

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Comparison of the two treatment techniques for recovery of hamstring shortness Comparative effects of US and hold relax on shortness of Hamstring

#### Protocol summary

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##### Summary

The aim of the present study was to compare the effects of ultrasound and Hold relax on shortness of hamstrings. 36 boys students who had bilateral hamstring shortness (SLR<65 Degrees) were candidate for the study. After completing the consent form, the subjects were randomly assigned in one of the three groups. Groups 1 received ultrasound with stretching. Group 2 received hold relax method and group 3 was control group who received routine program. The duration of treatment programs were six days a week for a two-week period. Passive SLR and Passive knee extension were assessed and compared between groups.

##### Recruitment status

**Recruitment complete**

##### Funding source

Semnan University of Medical Sciences

##### Expected recruitment start date

2010-02-15, 1388/11/26

##### Expected recruitment end date

2010-04-15, 1389/01/26

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT138810152995N1**

Registration date: **2010-04-24, 1389/02/04**

Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2010-04-24, 1389/02/04

##### Registrant information

###### Name

Mohammad Amouzadeh Khalili

###### Name of organization / entity

Semnan University of Medical Sciences

###### Country

Iran (Islamic Republic of)

###### Phone

+98 23 1335 4180

###### Email address

##### Scientific title

Comparison of the two treatment techniques for recovery of hamstring shortness Comparative effects of US and hold relax on shortness of Hamstring

##### Public title

Comparison of the two treatment techniques for recovery of hamstring shortness

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

Inclusion criteria: Healthy male between 18-30 years old, SLR less than 65 degrees, signing consent form  
Exclusion; Presence of orthopedic, neurologic or heart diseases, regular and professional sports

##### Age

From **18 years** old to **30 years** old

##### Gender

Male

##### Phase

2

## Groups that have been masked

No information

## Sample size

Target sample size: 36

## Randomization (investigator's opinion)

Randomized

## Randomization description

## Blinding (investigator's opinion)

Single blinded

## Blinding description

## Placebo

Not used

## Assignment

Parallel

## Other design features

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

The ethics committee of Semnan university of medical sciences

##### Street address

Semnan university of Medical Sciences, Semnan, Iran.

##### City

Semnan

##### Postal code

35131-38111

#### Approval date

2009-08-18, 1388/05/27

#### Ethics committee reference number

2/6415/Ā

## Health conditions studied

### 1

#### Description of health condition studied

Musculoskeletal disorders

#### ICD-10 code

M95

#### ICD-10 code description

Other acquired deformities of musculoskeletal system and connective tissue

## Primary outcomes

### 1

#### Description

maximum ROM in SLR,

#### Timepoint

Two months

#### Method of measurement

Goniometer

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Group 2: Using Hold relax method on the lower limbs, during a four weeks period, three days a week, in each session applied 4 triple cycle of hold relax, each cycle was 10 sec. contraction with a five sec. rest.

#### Category

Rehabilitation

### 2

#### Description

Control group: routine activities.

#### Category

N/A

### 3

#### Description

Group 1: application of US with stretch, during a four weeks period, three days a week, each session 4 minutes US with 4 minutes stretch, the intensity of US will be set as 1 MHZ.

#### Category

Rehabilitation

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Tadayoun Rehabilitation Clinic, Semnan, Iran

##### Full name of responsible person

Dr Amouzadeh

##### Street address

Rajaie Street, Tadayoun Clinic, Semnan, Iran

##### City

Semnan

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Semnan University of Medical Sciences

##### Full name of responsible person

Dr Ghorbanie

##### Street address

Research Office, Semnan University of Medical Sciences, Basij Road, Semnan, Iran

##### City

Semnan

#### Grant name

دانشگاه علوم پزشکی سمنان- دانشکده توانبخشی

**Grant code / Reference number**

278

**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**

Mohammad Amouzadeh Khalili

**Position**

Dean of faculty of Rehabilitation

**Other areas of specialty/work**

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**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