

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

18 Jun 2026

### The effect of static and dynamic balance exercises in water and drought on the balance performance of athletes with chronic ankle sprain

#### Protocol summary

##### Study aim

The aim of this study was to evaluate the effect of static and dynamic balance exercises in water and land on the balance performance of female athletes with chronic ankle sprain. In this study, 30 female athletes from Hamedan were selected randomly and divided into 2 groups of 15 exercises in water And land. The study was semi-experimental and the subjects performed six weeks of equilibrium exercises using such as mini trampolines and balance boards, etc., in two water and land conditions. Finally, the aim of this comparative study Static and dynamic balance of athletes in two water and land conditions using balance exercises.

##### Design

In this study, 30 athletes with chronic ankle sprain who are eligible to enter the study are selected. Participants are randomly divided into 2 exercises on land and water. Each group includes 15 people.

##### Settings and conduct

balance tests and anthropometric characteristics of the subjects will be collected at the Bu-Ali Sina University Rehabilitation Laboratory, and balance exercises will be carried out by subjects using equilibrium equipment in the hall and pool environment.

##### Participants/Inclusion and exclusion criteria

The criteria for entering the subjects include: ages 20-30 years; a history of at least one acute ankle sprain; and then a history of at least twice the chronic ankle sprain; Earning a score below 27 from the Cumberland Inventory; as well as none of the subjects in the last 3 months suffered from acute ankle sprain. The criteria for eliminating the subjects from the study were: symptoms of acute sprain such as inflammation in the past six weeks, any abnormality in the lower limb or injury in other areas of the body or people with skin and infectious diseases, heart failure, digestive disorders And kidney, open wounds, epilepsy, and allergies.

##### Intervention groups

Subjects are divided into two training groups in water

and drought and the effects of equilibrium exercises on their static and dynamic equilibrium are evaluated.

##### Main outcome variables

1 - Exercise on the ground has a positive effect on the static balance of athletes with chronic ankle sprain. 2- Exercise on the dry surface has a positive effect on the dynamic balance of athletes with chronic ankle sprain. 3- Water exercises have a positive effect on the static balance of athletes with chronic ankle sprain. 4. Water exercises have a positive effect on the dynamic balance of athletes with chronic ankle sprain. 5. Equilibrium exercises in the water environment are more effective than static athletes with ankle sprain. 6. Equilibrium exercises in the water environment relative to dryness have a greater effect on dynamic equilibrium of athletes with chronic ankle sprain

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20170615034552N2**

Registration date: **2018-02-08, 1396/11/19**

Registration timing: **retrospective**

Last update: **2018-02-08, 1396/11/19**

Update count: **0**

##### Registration date

2018-02-08, 1396/11/19

##### Registrant information

##### Name

کرامی karami

##### Name of organization / entity

Bu-ali sina univercity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 81 3254 8748

**Email address**  
s.karami@phe.basu.ac.ir

**Recruitment status**  
**Recruitment complete**

**Funding source**  
دانشکده تربیت بدنی دانشگاه بوعلی سینای همدان مخارج را تامین کردند.

**Expected recruitment start date**  
2017-01-15, 1395/10/26

**Expected recruitment end date**  
2017-03-16, 1395/12/26

**Actual recruitment start date**  
2017-01-15, 1395/10/26

**Actual recruitment end date**  
2017-03-16, 1395/12/26

**Trial completion date**  
empty

**Scientific title**  
The effect of static and dynamic balance exercises in water and drought on the balance performance of athletes with chronic ankle sprain

**Public title**  
The effect of balance exercises on ankle sprain

**Purpose**  
Treatment

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
Inclusion criteria: Age range 20 to 30 years A minimum of once acute ankle sprain and then a history of at least twice chronic chronic anesthesia The score below 27 from the Cumberland questionnaire none of the subjects experienced acute ankle sprain in the last 3 months  
**Exclusion criteria:**  
Signs of acute ankle sprain in the last 6 weeks any abdominal discomfort or injury in other areas of the body people with skin and infectious diseases; heart failure Digestive and renal disorders People with open epilepsy and various sensitivities

**Age**  
From **20 years** old to **30 years** old

**Gender**  
Female

**Phase**  
N/A

**Groups that have been masked**

- Participant
- Investigator
- Outcome assessor
- Data analyser

**Sample size**  
Target sample size: **30**  
Actual sample size reached: **30**

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

**Randomization description**

**Blinding (investigator's opinion)**  
Double blinded

**Blinding description**  
At the time of the initial test before the start of the training period, as well as the secondary test, after the training, the researcher did not intervene in any tests, and the tests were conducted by people who did not know the design. The subjects also acted as if the tests were functional and completely inactive. The person who analyzed the data did not know about the study and generally examined the data.

**Placebo**  
Not used

**Assignment**  
Parallel

**Other design features**  
This study has a Balanced Schedule Protocol for athletes with chronic ankle sprain.

**Secondary Ids**  
empty

## Ethics committees

**1**

**Ethics committee**

**Name of ethics committee**  
دانشگاه بوعلی سینا

**Street address**  
Pazhoohesh bridge. Bu-Ali Sina university.Hamedan

**City**  
Hamedan

**Province**  
Hamadan

**Postal code**  
6519917313

**Approval date**  
2017-01-14, 1395/10/25

**Ethics committee reference number**  
IR.UMSHA.REC.1395.471

## Health conditions studied

**1**

**Description of health condition studied**  
Chronic ankle sprain

**ICD-10 code**  
S90.9

**ICD-10 code description**  
Unspecified superficial injury of ankle, foot and toe

## Primary outcomes

**1**

**Description**  
Balance

**Timepoint**  
Practice Before and After 6 Weeks of Training

**Method of measurement**  
Biodex

## Secondary outcomes

empty

## Intervention groups

1

### Description

Subjects were divided into 2 training groups in water and dry. The exercise was performed in the same way in both groups. The exercises consisted of 6 weeks of static and dynamic equilibrium exercises using equilibrium equipment such as mini trampoline, balance board, full foam roller and D-shaped foam roller, which the subject would perform by repeating 3 sessions a week. The exercises will be progressive and training will intensify over time.

### Category

Other

## Recruitment centers

1

### Recruitment center

#### Name of recruitment center

sport clubs

#### Full name of responsible person

Somayeh Karami

#### Street address

Golestan street

#### City

Hamedan

#### Province

Hamadan

#### Postal code

6519917313

#### Phone

+98 81 3254 8748

#### Email

samanekr@yahoo.com

## Sponsors / Funding sources

1

### Sponsor

#### Name of organization / entity

Bu Ali Sina University

#### Full name of responsible person

Dr. Ali Yalfani

#### Street address

Management of Faculty of Physical Education at Bu-Ali Sina University

#### City

hamedan

#### Province

Hamadan

#### Postal code

6519917313

#### Phone

+98 81 3838 1422

#### Email

ali\_yalfani@yahoo.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

Private

#### 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

somaye karami

#### Position

Graduate student of pathology and corrective actions

#### Latest degree

Bachelor

#### Other areas of specialty/work

Others

#### Street address

Faculty of Physical Education, Bu-ali Sina University, Pol.Pazhoresh, Hamedan

#### City

Hamedan

#### Province

Hamadan

#### Postal code

6519917313

#### Phone

+98 81 3254 8748

#### Fax

#### Email

s.karami@phe.basu.ac.ir

#### Web page address

## Person responsible for scientific inquiries

### Contact

#### Name of organization / entity

Bu Ali Sina University

#### Full name of responsible person

Dr. Ali Yalfani

#### Position

Doctoral dissertation of the heart

#### Latest degree

Ph.D.

**Other areas of specialty/work**

Heart rehab

**Street address**

Bu-ali sina university, Hamedan

**City**

Hamedan

**Province**

Hamadan

**Postal code**

6519917313

**Phone**

+98 81 3838 1422

**Fax**

**Email**

ali\_yalfani@yahoo.com

**Web page address**

**Fax**

**Email**

s.karsmi@phe.basu.ac.ir

**Web page address**

## 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**

Yes - There is a plan to make this available

**Analytic Code**

Yes - There is a plan to make this available

**Data Dictionary**

Not applicable

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

All statistical analyzes are analyzed using spss version 24 software

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

Data analysis data can be disseminated to subjects within 2 months of data collection

**To whom data/document is available**

The information obtained from this research can be useful in rehabilitation for athletes with chronic ankle sprain and will be performed in sports clubs.

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

In rehabilitation, athletes with chronic ankle sprain are applicable

**From where data/document is obtainable**

To get the data, you can refer to the author of the study

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

The data is available to the author of the study

**Comments**

## Person responsible for updating data

**Contact**

**Name of organization / entity**

Bu-Ali Sina University

**Full name of responsible person**

somaye karami

**Position**

Graduate student of pathology and corrective actions

**Latest degree**

Bachelor

**Other areas of specialty/work**

Pathology and corrective movements

**Street address**

Pathology, Bu-Ali Sina University, Hamedan

**City**

Hamedan

**Province**

Hamadan

**Postal code**

6519917313

**Phone**

+98 81 3254 8748