Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

The comparative study of three stretching methods of static, ballistic and PNF in hamstring length changes in female and male students of Semnan University of Medical Sciences.

Protocol summary

Summary

The aim of this study is the comparison between three stretching methods on hamstring length. 80 volunteers with short hamstring muscles in 90-90 test will divide randomly in 4 groups of static stretch, ballistic stretch, PNF and control group .10 male and 10 female will be placed in each groups. The hamstring interventional groups will be stretched 3 times a week during 4 weeks. Each stretching technique will last 30 second each session and 360 second totally. The participants in static stretching group will take a 30 second stretching each session and participants in ballistic stretching group will take three stretching techniques that last 2 seconds with 8 seconds rest between each trial. The participants in PNF group will be stretched 10 seconds during 2 trials with 10 seconds rest between them. The control group will receive no stretching techniques. The range of motion will be measured before, immediately after and 4 weeks after intervention.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201110255112N3**
Registration date: **2013-06-30, 1392/04/09**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2013-06-30, 1392/04/09

Registrant information

Name

Rozita Hedayati

Name of organization / entity

Semnan University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 23 1335 4180

Email address

hedayati@sem-ums.ac.ir

Recruitment status

Recruitment complete

Funding source

Semnan University of Medical Sciences

Expected recruitment start date

2012-06-09, 1391/03/20

Expected recruitment end date

2013-09-05, 1392/06/14

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The comparative study of three stretching methods of static, ballistic and PNF in hamstring length changes in female and male students of Semnan University of Medical Sciences.

Public title

Comparison of three different stretching techniques on hamstring length.

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion Criteria: Presence of hamstring muscles shortening without pain in 90-90 test. Exclusion Criteria: Orthopedic and neurologic disorders; Operation in lower limb; Fracture in lower limb; Hamstring injury in 1 past

years; Diseases such as arthritis, menisci and ligament injury; Operation of vertebral columns; Injury of vertebral columns; The athletes

Age
From **18 years** old to **25 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **80**

Randomization (investigator's opinion)
Randomized

Randomization description

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
Semnan University of Medical Sciences

Street address
Semnan University of Medical Sciences, The 5th kilometers of Damghasn road

City
Semnan

Postal code

Approval date
2012-06-26, 1391/04/06

Ethics committee reference number
191311/91

Health conditions studied

1

Description of health condition studied
Musculoskeletal disorders

ICD-10 code
m95

ICD-10 code description
Other disorders of the musculoskeletal system and connective tissue

Primary outcomes

1

Description
hamstring muscles lenght

Timepoint
Beginning of the study, First Day, 4 weeks after

Method of measurement
Goniometer

Secondary outcomes

empty

Intervention groups

1

Description
static group : one 30 s static stretch during a four weeks period, three days a week

Category
Rehabilitation

2

Description
ballistic group ; 3 ballistic stretch during a four weeks period, three days a week

Category
Rehabilitation

3

Description
pnf group : 2 PNf stretch during a four weeks period, three days a week

Category
Rehabilitation

4

Description
control group : routine activities

Category
N/A

Recruitment centers

1

Recruitment center

Name of recruitment center
Neuromuscular Rehabilitation research center

Full name of responsible person
Dr. Rozita Hedayati

Street address
Semnan University of Medical Sciences, The 5th Kilometers of Damghan Road

City
Semnan

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Semnan University of Medical Sciences
Full name of responsible person
Dr Raheb Ghorbani
Street address
Research Deputy, Semnan University of Medical Sciences, The 5th kilometers of Damghan Road
City
Semnan
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Semnan University of Medical Sciences
Proportion provided by this source
100
Public or private sector
empty
Domestic or foreign origin
empty
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
empty

Person responsible for general inquiries

Contact
Name of organization / entity
Semnan University of Medical Sciences
Full name of responsible person
Dr. Rosita Hedayati
Position
Assistant Professor / Ph.D
Other areas of specialty/work
Street address
Semnan University of Medical Sciences, The 5th kilometres of Damghan road
City
Semnan
Postal code
Phone
+98 23 1335 4180
Fax
Email
hedayati @ sem-ums.ac.ir
Web page address

Person responsible for scientific inquiries

Contact
Name of organization / entity
Semnan University of Medical Sciences
Full name of responsible person
Dr. Rosita Hedayati
Position
assisted professor / Ph.D
Other areas of specialty/work
Street address
Semnan University of Medical Sciences, The 5th kilometers of Damghan Road
City
Semnan
Postal code
Phone
+98 23 1335 4180
Fax
Email
hedayati@ sem-ums.ac.ir
Web page address

Person responsible for updating data

Contact
Name of organization / entity
Semnan University of Medical Sciences
Full name of responsible person
Dr. Rosita Hedayati
Position
Assistant Professor / Ph.D
Other areas of specialty/work
Street address
Semnan University of Medical Sciences, The 5th kilometers of Damghan Road
City
semnan
Postal code
Phone
+98 23 1335 4180
Fax
Email
hedayati @ sem-ums.ac.ir
Web page address

Sharing plan

Deidentified Individual Participant Data Set (IPD)
empty
Study Protocol
empty
Statistical Analysis Plan
empty
Informed Consent Form
empty
Clinical Study Report
empty
Analytic Code
empty
Data Dictionary
empty