Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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