

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

18 Jun 2026

### The effect of stabilization exercises plus routine exercises compared with routine exercises alone on lumbar spine stabilizer muscles size, hamstring muscles size and flexibility in soccer players suffering from hamstring muscles strain in dominant sides

#### Protocol summary

##### Study aim

The purpose of this study is to assess the effect of stabilization exercises plus routine exercises compared with routine exercises alone on lumbo pelvic muscles size, hamstring muscles size and flexibility in athletes suffering from hamstring muscles strain.

##### Design

In this research, 40 soccer players with hamstring strain injury will be recruited from Tehran soccer super league clubs and a code was allocated to each one of them. Then, patient will be divided randomly into two experimental and control groups.

##### Settings and conduct

The size of lumbo pelvic and hamstring muscles will be measured by Ultrasound and hamstring flexibility will be assessed by Digital Inclinometer. Also single blind will be done in athletes.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: soccer players with history of hamstring strain injury Exclusion criteria: soccer players with history of low back pain and lower limb injuries

##### Intervention groups

Athletes in the experimental group will received stabilization exercises under the supervision of a physiotherapist for 12 weeks, 3 times a week plus routine exercises. The control group will be given only routine exercises. After the intervention lumbo pelvic and hamstring variables will be evaluated again.

##### Main outcome variables

Lumbo pelvic muscles size; Hamstring muscles size; Hamstring muscles flexibility

#### General information

##### Reason for update

##### Acronym

#### IRCT registration information

IRCT registration number: **IRCT20171010036689N2**

Registration date: **2021-06-09, 1400/03/19**

Registration timing: **retrospective**

Last update: **2021-06-09, 1400/03/19**

Update count: **0**

#### Registration date

2021-06-09, 1400/03/19

#### Registrant information

##### Name

Mahnaz Emami

##### Name of organization / entity

University of social welfare and rehabilitation sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 2218 0039

##### Email address

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#### Recruitment status

**Recruitment complete**

#### Funding source

University of social welfare and rehabilitation sciences

#### Expected recruitment start date

2020-08-19, 1399/05/29

#### Expected recruitment end date

2021-02-14, 1399/11/26

#### Actual recruitment start date

empty

#### Actual recruitment end date

empty

#### Trial completion date

empty

## Scientific title

The effect of stabilization exercises plus routine exercises compared with routine exercises alone on lumbar spine stabilizer muscles size, hamstring muscles size and flexibility in soccer players suffering from hamstring muscles strain in dominant sides

## Public title

the effect of stabilization exercises on hamstring muscles strain injuries in soccer players

## Purpose

Treatment

## Inclusion/Exclusion criteria

### Inclusion criteria:

Grade II hamstring strain injury in last year (3 month minimally) The minimum age of the athlete is 18 years The maximum age of the athlete is 30 years

### Exclusion criteria:

History of injury in lower extremity History of surgery in lumbar and lower extremity History of low back pain Shortness of hip flexors Difference of leg length > 1 cm Positive neurological tests Ankle sprain Sensitivity of US gel

## Age

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

## Gender

Male

## Phase

N/A

## Groups that have been masked

*No information*

## Sample size

Target sample size: **20**

## Randomization (investigator's opinion)

Randomized

## Randomization description

Block Randomization: Randomization was performed in three steps. A random sequence was created using the sealed envelope website. Sealed envelopes were then used to conceal random allocation. The created sequence was placed on the registration card and inside the envelope, and one of the envelopes was returned in the order of the participants, and the assigned group was identified. In the randomization process, the person in charge of designing, the sequence of the registration process and check-in and check-out did not interfere and was done by an independent person. The people in the intervention group were received stability exercises and routine exercises.

## 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

Ethics committee of University of social welfare and rehabilitation sciences

##### Street address

kodakyar Ave., daneshjo Blvd.,Evin

##### City

Tehran

##### Province

Tehran

##### Postal code

1985713834

#### Approval date

2017-05-02, 1396/02/12

#### Ethics committee reference number

IR.USWR.REC.1396.213

## Health conditions studied

### 1

#### Description of health condition studied

Status of functional disorder of lower limb

#### ICD-10 code

#### ICD-10 code description

## Primary outcomes

### 1

#### Description

muscle size

#### Timepoint

before intervention, 3 month after beginning of intervention

#### Method of measurement

rehabilitative ultrasound

## Secondary outcomes

### 1

#### Description

muscle flexibility

#### Timepoint

before intervention, 3 month after beginning of intervention

#### Method of measurement

digital inclinometer

## Intervention groups

### 1

#### Description

Intervention group: Stabilization exercises and routine exercises. Stabilization exercises, including local lumbo

pelvic muscle contraction, are performed in different lying, sitting, and standing positions. Local lumbo pelvic muscles is held for 10 seconds, repeated 10 times, and repeated 3 sets. Exercise is done 3 times a week. Each exercise is repeated 10 times. Routine exercises that include plyometric exercise, speed, shooting from the and then dividing the athletes into two groups and performing football tactics for 30 to 40 minutes. Routine exercises are performed every day.

**Category**

Rehabilitation

**2****Description**

Control group: Routine exercises that include plyometric exercise, speed, shooting from the and then dividing the athletes into two groups and performing football tactics for 30 to 40 minutes. Routine exercises are performed every day.

**Category**

Other

**Recruitment centers****1****Recruitment center****Name of recruitment center**

Soccer club

**Full name of responsible person**

Alireza Bayat

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Alvand Ave, Simon Bolival Ave, Ashrafi Esfahani

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**Sponsors / Funding sources****1****Sponsor****Name of organization / entity**

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Prof. Mohammad Ali Mohseni Bandpei

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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**

University of social welfare and rehabilitation sciences

**Proportion provided by this source**

100

**Public or private sector**

Public

**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**

University of social welfare and rehabilitation sciences

**Full name of responsible person**

Mahnaz Emami

**Position**

Researcher/Physiotherapy, PhD candidate

**Latest degree**

Master

**Other areas of specialty/work**

Physiotherapy

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**Web page address****Person responsible for scientific inquiries****Contact****Name of organization / entity**

University of social welfare and rehabilitation sciences

**Full name of responsible person**

Mohammadali Mohseni Bandpei

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Professor/Physiotherapy PhD

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Specialist  
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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

Yes - There is a plan to make this available

### Analytic Code

Yes - There is a plan to make this available

### Data Dictionary

Yes - There is a plan to make this available

### Title and more details about the data/document

All collected deidentified participants data are to be shared.

### When the data will become available and for how long

starting 8 months after publication

### To whom data/document is available

This information is only available for people working in academic institutions

### Under which criteria data/document could be used

Information for reviewing researches may also be provided.

### From where data/document is obtainable

mahnaz\_e55@hotmail.com

### What processes are involved for a request to access data/document

After request, data will sent maximally up to 3 months.

### Comments