

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

24 Jun 2026

### Comparison of the effect of eight weeks plyometric training program on different levels on balance, strength and functional movement of lower extremity non-athletic girls with ankle sprain

#### Protocol summary

##### Study aim

Comparison of the effect of eight weeks plyometric training program on different levels on balance, strength and functional movement of lower extremity non-athletic girls with ankle sprain

##### Design

Subjects were divided into 3 groups of 10 control, experimental hopping and experimental dip jump. Subjects will be selected after completing the Cumberland Ankle Functional Instability Questionnaire form.

##### Settings and conduct

Eight weeks of plyometric training is provided with both the Hoping and Deep Jump training protocols at the gym. Then, to evaluate the subjects before and after the training period, the Y balance tests were used to evaluate the balance, vertical jump test was used to evaluate the low explosive power of the trunk, and the tri-leap, lateral jump and 8-jump jump tests. The lower extremity motor function of subjects is used.

##### Participants/Inclusion and exclusion criteria

Entry requirements: Non-participation in sports for the past 2 years, age range between 18-30 years and ankle sprain experience in the past six months Exclusion criteria: Physician's diagnosis of non-jumping exercises, injuries other than ankle sprains, other lower extremity injuries

##### Intervention groups

Intervention groups included control group, Hoping group and Deep jump group. Eight weeks of Hoping Exercise 3 sessions per week with a range of 70 to 130 foot contact volume training in the Hoping Experimental group, and eight weeks of Deep Jump training and 3 sessions of 1 hour per week for the Deep Jump Experimental group. . The control group will start their daily life during these eight weeks.

##### Main outcome variables

Both exercises may improve balance, strength, and lower extremity motor function, and may be used to rehabilitate and improve ankle sprains and return to daily activities.

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20200125046257N1**  
Registration date: **2020-03-06, 1398/12/16**  
Registration timing: **prospective**

Last update: **2020-03-06, 1398/12/16**

Update count: **0**

##### Registration date

2020-03-06, 1398/12/16

##### Registrant information

##### Name

Fatemeh Mohamadzadeh

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 8821 7344

##### Email address

fa.mdz90@gmail.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2020-04-17, 1399/01/29

##### Expected recruitment end date

2020-05-12, 1399/02/23

##### Actual recruitment start date

empty

**Actual recruitment end date**  
empty

**Trial completion date**  
empty

**Scientific title**  
Comparison of the effect of eight weeks plyometric training program on different levels on balance, strength and functional movement of lower extremity non-athletic girls with ankle sprain

**Public title**  
Comparison of the effect of eight weeks plyometric training program on different levels on balance, strength and functional movement of lower extremity

**Purpose**  
Supportive

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
Failure to participate in sports activities for the past 2 years Ankle sprain experience in the last six months Age range between 18-30 years  
**Exclusion criteria:**  
Physician's diagnosis of non-movement and jumping exercises Having injuries other than ankle sprains Other injuries to the lower limbs

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

**Gender**  
Female

**Phase**  
N/A

**Groups that have been masked**  
*No information*

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

**Randomization (investigator's opinion)**  
N/A

**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**  
Ethics Committee of Shahid Beheshti University  
**Street address**  
No. 32, Ladan Alley., Sheikh Baha'i North Ave., Mulla

Sadra Ave., Vanak Square

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19917-45343

**Approval date**  
2020-02-21, 1398/12/02

**Ethics committee reference number**  
IR.SBU.REC.1398.033

## Health conditions studied

### 1

#### Description of health condition studied

Ankle Sprain

#### ICD-10 code

#### ICD-10 code description

## Primary outcomes

### 1

#### Description

Balance, Power and Motor function Lower extremity

#### Timepoint

Before the start of the training period - 2 days after the end of the training period

#### Method of measurement

Y balance test for balance evaluation, vertical jump test for low trunk explosive power test, and triple jump, lateral jump, and figure 8 jump tests to evaluate lower extremity motor function.

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Intervention group: First intervention group: Hoping group

#### Category

Rehabilitation

### 2

#### Description

Intervention group: Intervention group II: Deep jump group

#### Category

Rehabilitation

### 3

#### Description

Control group: Control

**Category**

Rehabilitation

**Type of organization providing the funding**

Persons

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

Ariaman Gym

**Full name of responsible person**

Fatemeh Mohamadzadeh

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No 66, North Sheikh Baha'i St, Mullasadra Ave

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

Islamic Azad University

**Full name of responsible person**

DR. Hamid Tabatabaei

**Street address**

No 9944, Damavand St, Imam Hossein Square

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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**

Islamic Azad University

**Proportion provided by this source**

100

**Public or private sector**

Private

**Domestic or foreign origin**

Domestic

**Category of foreign source of funding**

empty

**Country of origin****Person responsible for general inquiries****Contact****Name of organization / entity**

Islamic Azad University

**Full name of responsible person**

Dr. Hamid Tabatabaei

**Position**

Assistant Professor

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Others

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

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Assistant Professor

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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**

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**Position**

MSc of Sport injuries and Corrective exercise

**Latest degree**

Master

**Other areas of specialty/work**

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## 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**

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

**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**

Not applicable