

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Effects of ankle joint taping on force plate system kinetic changes and lower limb functional activity in athletes with chronic ankle sprain in perturbation condition

#### Protocol summary

##### Study aim

The aim of this study is to evaluate effects of ankle joint taping on force plate system kinetic changes and lower limb functional activity in athletes with chronic ankle sprain in perturbation condition

##### Design

30 athletes with chronic ankle sprain participate in this study and single blinded randomly assigned to two intervention and control groups with block stratified randomization using windows software.

##### Settings and conduct

The volunteer athletes with chronic ankle sprain referred to Neuromuscular Rehabilitation Research Center of Semnan University of Medical Sciences, participate in the study.

##### Participants/Inclusion and exclusion criteria

Inclusion criteria for this study are full consent for participating; 20-35 years old; have regular training sessions 3 days a week and from 6 months before the study at least; have at least one giving way after the first lateral ankle sprain; lower than 4 visual analogue scale score. Exclusion criteria are musculoskeletal deficit like bow leg, knock knee, flat foot or pes cavus; direct trauma to ankle or surgery; both ankles lateral sprain; pregnancy; body mass index equal or more than 30 kilograms per square meter; pathology in ankle such as cellulitis, cutting, ekimoz or osteomyelitis; rheumatic disease like rheumatoid arthritis.

##### Intervention groups

In the intervention group taping will be applied on ankle periarticular bones for mechanical correction with 20%, 70% and 100% tensions in 3 sessions during 9 days. In the control group taping without tension will be applied on ankle periarticular bones exactly like the intervention group in 3 sessions during 9 days.

##### Main outcome variables

Vertical jump measure, power, peak velocity, time to

reach maximum force and ground reaction force will be assessed in both groups before and after 9 days intervention.

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20150602022539N10**

Registration date: **2020-08-22, 1399/06/01**

Registration timing: **prospective**

Last update: **2020-08-22, 1399/06/01**

Update count: **0**

##### Registration date

2020-08-22, 1399/06/01

##### Registrant information

##### Name

Ziaeddin Safavi Farokhi

##### Name of organization / entity

Semnan University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 23 3365 4180

##### Email address

zsafavi@semums.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2020-09-22, 1399/07/01

##### Expected recruitment end date

2020-12-21, 1399/10/01

##### Actual recruitment start date

empty

**Actual recruitment end date**  
empty

**Trial completion date**  
empty

**Scientific title**  
Effects of ankle joint taping on force plate system kinetic changes and lower limb functional activity in athletes with chronic ankle sprain in perturbation condition

**Public title**  
Effects of ankle joint taping on force plate system kinetic changes and lower limb functional activity in athletes with chronic ankle sprain in perturbation condition

**Purpose**  
Treatment

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
Participation with willingness Age between 20 and 35  
Have training sessions constantly 3 days a week and from 6 month past at least Have at least one giving way after the first time lateral ankle sprain less than 4 visual analogue scale score  
**Exclusion criteria:**  
Musculoskeletal deficit like bow leg, knock knee, flat foot or pes cavus Direct trauma to ankle or surgery Both ankles lateral sprain Pregnancy Body mass index equal or more than 30 kg/m<sup>2</sup> Pathology in ankle such as cellulitis, cutting, ekimoz or osteomyelitis Rheumatic disease like rheumatoid arthritis

**Age**  
From **20 years** old to **35 years** old

**Gender**  
Male

**Phase**  
N/A

**Groups that have been masked**

- Participant
- Data analyser

**Sample size**  
Target sample size: **30**

**Randomization (investigator's opinion)**  
Randomized

**Randomization description**  
Blocking randomization

**Blinding (investigator's opinion)**  
Single blinded

**Blinding description**  
In this study the participants and statistical analyzer will be blind.

**Placebo**  
Used

**Assignment**  
Parallel

**Other design features**

**Secondary Ids**  
empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Ethics committee of Semnan University of Medical Sciences

##### Street address

Semnan University of Medical Sciences, Kilometer 5 Damghan road, Semnan

##### City

Semnan

##### Province

Semnan

##### Postal code

3519899951

#### Approval date

2020-08-09, 1399/05/19

#### Ethics committee reference number

IR.SEMUMS.REC.1399.153

## Health conditions studied

### 1

#### Description of health condition studied

Chronic ankle sprain

#### ICD-10 code

S93

#### ICD-10 code description

Dislocation and sprain of joints and ligaments at ankle, foot and toe level

## Primary outcomes

### 1

#### Description

Vertical jump measure

#### Timepoint

Before and after 9 days intervention

#### Method of measurement

Motion analysis system

### 2

#### Description

Power

#### Timepoint

Before and after 9 days intervention

#### Method of measurement

Force plate system

### 3

#### Description

Peak velocity

#### Timepoint

Before and after 9 days intervention

#### Method of measurement

Force plate system

#### 4

**Description**

Time to reach maximum force

**Timepoint**

Before and after 9 days intervention

**Method of measurement**

Force plate system

#### 5

**Description**

Ground reaction force

**Timepoint**

Before and after 9 days intervention

**Method of measurement**

Force plate system

### Secondary outcomes

empty

### Intervention groups

#### 1

**Description**

Intervention group: 100, 70 and 20 percent tension taping on ankle bones in 3 sessions during 9 days

**Category**

Rehabilitation

#### 2

**Description**

Control group: taping without tension on ankle bones in 3 sessions during 9 days

**Category**

Rehabilitation

### Recruitment centers

#### 1

**Recruitment center****Name of recruitment center**

Neuromuscular rehabilitation research center of Semnan university of medical sciences

**Full name of responsible person**

Ziaeddin Safavi Farokhi

**Street address**

In front of Helal Ahmar, Mashahir square, Semnan

**City**

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3513138111

**Phone**

+98 23 3365 4180

**Email**

ziasafavi@yahoo.com

### Sponsors / Funding sources

#### 1

**Sponsor****Name of organization / entity**

Semnan University of Medical Sciences

**Full name of responsible person**

Parviz Kuhkhahi

**Street address**

in front of Helal Ahmar, Mashahir Square, Semnan

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p-kokha@yahoo.com

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

No

**Title of funding source**

Vice chancellor for research, Semnan University of Medical 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**

Semnan University of Medical Sciences

**Full name of responsible person**

Ziaeddin Safavi Farokhi

**Position**

Ph.D, Assistant Professor

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Physiotherapy

**Street address**

Rehabilitation faculty, Semnan University of Medical Sciences, Kilometer 5 of Damghan Road, Semnan

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**Person responsible for scientific inquiries**

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**Position**

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Ph.D.

**Other areas of specialty/work**

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**Person responsible for updating data**

**Contact**

**Name of organization / entity**

Semnan University of Medical Sciences

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**Position**

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**Email**

ziasafavi@yahoo.com

**Sharing plan**

**Deidentified Individual Participant Data Set (IPD)**

Undecided - It is not yet known if there will be a plan to make this available

**Study Protocol**

Undecided - It is not yet known if there will be a plan to make this available

**Statistical Analysis Plan**

Not applicable

**Informed Consent Form**

Undecided - It is not yet known if there will be a plan to make this available

**Clinical Study Report**

Undecided - It is not yet known if there will be a plan to make this available

**Analytic Code**

Not applicable

**Data Dictionary**

Undecided - It is not yet known if there will be a plan to make this available