

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

13 Jun 2026

### The effect of online respiratory and corrective exercises on posture, physical ability, respiratory function, and quality of life in the elderly with thoracic hyper-kyphosis

#### Protocol summary

##### Study aim

In this study we sought to evaluate the effectiveness of 6 weeks of online corrective exercises on posture, disability, respiratory function, and quality of life in the elderly with thoracic hyperkyphosis

##### Design

A clinical trial with the control group, With parallel groups, single-blinded, randomized

##### Settings and conduct

34 elderly adults with thoracic hyperkyphosis will recruit and randomly assign to two control and experimental groups. All measurements will perform in the biomechanics laboratory of the faculty of physical education at Allameh Tabataba'i University.

##### Participants/Inclusion and exclusion criteria

Adults aged  $\geq 60$  with TK angle more than  $40^\circ$ , without participation in any regular exercise routines were included in this study. The exclusion criteria were the history of any neuromuscular diseases, presence of back pain, osteoarthritis, falls while walking, cancers and chemotherapy, long-term use of corticosteroids medication,

##### Intervention groups

The experimental group will undergo the corrective exercises protocols with online supervision for 6 weeks (3 sessions per week  $\times$  60 minutes), which will be augmented with breathing practices. Exercises will be used as part of the intervention to address issues with spinal extensor muscle weakness, inadequate recruitment and activation of the muscles, limited spinal mobility, and improper postural alignment. The control group will be asked to perform 10 minutes of general warm-up exercises and general stretching exercises followed by 40 minutes of self-selected walking speed.

##### Main outcome variables

Quality of life (SF 36) Postural measurements (Kyphosis angle, forward head posture angle, shoulder angle)

Disability Index (Barthel Index) Breathing pattern

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20180626040244N3**

Registration date: **2022-10-08, 1401/07/16**

Registration timing: **prospective**

Last update: **2022-10-08, 1401/07/16**

Update count: **0**

##### Registration date

2022-10-08, 1401/07/16

##### 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

2022-10-23, 1401/08/01

##### Expected recruitment end date

2023-01-10, 1401/10/20

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty  
**Trial completion date**  
empty

**Scientific title**  
The effect of online respiratory and corrective exercises on posture, physical ability, respiratory function, and quality of life in the elderly with thoracic hyper-kyphosis

**Public title**  
The effect of online rcorrective exercises in the elderly with thoracic hyper-kyphosis: A clinical trial study

**Purpose**  
Prevention

**Inclusion/Exclusion criteria**

**Inclusion criteria:**

Adults aged  $\geq 60$  Thoracic kyphosis angle more than  $40^\circ$   
Without participation in any regular exercise routines

**Exclusion criteria:**

History of any neuromuscular diseases Presence of back pain History of osteoarthritis History of falls while walking History of cancers and chemotherapy History of long-term use of corticosteroids medication Age more than 75 years

**Age**  
From **60 years** old to **75 years** old

**Gender**  
Both

**Phase**  
N/A

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

**Sample size**  
Target sample size: **34**

**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 envelopes 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**

**Secondary Ids**

empty

**Ethics committees**

1

**Ethics committee**

**Name of ethics committee**

Allameh Tabataba'i University

**Street address**

Chogan street

**City**

Tehran

**Province**

Tehran

**Postal code**

1485743411

**Approval date**

2021-05-22, 1400/03/01

**Ethics committee reference number**

IR.ATU.REC.1400.012

**Health conditions studied**

1

**Description of health condition studied**

Thoracic hyper kyphosis

**ICD-10 code**

M40.03

**ICD-10 code description**

Postural kyphosis, cervicothoracic region

**Primary outcomes**

1

**Description**

Quality of life

**Timepoint**

Before the study starts and after 6 weeks of intervention

**Method of measurement**

SF-36 questionnaire

2

**Description**

Posture

**Timepoint**

Before the study starts and after 6 weeks of intervention

**Method of measurement**

photogrametric method

3

**Description**

Physical ability

**Timepoint**

Before the study starts and after 6 weeks of intervention

**Method of measurement**

Barthel index

## Secondary outcomes

empty

## Intervention groups

1

### Description

Intervention group: online respiratory and corrective exercises including stretching and strengthening, for 6 weeks, 3 sessions per week, every session last for 60 minuets,

### Category

Prevention

2

### Description

Control group: general walking for 60 minuets, 3 sessions per week with self-selected speed

### Category

Prevention

## 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

Tehran

#### Postal code

1485743411

#### Phone

+98 21 4411 8629

#### Email

rahmanhoseini@atu.ac.ir

## Sponsors / Funding sources

1

### Sponsor

#### Name of organization / entity

Allameh Tabataba'i University

#### Full name of responsible person

Rahman Sheikhhoseini

#### Street address

Chogan street

#### City

Tehran

#### Province

Tehran

#### Postal code

1485743411

#### Phone

+98 21 4411 8629

#### Email

rahmanhoseini@atu.ac.ir

### 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

Associated professor

#### Latest degree

Ph.D.

#### Other areas of specialty/work

Physiotherapy

#### Street address

Chogan street

#### City

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#### Province

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#### Postal code

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#### Phone

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#### Email

rahmanhoseini@atu.ac.ir

## Person responsible for scientific 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

**Street address**

Faculty of Sport Sciences, AllamehTabataba'i University, Tehran, Iran

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**Province**

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**Postal code**

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**Phone**

+98 21 4839 4134

**Fax****Email**

rahman.pt82@gmail.com

**Email**

rahman.pt82@gmail.com

**Sharing plan****Deidentified Individual Participant Data Set (IPD)**

No - There is not a plan to make this available

**Justification/reason for indecision/not sharing IPD**

There is no further information

**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**

Yes - There is 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****Person responsible for updating data****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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