Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparative Effects of Graston Tool and Post Isometric Relaxation on Hamstring Tightness in Young Healthy Women

Protocol summary

Study aim
To compare the effects of graston tool and post isometric relaxation technique to improve the range of motion on hamstring tightness in young healthy individuals.

Design
randomization will be through lottery method, single blinded study will be conducted in which only patient would be blinded.

Settings and conduct
subjects with hamstring tightness will be taken from The University Of Faisalabad. subjects will be divided into two groups one group will receive graston technique and other group will receive post isometric relaxation technique.

Participants/Inclusion and exclusion criteria
people who have asymptomatic hamstring tightness .female and active knee extension test positive and people who will want to part of this study will be included this study. People who have acute and chronic hamstring injury. acute and chronic low back pain, having skin infections ,previous orthopedic surgeries and sciatica patients will be excluded.

Intervention groups
Group A and Group B will be given hot pack for 10 minutes as a baseline treatment. Group A will given graston tool and Group B will given post isometric relaxation technique. Both techniques will effective on hamstring tightness but which one will more effective technique.

Main outcome variables
Active knee extension test and straight leg raise test

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20220513054844N1**
Registration date: **2022-05-21, 1401/02/31**
Registration timing: **registered_while_recruiting**

Last update: **2022-05-21, 1401/02/31**
Update count: **0**

Registration date
2022-05-21, 1401/02/31

Registrant information

Name
USWAH MUBEEN

Name of organization / entity
THE UNIVERSITY OF FAISALABAD

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2022-04-29, 1401/02/09

Expected recruitment end date
2022-05-30, 1401/03/09

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Comparative Effects of Graston Tool and Post Isometric Relaxation on Hamstring Tightness in Young Healthy Women

Public title
Comparative Effects of Graston Tool and Post Isometric

Relaxation on Hamstring Tightness in Young Healthy Women

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
people having age of 20 to 25 year people having asymptomatic hamstring tightness people having active knee extension test positive people wants to be part of study

Exclusion criteria:
people having acute and chronic low back pain people having acute and chronic hamstring injury students having skin infection people having previous orthopedic surgeries(surgeries of lower extremity within 6 month) sciatica patients

Age
From **20 years** old to **25 years** old

Gender
Female

Phase
N/A

Groups that have been masked

- Participant

Sample size
Target sample size: **36**

Randomization (investigator's opinion)
Randomized

Randomization description
randomization is done by lottery method. sealed envelop will made upon which allocation of participants in both groups can be possible without biasness.

Blinding (investigator's opinion)
Single blinded

Blinding description
participants of both groups will be unaware whether they are placed in which treatment group after the informed consent has been taken from them. participants of both groups will receive the same baseline treatment that will be the hot pack. After that different physiotherapy treatment of both groups of which participants will be unaware of.

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
Ward no 6 jaranwala road shahkot

City
Shahkot

Postal code
39630

Approval date
2022-04-07, 1401/01/18

Ethics committee reference number
TUF/DR/MSPP/329

Health conditions studied

1

Description of health condition studied
hamstring tightness

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
range of motion will be primary out come measure

Timepoint
range of motion will be measured before treatment and after 4 weeks after the completion of intervention.

Method of measurement
active knee extension test and SLR will be used to measure the range of motion.

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: 1 graston technique will given to patient for 60 seconds. 3 sessions per week for 4 weeks will be given. Active knee extension test and straight leg raise test taken pre and post treatment

Category
Rehabilitation

2

Description
Intervention group: 2 Post Isometric Relaxation technique will given to patients and 3 repetitions will done 3 sessions per week for 4 weeks will be given. Active knee extension test and straight leg raise test taken pre and post treatment.

Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
The University Of Faisalabad
Full name of responsible person
DR.Nisar Fatima
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Sargodha road, The University Of Faisalabad, Punjab, Pakistan
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Sponsors / Funding sources

1

Sponsor
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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
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
Sponsor: country of origin
Country of origin
PK
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
Dr. Nisar Fatima, PT
Position
assistant professor
Latest degree
Master
Other areas of specialty/work
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Person responsible for updating data

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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
All collected participants data set for the outcome measures
When the data will become available and for how long
4 months after publication
To whom data/document is available
people working in academic institutions
Under which criteria data/document could be used
IPD and any additional supporting documents will be provided for the research on the similar topic and can be obtained by asking the contact person mentioned below
From where data/document is obtainable
Contact person Uswah Mubeen contact no 0305 5379058
What processes are involved for a request to access data/document
Data files will be provided after taking to the contact person as mention in the above slot.
Comments