

Clinical Trial Protocol

Iranian Registry of Clinical Trials

17 Sep 2026

Effect of feedback plyometric exercise on Electromyographic activity of lower limb muscle in female with dynamic knee valgus

Protocol summary

Study aim

The purpose of this study is to investigate the effect of feedback plyometric exercise on kinematics and electromyographic activity of some of the selected muscles of the lower limb.

Design

Clinical trial with control group, with parallel groups, single blinded, randomized

Settings and conduct

The tests will be carried out by the specialists at the Sport Rehabilitation Laboratory of Bu-Ali Sina University in Hamadan, and then interventions and exercises will take place in the gym. During the testing, the participant will be unaware of the main purpose of the research.

Participants/Inclusion and exclusion criteria

The inclusion criteria included: age range 16 to 26 years, having knee dynamic valgus angle greater than 12 degrees, having at least two years of regular exercise history, and exit criteria including history of mechanical back pain in the past year, history of any damage in the past six months, history of surgery Knee and ankle.

Intervention groups

feedback plyometric exercise group, control group

Main outcome variables

Disorder in muscle activity; anterior cruciate ligament injury; knee and ankle injury

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190224042827N1**

Registration date: **2019-05-12, 1398/02/22**

Registration timing: **retrospective**

Last update: **2019-05-12, 1398/02/22**

Update count: **0**

Registration date

2019-05-12, 1398/02/22

Registrant information

Name

Farzane Ramezani

Name of organization / entity

Bu Ali Sina University

Country

Iran (Islamic Republic of)

Phone

+98 81 3838 1423

Email address

f.ramezani@phe.basu.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-03-16, 1397/12/25

Expected recruitment end date

2019-04-20, 1398/01/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of feedback plyometric exercise on Electromyographic activity of lower limb muscle in female with dynamic knee valgus

Public title

The effect of feedback pleometric exercises on muscle electromyographic activity

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Having a knee dynamic valgus angle of more than 12 degrees Having at least two years of regular sports experience

Exclusion criteria:
History of mechanical back pain in the last year History of any damage in the last six months History of knee surgery History of ankle surgery

Age
From **15 years** old to **26 years** old

Gender
Female

Phase
N/A

Groups that have been masked

- Participant
- Outcome assessor
- Data analyser

Sample size
Target sample size: **26**

Randomization (investigator's opinion)
Randomized

Randomization description
Random Number Generator software is randommized and then assigned to double groups based on SNOSE allocation hiding.

Blinding (investigator's opinion)
Single blinded

Blinding description
Participants

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids
empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics committee of Hamedan University of Medical Sciences

Street address
Bu Ali Sina University, Abu Taleb St, Modares Quarter, Hamedan

City
Hamedan

Province
Hamadan

Postal code
3869565178

Approval date
2019-03-13, 1397/12/22

Ethics committee reference number
IR.UMSHA.REC.1397.1000

Health conditions studied

1

Description of health condition studied

Dynamic Knee Valgus

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Electromyographic activity of lower limb muscle

Timepoint

Before the intervention begins, One day after the end of the intervention

Method of measurement

Electromyographic device

Secondary outcomes

1

Description

impairment of muscle activity

Timepoint

Before and after intervention

Method of measurement

Surface Electromyography Device Model Data Log p3 X8

Intervention groups

1

Description

Intervention group: feedback plyometric exercise, Exercises will be 3 sessions of 2 hours per week for 8 weeks, and equipment will be used for exercises such as mirrors, stairs and cones.

Category

Rehabilitation

2

Description

Control group: No Intervention

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

committee of volleyball and basketball of Hamedan

Full name of responsible person

Farzane Ramezani

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Bu Ali Sina University, Abu Taleb St, Modares Quarter,
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Bu Ali Sina University

Full name of responsible person

Farzane Saki

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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

Bu Ali Sina University

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

Bu Ali Sina University

Full name of responsible person

Frazane Ramezani

Position

Student

Latest degree

Bachelor

Other areas of specialty/work

Sport Rehabilitation

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Person responsible for updating data

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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

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

Data Dictionary

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