

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### The Effect of Eight Weeks of Upper Extremity Performance-Based Injury Prevention Exercises on Glenohumeral Joint Range of Motion and Functional Stability in Male Volleyball Players

#### Protocol summary

##### Study aim

The effect of eight weeks of shoulder injury prevention training on range of motion and performance of adolescent volleyball players.

##### Design

The clinical trial has an intervention group and a control group, , no blinding, simple randomization, phase zero on 60 volleyball players, which used the rand function of Excel software for randomization.

##### Settings and conduct

"This study involves 60 volleyball players (30 males, 30 females) at Shahid Beheshti University gym. The intervention consists of an 8-week shoulder injury prevention program (3 sessions/week, 20 min/session) implemented during warm-ups. Shoulder ROM and upper limb function will be assessed using a goniometer and the Closed Kinetic Chain Upper Extremity Stability test, respectively

##### Participants/Inclusion and exclusion criteria

Inclusion criteria: At least 3 regular training sessions per week; no history of spine or upper limb surgery; 2 years of volleyball experience; age range 12-15 years  
Exclusion criteria: Older and younger age range, unwillingness to continue the research, having organ damage

##### Intervention groups

The intervention of the present study is the Oslo Sport Trauma Research Center injury prevention exercises, which were designed by the Oslo Injury Prevention Research Center. These exercises will be performed for 8 weeks and 3 sessions per week for 20 minutes as a shoulder warm-up protocol. In the control group, no intervention is performed and they continue with their normal program.

##### Main outcome variables

Primary outcomes include shoulder internal/external rotation range of motion, upper limb functional balance,

and sports injury incidence rate

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20240306061185N6**

Registration date: **2025-12-25, 1404/10/04**

Registration timing: **prospective**

Last update: **2025-12-25, 1404/10/04**

Update count: **0**

##### Registration date

2025-12-25, 1404/10/04

##### Registrant information

##### Name

Hossein Rezaei

##### Name of organization / entity

The University of Shahid Beheshti

##### Country

Iran (Islamic Republic of)

##### Phone

+98 24 3562 3177

##### Email address

hosse.rezaei@mail.sbu.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2025-12-28, 1404/10/07

##### Expected recruitment end date

2025-12-31, 1404/10/10

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

**Trial completion date**  
empty

**Scientific title**  
The Effect of Eight Weeks of Upper Extremity Performance-Based Injury Prevention Exercises on Glenohumeral Joint Range of Motion and Functional Stability in Male Volleyball Players

**Public title**  
Shoulder injury prevention exercises for volleyball players

**Purpose**  
Prevention

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
Having 3 regular training sessions per week  
Age range 12 to 15 years  
No history of spine or upper limb surgery  
Experience in volleyball for 2 years  
**Exclusion criteria:**  
Older and younger ages  
Unwillingness to participate in research  
Having damage to the organs

**Age**  
From **12 years** old to **15 years** old

**Gender**  
Both

**Phase**  
N/A

**Groups that have been masked**  
*No information*

**Sample size**  
Target sample size: **60**

**Randomization (investigator's opinion)**  
Randomized

**Randomization description**  
In this study, simple randomization method is used and the randomization unit is "individual". Random sequence is generated in Excel software using RAND function and MOD ROW function is used for grouping. In order to observe allocation concealment, each individual's allocation code is placed in illegible and sealed envelopes after being determined in Excel.

**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

Shahid Beheshti University Ethics Committee

#### Street address

Shahid Beheshti University, Shahriari square, Volanjek Town, Tehran

#### City

Tehran

#### Province

Tehran

#### Postal code

1983969411

#### Approval date

2025-10-11, 1404/07/19

#### Ethics committee reference number

IR.SBU.REC.1404.185

## Health conditions studied

### 1

#### Description of health condition studied

Preventing shoulder pain and injury

#### ICD-10 code

#### ICD-10 code description

## Primary outcomes

### 1

#### Description

Range of motion

#### Timepoint

Before the intervention and eight weeks after the intervention

#### Method of measurement

360 degree goniometer

### 2

#### Description

Closed Kinetic Chain Upper Extremity Stability Test

#### Timepoint

Before the intervention and eight weeks after the intervention

#### Method of measurement

Closed Kinetic Chain Upper Extremity Stability Test: The hands should be placed on the bars in a push-up position, and then one hand should be lifted off the ground. While maintaining balance on one hand, the guiding hand should be lifted off the ground and approached and touched the hand bar on which it is resting. Then, return to the original push-up position and repeat the movement with the other hand.

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Intervention group: The Oslo Sports Trauma Research Center Shoulder Injury Prevention Exercises are designed by the Oslo Sports Trauma Research Center to prevent shoulder injuries. The training group will use this protocol for warm-up for eight weeks, three sessions per week for 20 minutes. A goniometer will be used to measure the variables of shoulder internal and external rotation range of motion, and a closed-chain functional test will be used to assess performance in the pre-test and post-test.

### Category

Prevention

## 2

### Description

Control group: During the research period, there will be no intervention in the control group and they will do their usual exercises. Also, the range of motion of the shoulder internal and external rotation and the closed chain functional test will be measured in the pre-test and post-test.

### Category

Prevention

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Sports Science Laboratory of Shahid Beheshti University

##### Full name of responsible person

Sirus Sheikhi

##### Street address

Shahid Beheshti University, Shahriari square, Volanjek Town, Tehran

##### City

Tehran

##### Province

Tehran

##### Postal code

1983969411

##### Phone

+98 21 2243 1953

##### Email

Moh\_hosseini@sbu.ac.ir

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

The University of Shahid Beheshti

##### Full name of responsible person

Seyed Mohammad Hosseini

##### Street address

Shahid Beheshti University, Shahriari square, Volanjek Town, Tehran

##### City

Tehran

##### Province

Tehran

##### Postal code

1983969411

##### Phone

+98 21 2243 1953

##### Email

moh\_hosseini@sbu.ac.ir

#### Grant name

#### Grant code / Reference number

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

No

#### Title of funding source

The University of Shahid Beheshti

#### 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

The University of Shahid Beheshti

##### Full name of responsible person

Hossein Rezaei

##### Position

PhD student

##### Latest degree

Master

##### Other areas of specialty/work

sport injury and corrective exercises

##### Street address

No 403., Nawab Safavi Ave., Imam Hossein Square., Sain Qala

##### City

Sain Qala

##### Province

Zanjan

##### Postal code

4574148543

##### Phone

+98 24 3562 3177

##### Email

hosse.rezaei@mail.sbu.ac.ir

## Person responsible for scientific inquiries

#### Contact

##### Name of organization / entity

The University of Shahid Beheshti

##### Full name of responsible person

Hossein Rezaei

**Position**

PhD student

**Latest degree**

Master

**Other areas of specialty/work**

sport injury and corrective exercises

**Street address**

No 403., Nawab Safavi Ave., Imam Hossein Square.,  
Sain Qala

**City**

Sain Qala

**Province**

Zanjan

**Postal code**

4574148543

**Phone**

+98 24 3562 3177

**Email**

hosse.rezaei@mail.sbu.ac.ir

**Person responsible for updating data****Contact****Name of organization / entity**

The University of Shahid Beheshti

**Full name of responsible person**

Hossein Rezaei

**Position**

PhD student

**Latest degree**

Master

**Other areas of specialty/work**

sport injury and corrective exercises

**Street address**

No 403., Nawab Safavi Ave., Imam Hossein Square.,

Sain Qala

**City**

Sain Qala

**Province**

Zanjan

**Postal code**

4574148543

**Phone**

+98 24 3562 3177

**Email**

hosse.rezaei@mail.sbu.ac.ir

**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