

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Does Corrective exercises Influence the Performance, Posture, range of motion and shoulder pain of Elite Front crawl Swimmers with Upper Crossed Syndrome?

#### Protocol summary

##### Study aim

The effect of eight weeks of corrective movement program on performance, body alignment, range of motion and shoulder pain in professional swimmers with upper cruciate syndrome.

##### Design

Clinical trial with an intervention group and a control group; With factorial groups, without blinding, simple randomization, zero phase on 30 swimmers with upper cruciate syndrome, which rand function of Excel software was used for randomization

##### Settings and conduct

The purpose of performing these exercises is to improve the posture and shoulder pain of swimmers with upper impingement syndrome. These exercises will be performed in the Nikian swimming pool in Abhar city. In this research, to measure the forward shoulder posture and forward head posture from photogrammetry, the degree of kyphosis from a flexible ruler, Pain using a visual measurement scale, speed measurement using a manual timer, glenohumeral joint range of motion measurement using a goniometer will be measured.

##### Participants/Inclusion and exclusion criteria

forward head posture more than 46 degrees; forward shoulder posture more than 52 degrees; kyphosis more than 40 degrees; professional male swimmers aged 20 to 40; Having mild to moderate pain in the shoulder joint based on the person's self-report; having at least 3 regular training sessions per week; Having a history of participating in swimming for 3 years

##### Intervention groups

The intervention of the current research is corrective exercises designed based on previous related articles, these exercises will be performed for eight weeks, three training sessions per week and each training session will last 30-40 minutes. and continue their daily exercises

##### Main outcome variables

Improvement of forward head posture, kyphosis and forward shoulder posture, reduction of shoulder pain, 50m swimming record

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20240306061185N1**

Registration date: **2024-03-08, 1402/12/18**

Registration timing: **prospective**

Last update: **2024-03-08, 1402/12/18**

Update count: **0**

##### Registration date

2024-03-08, 1402/12/18

##### 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

2024-04-13, 1403/01/25

##### Expected recruitment end date

2024-04-18, 1403/01/30

##### Actual recruitment start date

empty

**Actual recruitment end date**  
empty

**Trial completion date**  
empty

**Scientific title**  
Does Corrective exercises Influence the Performance, Posture, range of motion and shoulder pain of Elite Front crawl Swimmers with Upper Crossed Syndrome?

**Public title**  
The effect of corrective exercises on upper crossed syndrome in swimmers

**Purpose**  
Supportive

**Inclusion/Exclusion criteria**  
**Inclusion criteria:**  
Head forward posture more than 46 degrees Shoulder forward posture more than 52 degrees Kyphosis more than 40 degrees Professional male swimmers in the age range of 20 to 40 years Having mild to moderate pain in the shoulder joint based on the person's self-report Having at least 3 regular training sessions per week No history of spine or upper extremity surgery Having 3 years of swimming experience  
**Exclusion criteria:**  
Older and younger ages Unwillingness to participate in research Having damage to the organs

**Age**  
From **20 years** old to **40 years** old

**Gender**  
Male

**Phase**  
N/A

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

**Sample size**  
Target sample size: **30**

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

**Randomization description**  
Individual simple randomization! Coincidence tools: rand function of 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

Ethics Committee of Sport Sciences Research Institute

## Street address

Mir Emad Ave., Tehran

## City

Tehran

## Province

Tehran

## Postal code

1411713116

## Approval date

2024-03-05, 1402/12/15

## Ethics committee reference number

IR.SSRC.REC.1402.294

## Health conditions studied

1

### Description of health condition studied

Upper Crossed Syndrome, shoulder pain

### ICD-10 code

### ICD-10 code description

## Primary outcomes

1

### Description

Upper Crossed Syndrome

### Timepoint

Before the intervention and eight weeks later

### Method of measurement

Photogrammetry, Flexible ruler

2

### Description

shoulder pain

### Timepoint

Before the intervention and eight weeks later

### Method of measurement

Visual Analogue Scale

## Secondary outcomes

1

### Description

Performance

### Timepoint

Before the intervention and eight weeks later

### Method of measurement

chronometer

## Intervention groups

1

**Description**

Intervention group: Corrective exercises

**Category**

Rehabilitation

**2**

**Description**

Control group: Control

**Category**

Rehabilitation

**Recruitment centers**

**1**

**Recruitment center**

**Name of recruitment center**

Sports Science Laboratory of Shahid Beheshti University

**Full name of responsible person**

Sirus Sheikhi

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Shahid Beheshti University, Shahriari square, Volanjek Town, Tehran

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**Sponsors / Funding sources**

**1**

**Sponsor**

**Name of organization / entity**

The University of Shahid Beheshti

**Full name of responsible person**

Mahdi Gheitasi

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**Grant name**

**Grant code / Reference number**

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

Yes

**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**

Masters student

**Latest degree**

Bachelor

**Other areas of specialty/work**

Sport injury and corrective exercises

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**Contact**

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## Person responsible for updating data

### Contact

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The University of Shahid Beheshti  
**Full name of responsible person**  
Hossein Rezaei  
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**Province**  
Zanjan  
**Postal code**

## 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