

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

28 May 2026

### Comparison of the Effects and Maintenance Duration of Passive Stretch and Muscle Energy Techniques in the Treatment of Hamstring Muscles Shortening

#### Protocol summary

##### Summary

The study will be conducted on 45 female students 18 to 25 years old with short hamstring. Randomly allocated to a control, passive stretch or muscle energy technique (MET) groups. In passive stretch and MET groups, intervention 3 times per week for 3 weeks will be done. At the end of 3 weeks and 4 weeks later (week 7 after intervention) knee extension range of motion is measured

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT201407121552N2**  
Registration date: **2014-08-09, 1393/05/18**  
Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2014-08-09, 1393/05/18

##### Registrant information

###### Name

Maryam Ebrahimian

###### Name of organization / entity

Shiraz University of Medical Sciences

###### Country

Iran (Islamic Republic of)

###### Phone

+98 71 1627 1551

###### Email address

ebrahimian@sums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Shiraz University of Medical Sciences

##### Expected recruitment start date

2014-07-23, 1393/05/01

##### Expected recruitment end date

2014-11-22, 1393/09/01

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Comparison of the Effects and Maintenance Duration of Passive Stretch and Muscle Energy Techniques in the Treatment of Hamstring Muscles Shortening

##### Public title

Comparison of the effect of two types of exercise therapy in the treatment of shortening of posterior muscles of thigh

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

Inclusion criteria: active and passive knee extension angle decreased to less than 160 degrees Exclusion criteria: musculoskeletal disorders in lumbar and pelvic region; nervous system diseases (M. S., peripheral neuropathy, cerebral palsy); joint diseases such as rheumatoid arthritis; history of surgeries such as joint replacement

##### Age

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

##### Gender

Female

##### Phase

N/A

## Groups that have been masked

No information

## Sample size

Target sample size: 45

## 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

Shiraz University of Medical Sciences

##### Street address

Opposite to Felestin Street, Zand Avenue

##### City

Shiraz

##### Postal code

1433671348

#### Approval date

2013-10-06, 1392/07/14

#### Ethics committee reference number

92-01-06-5863

## Health conditions studied

### 1

#### Description of health condition studied

Hamstring muscle shortening

#### ICD-10 code

M67.8

#### ICD-10 code description

Other specified disorders of synovium and tendon

## Primary outcomes

### 1

#### Description

Knee extension angle

#### Timepoint

3 and 7 weeks after intervention

#### Method of measurement

Photography with a digital camera from the latera view of knee joint and meassurment the joint angle with image j software

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

In passive stretch group, subjects do hamstring stretch for three weeks, three times a week and every time do 5 times 30-second stretch.

#### Category

Rehabilitation

### 2

#### Description

In muscle energy group, muscle therapy will do by a therapist for three weeks, three times in a week.

#### Category

Rehabilitation

### 3

#### Description

The control group, dont receive any treatment

#### Category

Rehabilitation

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Rehabilitation Sciences School of Shiraz University of Medical Sciences

##### Full name of responsible person

Maryam Ebrahimian

##### Street address

Abiverdi No.1 St.,Shahid Chamran Blvd.

##### City

Shiraz

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Vice Chancellor for Research Affairs Of Shiraz University of Medical Sciences

##### Full name of responsible person

Dr. Syed Basir Hashemi

##### Street address

7th floor of Central Building of Shiraz University of Medical Sciences,Oppsite to Felestin Street, Zand Avenue.

##### City

Shiraz

#### Grant name

**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Vice Chancellor for Research Affairs Of Shiraz 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**

Shiraz University of Medical Sciences

**Full name of responsible person**

Maryam Ebrahimian

**Position**

Master of Science/ Faculty member

**Other areas of specialty/work****Street address**

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**Email**

ebrahimian@sums.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*