

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Comparison of the effect of ankle exercises with global exercises(ankle and hip)on the navicular drop and postural control of the foot in subjects with flexible flat foot

#### Protocol summary

##### Study aim

Determining and comparing the effect of ankle exercises with global exercises (ankle and hip) on navicular drop and postural control in people with flexible flat foot

##### Design

A clinical trial study, with simple and accessible sampling, without blinding will be performed on 30 people with flexible flat foot.

##### Settings and conduct

This randomized clinical trial of Zahedan University of Medical Sciences 1400 in Mashhad University of Medical Sciences will be performed without blinding through simple and available sampling

##### Participants/Inclusion and exclusion criteria

Participants are in the age group of 19 to 30 years, positive navicular drop test , no history of fractures and dislocations in the lower extremities, no history of rheumatoid, neurological, respiratory disorders, cardiovascular disorders, No pregnancy, no history of diabetes , no deformity in the lower extremities, approved by an orthopedist

##### Intervention groups

Ankle exercises group and Global exercises group (ankle and hip)

##### Main outcome variables

Determining and comparing the amount of navicular drop and postural control variables (mean center of pressure level, anterior-posterior deviations, internal-external deviations and mean velocity of pressure center fluctuations) in the group of ankle exercises and global exercises (ankle and hip)

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20090210001675N16**

Registration date: **2021-07-20, 1400/04/29**

Registration timing: **prospective**

Last update: **2021-07-20, 1400/04/29**

Update count: **0**

##### Registration date

2021-07-20, 1400/04/29

##### Registrant information

###### Name

Asghar Akbari

###### Name of organization / entity

Zahedan University of Medical Sciences

###### Country

Iran (Islamic Republic of)

###### Phone

+98 54 1322 8445

###### Email address

akbaria@zdmu.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2021-08-20, 1400/05/29

##### Expected recruitment end date

2021-12-05, 1400/09/14

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Comparison of the effect of ankle exercises with global exercises(ankle and hip)on the navicular drop and

postural control of the foot in subjects with flexible flat foot

## Public title

Comparison of the effect of ankle exercises with global exercises(ankle and hip)in subjects with flexible flat foot

## Purpose

Treatment

## Inclusion/Exclusion criteria

### Inclusion criteria:

People in the age group of 19 to 30 years Positive navicular drop test No history of fracture, dislocation of the lower limb No history of lower limb surgery No history of rheumatoid and neurological diseases No history of diabetes No pregnancy No respiratory disorders Lack of deformity in the lower extremities No cardiovascular disorders Approved by an orthopedic specialist

### Exclusion criteria:

People with flexible flat foot who have been absent for more than three consecutive treatment sessions Receiving or performing other treatments while studying

## Age

From **19 years** old to **30 years** old

## Gender

Both

## Phase

N/A

## Groups that have been masked

*No information*

## Sample size

Target sample size: **30**

## Randomization (investigator's opinion)

Randomized

## Randomization description

Individuals will be randomly divided into two groups by lottery

## 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 Zahedan University of Medical Sciences

##### Street address

Dr. Hesabi Square, Janat Blvd., Zahedan University of Medical Sciences

##### City

Zahedan

#### Province

Sistan-va-Balouchestan

#### Postal code

9816843463

#### Approval date

2021-06-20, 1400/03/30

#### Ethics committee reference number

IR.ZAUMS.RES.1400.121

## Health conditions studied

### 1

#### Description of health condition studied

Flexible flatfoot

#### ICD-10 code

M21.4

#### ICD-10 code description

Flat foot [pes planus] (acquired)

## Primary outcomes

### 1

#### Description

Drop Navicular

#### Timepoint

Before intervention, After the intervention(4 week), 4weeks after finishing of the intervention

#### Method of measurement

ruler

### 2

#### Description

The average area of the center of pressure of the sole of the foot

#### Timepoint

Before intervention, After the intervention(4 week), 4weeks after finishing of the intervention

#### Method of measurement

force plate

### 3

#### Description

Mean anterior-posterior displacement

#### Timepoint

Before intervention, After the intervention(4 week), 4weeks after finishing of the intervention

#### Method of measurement

force plate

### 4

#### Description

Mean internal-external displacement

#### Timepoint

Before intervention, After the intervention(4 week), 4weeks after finishing of the intervention

#### Method of measurement

force plate

## 5

### Description

Average speed of pressure center oscillations

### Timepoint

Before intervention, After the intervention(4 week),  
4weeks after finishing of the intervention

### Method of measurement

force plate

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Intervention group: Global exercises(ankle and hip), 12 sessions for 4 consecutive weeks, 3 times a week, 20 to 30 minutes each session, which includes training and exercises.

#### Category

Rehabilitation

### 2

#### Description

Control group: Ankle exercises, 12 training sessions for 4 consecutive weeks, 3 times a week, 20 to 30 minutes each session, which includes training and doing exercises.

#### Category

Rehabilitation

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Physiotherapy clinic of Ghaem hospital in Mashhad

##### Full name of responsible person

Dr. Asghar Akbari

##### Street address

Ahmadabad St., Ghaem Hospital

##### City

Mashhad

##### Province

Razavi Khorasan

##### Postal code

91766-99199

##### Phone

+98 51 3845 3239

##### Fax

##### Email

Akbari\_as@yahoo.com

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Zahedan University of Medical Sciences

##### Full name of responsible person

Dr. Noor Mohammad Bakhshaei I

##### Street address

Dr. Hesabi Square, Gent Boulevard, Zahedan  
University of Medical Sciences, Vice Chancellor for  
Research

##### City

Zahedan

##### Province

Sistan-va-Balouchestan

##### Postal code

9816743463

##### Phone

+98 54 5715 3329

##### Email

a.akbari@zaums.ac.ir

##### Web page address

##### Grant name

##### Grant code / Reference number

##### Is the source of funding the same sponsor organization/entity?

Yes

##### Title of funding source

Zahedan 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

Zahedan University of Medical Sciences

##### Full name of responsible person

Dr.Asghar Akbari

##### Position

Phd in Physiotherapy, Associate professor, Director of  
the Department of physiotherapy Zahedan Unive

##### Latest degree

Ph.D.

##### Other areas of specialty/work

Physiotherapy

##### Street address

Department of Physiotherapy, School of Rehabilitation  
Sciences, Razmejo-Moghadam Laboratory, Ayatoal

##### City

Zahedan

**Province**  
Sistan-va-Balouchestan  
**Postal code**  
64855-98136  
**Phone**  
+98 54 1322 8445  
**Fax**  
+98 54 1322 8445  
**Email**  
akbaria@zdmu.ac.ir

Rehabilitation Sciences, Razmojomoghadam  
Laboratory, Ayatollah Kafami St.

**City**  
Zahedan  
**Province**  
Sistan-va-Balouchestan  
**Postal code**  
64855-98136  
**Phone**  
0098 46753342  
**Email**  
akbari\_as@yahoo.com

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**  
Zahedan University of Medical Sciences  
**Full name of responsible person**  
Asghar Akbari  
**Position**  
Associate professor  
**Latest degree**  
Ph.D.  
**Other areas of specialty/work**  
Physiotherapy  
**Street address**  
Department of Physiotherapy, Faculty of  
Rehabilitation Sciences, Razmojomoghadam  
Laboratory, Ayatollah Kafami St.  
**City**  
Zahedan  
**Province**  
Sistan-va-Balouchestan  
**Postal code**  
64855-98136  
**Phone**  
0098 4675334254  
**Email**  
akbari\_as@yahoo.com

## Person responsible for updating data

### Contact

**Name of organization / entity**  
Zahedan University of Medical Sciences  
**Full name of responsible person**  
Asghar Akbari  
**Position**  
Associate professor  
**Latest degree**  
Ph.D.  
**Other areas of specialty/work**  
Physiotherapy  
**Street address**  
Department of Physiotherapy, Faculty of

## Sharing plan

### Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

### Study Protocol

Yes - There is a plan to make this available

### Statistical Analysis Plan

Yes - There is a plan to make this available

### Informed Consent Form

Yes - There is a plan to make this available

### Clinical Study Report

Not applicable

### Analytic Code

Not applicable

### Data Dictionary

Not applicable

### Title and more details about the data/document

All data can be shared after unidentifiable individuals.

### When the data will become available and for how long

2 months after the results are published

### To whom data/document is available

Researchers working in academic and scientific institutions

### Under which criteria data/document could be used

All data can be made available to researchers after unidentifiable the participants, and any other analysis of the data and any use for research and therapeutic purposes of this study is allowed.

### From where data/document is obtainable

Dr. Asghar Akbari Address: Ayatollah Kafami St., Razmojomoghadam Laboratory, Faculty of Rehabilitation Sciences, Department of Physiotherapy. City: Zahedan. Sistan and Baluchestan Province. Country: Islamic Republic of Iran. Postal Code: 6485598136 Tel: 0098 54 46753342

### What processes are involved for a request to access data/document

After receiving the message from the applicant and reviewing the application conditions, the required information will be sent to the person at the earliest opportunity.

### Comments