# Clinical Trial Protocol
# Iranian Registry of Clinical Trials

22 Nov 2026

## The effect of 12-week corrective exercises on the upper quarter posture in females with upper crossed syndrome

## Protocol summary

**Study aim**
This study aimed to investigate the effect of 12-week corrective exercises on the forward head, forward shoulder and kyphosis angles in females with Upper crossed syndrome

**Design**
Randomized control trial with control group, with parallel groups, without blindness

**Settings and conduct**
Forty women with Upper crossed syndrome will recruit and randomly assign in two control and experimental groups. All measurements will perform in biomechanics laboratory of faculty of physical education at Allame Tabataba'i University.

**Participants/Inclusion and exclusion criteria**
The inclusionary criteria are female gender, forward shoulder angle more than 52°, forward head angle more than 46°, and kyphosis angle more than 42°. The exclusionary criteria are history of cervical or thoracic spine surgery, observing significant scoliosis, torticollis, and cervical spine instability based on the New York Postural Assessment Tool. Besides, the participants were excluded if they were involved in other training programs and did not participate in training sessions regularly for last 1 years.

**Intervention groups**
A corrective exercise program will be implemented for 12 weeks. Each training session will beginning with ten minutes warm-up and ended with ten minutes cool-down. The self-myofascial release technique will execute in the first phase of the corrective exercise continuum to inhibit and release latissimus dorsi, upper trapezius, sternocleidomastoid, levator scapula muscles, and thoracic spine. Stretching exercises will prescribe for these muscles, too. Isolated strengthening exercises including quadruped ball chin tucks, resisted cervical posterior translation, floor prone scaption, and ball combo I. In the last phase, integrated dynamic movements will perform.

**Main outcome variables**
forward shoulder angle، forward head angle, and kyphosis angle

## General information

**Reason for update**

**Acronym**

**IRCT registration information**
IRCT registration number: **IRCT20180626040244N2**
Registration date: **2021-04-18, 1400/01/29**
Registration timing: **prospective**

Last update: **2021-04-18, 1400/01/29**
Update count: **0**

**Registration date**
2021-04-18, 1400/01/29

**Registrant information**

**Name**
Rahman Sheikhhoseini

**Name of organization / entity**
Allameh Tabataba'i University

**Country**
Iran (Islamic Republic of)

**Phone**
+98 21 4839 4134

**Email address**
rahmanhoseini@atu.ac.ir

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

**Funding source**

**Expected recruitment start date**
2021-04-30, 1400/02/10

**Expected recruitment end date**
2021-06-21, 1400/03/31

**Actual recruitment start date**
empty

**Actual recruitment end date**
empty
**Trial completion date**
empty

**Scientific title**
The effect of 12-week corrective exercises on the upper quarter posture in females with upper crossed syndrome

**Public title**
The effect of corrective exercises on upper crossed syndrome
**Purpose**
Prevention
**Inclusion/Exclusion criteria**
**Inclusion criteria:**
forward shoulder angle more than 52 degrees forward head angle more than 46 degrees kyphosis angle more than 42 degrees Age between 25-40 years old
**Exclusion criteria:**
significant scoliosis in the spine presence of torticollis history of thoracic spine surgery history of cervical spine surgery
**Age**
From **25 years** old to **40 years** old
**Gender**
Female

**Phase**
N/A
**Groups that have been masked**
*No information*
**Sample size**
Target sample size: **40**
**Randomization (investigator's opinion)**
Randomized
**Randomization description**
Randomization will be done as simple method with card. The type of intervention will be put in sealed envelopes. Individuals are listed in order of attendance. After including in the study, the envelops will shuffled and each person is asked to select an envelope. The subjects will be asked to select one envelope. According to the predicted sample size, the number of envelope will be provided. Therefore, any selected envelope will not return to randomization sequence. This type of randomization can result to have the same number of individuals in both groups.
**Blinding (investigator's opinion)**
Not blinded
**Blinding description**
**Placebo**
Not used
**Assignment**
Parallel
**Other design features**
Not available

## Secondary Ids

empty

## Ethics committees

### 1

**Ethics committee**
**Name of ethics committee**
Islamic Azad University, Tehran Science and Research Branch
**Street address**
Hesarak Shohada Bulevered
**City**
Tehran
**Province**
Tehran
**Postal code**
1477893855
**Approval date**
2021-02-14, 1399/11/26
**Ethics committee reference number**
IR.IAU.SRB.REC.1399.167

## Health conditions studied

### 1

**Description of health condition studied**
Upper crossed syndrome
**ICD-10 code**
R29.3
**ICD-10 code description**
Abnormal posture

## Primary outcomes

### 1

**Description**
Forward head angle more than 46°
**Timepoint**
Before starting the study and after 12 weeks of prescribing corrective exercises
**Method of measurement**
The photogrammetric method by calculating angles from a captured pictures

## Secondary outcomes

### 1

**Description**
Forward shoulder angle more than 52 degrees
**Timepoint**
At study start and end of 12 weeks of corrective exercises
**Method of measurement**
The photogrammetric method by calculating angles from a captured pictures

### 2

**Description**

Kyphosis angle more than 42°

**Timepoint**

At study start and end of 12 weeks of corrective exercises

**Method of measurement**

With flexible ruler with 70 centimeters of length

## Intervention groups

### 1

**Description**

Intervention group: 12 weeks of corrective exercises, 3 sessions per week, 45 minutes for each session. Number (adding one set) and time (adding 5 seconds) of doing sets increase progressively each weak. to prevent from fatigue, allocated 30 seconds rest between each set

**Category**

Prevention

### 2

**Description**

Control group: No intervention

**Category**

N/A

## Recruitment centers

### 1

**Recruitment center**

**Name of recruitment center**
Allameh Tabataba'i University

**Full name of responsible person**
Rahman Sheikhhoseini

**Street address**
Chogan street

**City**
Tehran

**Province**
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**Phone**
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**Email**
rahmanhoseini@atu.ac.ir

## Sponsors / Funding sources

### 1

**Sponsor**

**Name of organization / entity**
Allameh Tabataba'i University

**Full name of responsible person**
Hashem Piri

**Street address**
Chogan street

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**Phone**
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**Email**
hpiry63@gmail.com

**Grant name**

**Grant code / Reference number**

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

Yes

**Title of funding source**

Allameh Tabataba'i University

**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**
Allameh Tabataba'i University

**Full name of responsible person**
Rahman Sheikhhoseini

**Position**
Assistant professor

**Latest degree**
Ph.D.

**Other areas of specialty/work**
Physiotherapy

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## Person responsible for scientific inquiries

**Contact**

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**Position**

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**Latest degree**
Ph.D.

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## Person responsible for updating data

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Allameh Tabataba'i University

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Rahman Sheikhhoseini

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## 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**
Not applicable

**Data Dictionary**
Undecided - It is not yet known if there will be a plan to make this available

**Title and more details about the data/document**
All primary and secondary data will be share in the future after making them unidentifiable

**When the data will become available and for how long**
Data will be available immediately after publishing the study results

**To whom data/document is available**
All academic people and researchers

**Under which criteria data/document could be used**
Data will be share for systematic review and meta-analyses studies, or for any researchers who need for our data for research proposes

**From where data/document is obtainable**
Data request can be sent to following Emails: 1. rahman.pt82@gmail.com, 2. hpiry63@gmail.com, and 3. rahmanhoseini@atu.ac.ir

**What processes are involved for a request to access data/document**
All requests will be answered immediately after receiving Emails, for maximum of 1 week

**Comments**