Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 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

City

Tehran

Province

Tehran

Postal code

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

Recruitment centers

1

Recruitment center
Name of recruitment center
Ariaman Gym
Full name of responsible person
Fatemeh Mohamadzadeh
Street address
No 66, North Sheikh Baha'i St, Mullasadra Ave
City
Tehran
Province
Tehran
Postal code
19917-45343
Phone
+98 21 8821 7344
Email
fa.mdz90@gmail.com

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
City
Tehran
Province
Tehran
Postal code
17117-34353
Phone
+98 21 3379 7776
Email
tabatabaei@doctor.com
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
Type of organization providing the funding
Persons

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
Street address
No 19, Mahour Alley, Thirty-fourth Alley, South misaq, Bahman Square
City
Tehran
Province
Tehran
Postal code
15847-15414
Phone
+98 21 5554 5041
Email
tabatabaei@doctor.com

Person responsible for scientific 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
Street address
No 19, Mahour Alley, Thirty-fourth Alley, South misaq, Bahman Square
City
Tehran
Province
Tehran
Postal code
15847-15414
Phone
+98 21 5554 5041
Email
tabatabaei@doctor.com

Person responsible for updating data

Contact
Name of organization / entity

Islamic Azad University

Full name of responsible person

Fatemeh Mohamadzadeh

Position

MSc of Sport injuries and Corrective exercise

Latest degree

Master

Other areas of specialty/work

Others

Street address

No. 32, Ladan Alley., Sheikh Baha'i North Ave., Mulla Sadra Ave., Vanak Square

City

Tehran

Province

Tehran

Postal code

19917-45343

Phone

+98 21 8821 7344

Fax

Email

fa.mdz90@gmail.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

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