steroids, analgesics, muscle relaxants, or other medications. • Have taken other clinical trial drugs for less than 3 months • Have genetic problems, such as galactose intolerance, Lapp lactase deficiency, or glucose-galactose malabsorption • Are unwilling or unable to follow the study guidelines

Intervention groups

Group A: Group A will perform active recovery technique that 30 min Cardio/Jogging, 10 repetitions of Resistance bands exercises, Stretches of targeted muscles and Foam roller exercise of 45 seconds to minimize effect of fatigue in Active Recovery Techniques. Participants will perform Active recovery techniques with an interval of 10 sec. Group B: Group B will get Active Release technique manually. This technique will be performed for duration of 15 minutes. This protocol will be performed twice after Workout.

Main outcome variables

Rating of fatigue scale Numeric Pain Rating Scale:
Functional Performance Tests: Likert Scale of Muscle Soreness:

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20231103059939N1**

Registration date: **2023-11-24, 1402/09/03**

Registration timing: **prospective**

Last update: **2023-11-24, 1402/09/03**

Update count: **0**

Registration date

2023-11-24, 1402/09/03

Registrant information

Name

Sibgha Anum

Name of organization / entity

Riphah International University ,Lahore
Campus,Pakistan

Country

Pakistan

Phone

+92 324 6456629

Email address

sibghaanum8@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-12-04, 1402/09/13

Expected recruitment end date

2023-12-07, 1402/09/16

Actual recruitment start date

empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Comparison of active release and active recovery techniques for delayed onset muscle soreness on recovery and fatigue among athletes.

Public title
Athlete's Guide to Faster Recovery: Comparing Muscle Soreness Relief Methods

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Height range: 165 cm-180 cm weight range: 60 kg-80 kg; Healthy free from cardiovascular diseases, muscle damage and pain, and neurological diseases Voluntarily participated in the study without any discomfort and sign informed consent Have past history of DOMS. Sprinters, runners.

Exclusion criteria:

Have had an open wound or inflammatory disease within the last 6 month Have neurological or muscular disorders that may affect muscle strength Are with missing limbs Have a seriously unstable medical condition determined from a physical examination, such as cardiovascular disease, respiratory disease, gastrointestinal disease, hepatobiliary disease, metabolic disease, endocrine disease, renal disease, urinary disease, or problems with the nervous system or mental health Players who are taking steroids, analgesics, muscle relaxants, or other medications that the researchers decide to be inappropriate, such as antispasmodics, antidepressants, antiarrhythmic, antibiotics, or thrombolytic substances. Have taken other clinical trial drugs for less than 3 months Have genetic problems, such as galactose intolerance, Lapp lactase deficiency, or glucose-galactose malabsorption Are unwilling or unable to follow the study guidelines

Age
No age limit

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **44**

Randomization (investigator's opinion)
Randomized

Randomization description
Simple Randomization each member of the population is assigned a number, after which numbers are selected at random.

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research and Ethics committee

Street address

Riphah International University, Gulberg campus, Lahore , Pakistan

City

Lahore

Postal code

54810

Approval date

2023-08-03, 1402/05/12

Ethics committee reference number

REC/RCR & AHS/23/0452

Health conditions studied

1

Description of health condition studied

DELAYED ONSET MUSCLE SYNDROME

ICD-10 code

M79.1

ICD-10 code description

Myalgia

Primary outcomes

1

Description

RECOVERY AMONG ATHLETES

Timepoint

Five readings will be taken. First baseline reading will be taken 24 hours before workout. Pre and post readings of recovery Technique will be taken immediate after workout. Next two readings will be taken after 24 h and 48hours.

Method of measurement

Numeric Pain Rating Scale AND Functional Performance Tests:

Secondary outcomes

1

Description

FATIGUE AMONG ATHLETES

Timepoint

Five readings will be taken. First baseline reading will be taken 24 hours before workout. Pre and post readings of recovery Technique will be taken immediate after workout. Next two readings will be taken after 24 h and 48hours.

Method of measurement

Rating of fatigue scale AND Likert Scale of Muscle Soreness:

Intervention groups

1

Description

Intervention group:22 participants will be randomly allocated in Group A. Rating of fatigue scale, FPT and NPRS will be considered as baseline measure. Active recovery technique will follow the regime of 4 to 12 reps, 1 to 5 sets, at interval of 30 to 40 sec.

Category

Treatment - Other

2

Description

Intervention group:22participants will be randomly allocated in Group B. This group will receive active release technique for 15 minutes. ART includes manual therapy to apply compressive, tensile and shear. We will apply deep tension at the area of tenderness whilst the participants will instructed to actively move the DOMS site from a shortened to a lengthened position.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Pakistan Sports Board Lahore

Full name of responsible person

Sibgha Anum

Street address

Pakistan Sports Board , Qaddafi Stadium, Lahore , Pakistan

City

Lahore

Postal code

54810

Phone

+92 42 99232074

Email

infopsb@sports.gov.pk

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Riphah International University Lahore

Full name of responsible person

Dr. Muhammad Hashim

Street address

Riphah International University, Gulberg campus, Lahore , Pakistan

City

Lahore

Postal code

54660

Phone

+92 323 4071564

Email

Muhammad.hashim@riphah.edu.pk

Web page address

<https://www.riphah.edu.pk/lahore/>

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

Sibgha Anum

Position

student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

Street address

Riphah International University, Gulberg campus, 25 Raza Saeed Rd, Bhabra Block M Gulberg III, Lahore, Punjab 25-M Block, Lahore, 54660Lahore , Pakistan

City

Lahore

Province

Punjab

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54660

Phone

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Email

sibghaanum8@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

Riphah International University Lahore

Full name of responsible person

Sibgha Anum

Position

student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

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Person responsible for updating data

Contact

Name of organization / entity

Riphah International University Lahore

Full name of responsible person

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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