Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The Effect of a Combination of Short Foot Exercise and Three-Dimensional Ankle Exercises on Blance, Proprioception and Foot Pressure Variables in People with Flat Foot

Protocol summary

Study aim
The Effect of a Combination of Short Foot Exercise and Three- Dimensional Ankle Exercises on Blance, Proprioception and Foot Pressure Variables in People with Flat Foot

Design
Clinical trial with two training group, with parallel groups, single blinded, randomized

Settings and conduct
The tests will be taken by a specialist in the sports rehabilitation laboratory of Razi University. And then intervention and exercises will take place in the sports hall of this university. In such a way that the outcome assessors will not know about the allocation of study groups and the reason for their presence in this research.

Participants/Inclusion and exclusion criteria
Inclusion criteria: age between 18 and 25 years old; not having history of injury or surgery of the lower limbs; the indicator of navicular bone drop be more than 10 mm. non-entry criteria: presence or creation of pain during the study, and not continuously attending the exercises (absence in the two consecutive sessions or absence in three sessions during the period); the indicator of navicular bone drop be less than 10 mm.

Intervention groups
The intervention group of short foot exercises which includes the release of plantar fasciitis and doing short foot exercises, the intervention group of the combination of short foot and 3D ankle exercises including the release of plantar fasciitis and the release of peroneal muscles. Both groups will perform balance, strength, proprioceptive, short foot and three-dimensional exercises for 8 weeks and 1-hour sessions for 3 weeks. Equipment such as foam roller, elastic band, balance board and marbles will be used to perform the exercises.

Main outcome variables
Lower body deformities

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20221215056826N1**
Registration date: **2022-12-28, 1401/10/07**
Registration timing: **registered_while_recruiting**

Last update: **2022-12-28, 1401/10/07**
Update count: **0**

Registration date
2022-12-28, 1401/10/07

Registrant information

Name
Yasaman Ghadiri

Name of organization / entity
Boali Sina University

Country
Iran (Islamic Republic of)

Phone
+98 81 3838 1423

Email address
y.ghadiri@phe.basu.ac.ir

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2022-12-24, 1401/10/03

Expected recruitment end date
2023-01-04, 1401/10/14

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date

empty

Scientific title
The Effect of a Combination of Short Foot Exercise and Three- Dimensional Ankle Exercises on Blance, Proprioception and Foot Pressure Variables in People with Flat Foot

Public title
The Effect of Short Foot Exercise and Three- Dimensional Ankle Exercises in People with Flat Foot

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Age between 18 and 25 years old Not having history of injury or surgery of the lower limbs The indicator of navicular Bone drop be more than 10 mm

Exclusion criteria:
Presence or creation of pain during the study And not continuously attending the exercises(absence in the two consecutive sessions or absene in three sessions during the period) The indicator of navicular Bone drop be less than 10 mm

Age
From **18 years** old to **25 years** old

Gender
Female

Phase
N/A

Groups that have been masked

- Participant

Sample size
Target sample size: **30**

Randomization (investigator's opinion)
Randomized

Randomization description
Randomization is done based on the Random Number Generator software, and they will be assigned to double groups based on the allocation concealment using the SNOSE method. The randomization of subjects is done in two stages. First, each of the subjects chooses a number between 1-30 using a lottery, then using the Random number generator software, fifteen random numbers are selected between the numbers 1-30, and according to the generated numbers and the selected numbers, the subjects are divided into two groups.

Blinding (investigator's opinion)
Single blinded

Blinding description
These people will be unaware of the purpose of the research, the allocation of study groups and the reason for their presence in the laboratory. And they only evaluate the variables and record their observations. The blinding of the participants will be done in such a way that each group will do their own exercises and in order to achieve the blinding, the members of the two groups will be present in the hall to receive the exercises on two different days.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics committee of Bu Ali Sina University

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

City
Hamedan

Province
Hamadan

Postal code
3869565178

Approval date
2022-03-08, 1400/12/17

Ethics committee reference number
IR.BASU.REC.1401.025

Health conditions studied

1

Description of health condition studied
Flat Foot

ICD-10 code
M21.4

ICD-10 code description
M21.4

Primary outcomes

1

Description
Navicular drop, Y balance, proprioception, strength, function, plantar pressure distribution, postural fluctuations, earth reaction force

Timepoint
Before the intervention begins, one day after the end of the intervention

Method of measurement
Brody's method, Y balance device, inclinometer, hand dynamometer, tape measure, foot scan machine

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group one: short foot exercises, exercises for 8 weeks and 3 sessions of 1 hour per week. Equipment such as foam roller, balance board, elastic band, small glass stones will be used. The training protocol includes plantar fasciitis release, short foot exercises, strength, balance, and proprioceptive exercises.

Category
Rehabilitation

2

Description
Intervention group two: the combination of short foot and three- dimensional ankle exercises, the exercises will be for 8 weeks and 3 sessions of 1 hour each week. Equipment such as foam roller, balance board, elastic band, small glass stones will be used. the training protocol includes plantar fasciitis release, peroneal release, short foot and three-dimensional exercises, strength, balance, and proprioception.

Category
Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center
Kermanshah province General Administration of sport

Full name of responsible person
Yasaman Ghadiri

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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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f.sport2008@gmail.com

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
Bo Ali Sina University

Full name of responsible person
Yasaman Ghadiri

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