

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Evaluation of the effect of sacroiliac joint manipulation on pain ,function and electromyographic activity of vastus medialis and latralis in athletes with patellofemoral pain syndrome

#### Protocol summary

##### Summary

Objectives:To evaluation of the effect of sacroiliac joint manipulation on pain ,function and electromyographic activity of vastus medialis and latralis in athletes with patellofemoral pain syndrome. inclusion criteria: athletes that have anterior or retro-patellar and around knee pain; pain at least as long as 6 month; pain during squat, step up and step down, running and jumping; At least one positive test: eccentric step down test, vastus medialis coordination test, patellar apprehension test. exclusion criteria: pain is due to trauma; acute and subacute neuromuscular disease; history of surgery in the knee. subjects: 28 athletes that aged between 18 to 40 that have anterior knee pain on one side participate in this study, Being an athlete is a measure of the individual's regular schedule for at least 3 sessions per week, each session is 2 hours of practice Interventions: participants divide in two groups, the first group is received manipulation to the sacroiliac joint and second group is not received manipulation but received manipulation position.electromyographic activity(onset and amplitude)of vastus medialis and vastus latralis , pain and functional level of knee joint at both groups is measured before and after by electromyographic device on rock task , VAS and Kujala Patellofemoral Scale.One group the high-velocity low-amplitude (HVLA) manipulation and the other group receive position(placebo) in a single session.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2013122515932N1**

Registration date: **2014-01-30, 1392/11/10**

Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2014-01-30, 1392/11/10

##### Registrant information

###### Name

Alireza Motealleh

###### Name of organization / entity

Shiraz University of Medical Sciences

###### Country

Iran (Islamic Republic of)

###### Phone

+98 71 1626 5108

###### Email address

motealleh@sums.ac.ir

##### Recruitment status

###### Recruitment complete

##### Funding source

Shiraz University of Medical Sciences

##### Expected recruitment start date

2013-12-05, 1392/09/14

##### Expected recruitment end date

2014-02-07, 1392/11/18

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Evaluation of the effect of sacroiliac joint manipulation on pain ,function and electromyographic activity of vastus medialis and latralis in athletes with patellofemoral pain syndrome

##### Public title

Evaluation of the effect of sacroiliac joint manipulation on pain ,function and electromyographic activity of vastus medialis and latralis in athletes with patellofemoral pain syndrome

**Purpose**

Treatment

**Inclusion/Exclusion criteria**

inclusion criteria: athletes that have anterior or retro-patellar and around knee pain; pain at least as long as 6 month; pain during squat, step up and step down, running and jumping; At least one positive test: eccentric step down test, vastus medialis coordination test, patellar apprehension test. exclusion criteria: pain is due to trauma; acute and subacute neuromuscular disease; history of surgery in the knee,postural deformities,osteoporosis

**Age**

From **18 years** old to **40 years** old

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **28**

**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**

Central Building of Shiraz University of Medical Sciences, Zand avenue -shiraz

**City**

shiraz

**Postal code**

1978-71345

**Approval date**

2013-10-12, 1392/07/20

**Ethics committee reference number**

CT-92\_6722

**Health conditions studied****1****Description of health condition studied**

Patellofemoral pain syndrome

**ICD-10 code**

M22.2 , M2

**ICD-10 code description**

Patellofemoral disorders, Chondromalacia patellae

**Primary outcomes****1****Description**

electromyographic activity(onset and amplitude) of vastus medialis and latralis in heel rise task

**Timepoint**

before\_ after

**Method of measurement**

electromyographic device

**2****Description**

pain intensity

**Timepoint**

before- after

**Method of measurement**

Visual analoug scale

**Secondary outcomes****1****Description**

functional level of knee

**Timepoint**

before - after

**Method of measurement**

Kujala Patellofemoral Scale

**Intervention groups****1****Description**

Intervention:in the intervention group,the patient is supine on the bed and the therapist bends contralateral to the side which is to be manipulated.The patient is passively move into side bending. toward the side to be manipulated. The patient interlock the fingers behind his or her head. The therapist passively rotate the patient, and then deliver a quick thrust to the Anterior Superior Iliac Spine (ASIS) in a posterior and inferior direction. Treatment is one session.Then the patient to br evaluated immediately and the information to be recorded.

**Category**

Rehabilitation

## 2

### Description

Control group:the patient is given sacroiliac manipulation position But the technique should not be placed.Then the patient to be evaluated immediately and the information to be recorded

### Category

Rehabilitation

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Rehabilitation Collage of Shiraz Medical Science University

##### Full name of responsible person

Ali Reza Motealeh

##### Street address

NO.32, Abiverdi 1 Avenue, Chamran Blvd, Shiraz ,Fars

##### City

shiraz

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Shiraz University of Medical Sciences

##### Full name of responsible person

Dr.Hatam

##### Street address

Central Building of Shiraz University of Medical Sciences ,Zand avenue ,Shiraz

##### City

shiraz

#### Grant name

#### Grant code / Reference number

#### Is the source of funding the same sponsor organization/entity?

Yes

#### Title of funding source

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

Elham Gheissary

##### Position

Master science student of Physical Therapy

##### Other areas of specialty/work

##### Street address

Abiverdi1 avenue, School of Rehabilitation Sciences

##### City

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## Person responsible for scientific inquiries

#### Contact

##### Name of organization / entity

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##### Full name of responsible person

Ali Reza Motealeh

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## Person responsible for updating data

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## **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*