

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

19 Jun 2026

### The effect of core stability training and electrical muscle stimulation on pain, disability and trunk endurance in women with chronic non-specific low back pain

#### Protocol summary

##### Study aim

Determining the effect of core stability training and electrical muscle stimulation on pain, disability and trunk endurance in women with non-specific chronic back pain.

##### Design

By lottery, 30 people were selected in three groups of 10 people in a blind way.

##### Settings and conduct

The health center room of Shazand Refinery sports complex was made available for research work. The space is completely hygienic and has the necessary sports equipment with proper ventilation and lighting. According to the previous appointment, the subjects arrived at the scheduled time and the exercises were done under the supervision of the trainer. The subjects were blinded.

##### Participants/Inclusion and exclusion criteria

Women with more than three months of back pain without any injury, illness or fracture in the back

##### Intervention groups

Control group without any training, core stability training group, core stability training group with electrical muscle stimulation

##### Main outcome variables

Examining the intensity of pain with a visual questionnaire. Investigation of Navati with Oswestry questionnaire. Examining trunk endurance with Sorenson's test.

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20230729058957N1**

Registration date: **2024-02-17, 1402/11/28**

Registration timing: **prospective**

Last update: **2024-02-17, 1402/11/28**

Update count: **0**

##### Registration date

2024-02-17, 1402/11/28

##### Registrant information

###### Name

Maryam Nabiuni

###### Name of organization / entity

Arak University

###### Country

Iran (Islamic Republic of)

###### Phone

+98 86 3368 6942

###### Email address

s\_shahrjerdi@araku.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2024-03-09, 1402/12/19

##### Expected recruitment end date

2024-05-08, 1403/02/19

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

The effect of core stability training and electrical muscle stimulation on pain, disability and trunk endurance in women with chronic non-specific low back pain

##### Public title

The effect of core stability training and electrical muscle stimulation on chronic non-specific low back pain

## Purpose

Supportive

## Inclusion/Exclusion criteria

### Inclusion criteria:

Having at least three months of non-specific low back pain

### Exclusion criteria:

History of spinal fracture, lower limb History of disc herniation History of spinal tumor History of rheumatic disease History of spine and lower limb surgery Heart disease Thyroid disease Diabetes

## Age

From **30 years** old to **40 years** old

## Gender

Female

## Phase

N/A

## Groups that have been masked

*No information*

## Sample size

Target sample size: **30**

## Randomization (investigator's opinion)

Randomized

## Randomization description

A simple randomization method will be used. The number of 30 envelopes in the package is considered, and in 10 items we put the number 1 (code of the central static exercises group), 10 items 2 (the code of the EMS exercises group) and 10 items the number 3 (code of the control group). Then the person is asked to choose one of the envelopes and be placed in one of the three groups based on the desired code.

## 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 Arak University

##### Street address

Arak, Sardasht, Basij Square, Karbala Boulevard, Arak University

##### City

Arak

##### Province

Markazi

##### Postal code

3848177584

## Approval date

2023-04-19, 1402/01/30

## Ethics committee reference number

IR.ARAKU.REC.1402.013

## Health conditions studied

### 1

#### Description of health condition studied

chronic non-specific low back pain

#### ICD-10 code

G89.29

#### ICD-10 code description

Other chronic pain

## Primary outcomes

### 1

#### Description

Pain intensity score in the visual VAS questionnaire, disability score in the Osostery disability questionnaire, Sorenson's trunk and hip bridge endurance test and instability to evaluate the central stabilizing muscles, Wells bench test for hamstring flexibility

#### Timepoint

vBefore the start of the exercises and after the end of the exercises

#### Method of measurement

The visual analog scale of pain to evaluate pain, Oswestry questionnaire to evaluate disability, Sorenson trunk endurance test

## Secondary outcomes

### 1

#### Description

Hip bridge and instability to assess central stabilizer muscles, Wells bench test for hamstring flexibility

#### Timepoint

Before the start of training and after the end of the training period

#### Method of measurement

Perform movements and record measurements

## Intervention groups

### 1

#### Description

In order to select the subjects of the research, by presenting the functional disability questionnaire, the degree of disability and with the VAS questionnaire, the pain level of the people was measured and the researcher selected the desired statistical sample based on the entry and exit criteria of this research in a targeted manner and the selected samples were randomly selected. Sadeh are divided into three groups of 10 people (control group, central stability training group, central stability training group with electrical

muscle stimulation). The exercises are three sessions a week for eight weeks and then a post-test is taken. The control group does not have any training and intervention and continues their past life.

### Category

Rehabilitation

## 2

### Description

Intervention group: The group of central stability exercises includes plank exercises, flying dog, etc., which are held in 30-45 minute sessions. The equipment needed for this group includes: special sports clothes, water bottle and swissball.

### Category

Rehabilitation

## 3

### Description

Intervention group: The group of electrical muscle stimulation exercises have the same exercises in 30 minutes, with the difference that they wear clothes with electrical pulses and then exercise. The clothing equipment is special for the device that is available. For practice, the items mentioned in the previous intervention are the same.

### Category

Rehabilitation

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Shazand Imam Khomeini Oil Refining Company cultural and sports club

##### Full name of responsible person

Haibollah Abbasian

##### Street address

Milad\_ oil field

##### City

Shazand\_ Mohageran

##### Province

Markazi

##### Postal code

۳۸۶۷۱۴۱۱۱۱

##### Phone

+98 86 3349 1893

##### Email

Gholami.s@ikorc.ir

##### Web page address

<https://www.ikorc.ir/>

## Sponsors / Funding sources

### 1

#### Sponsor

Name of organization / entity

Shazand Imam Khomeini Oil Refining Company

#### Full name of responsible person

Mrs. Halakui

#### Street address

Kilometer 20 of Borujerd road

#### City

Shazand

#### Province

Markazi

#### Postal code

۳۸۶۷۱۴۱۱۱۱

#### Phone

+98 86 3349 1891

#### Email

Asgari.s@ikorc.ir

#### Grant name

#### Grant code / Reference number

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

Yes

#### Title of funding source

Shazand Imam Khomeini Oil Refining Company

#### Proportion provided by this source

100

#### Public or private sector

Private

#### Domestic or foreign origin

Domestic

#### Category of foreign source of funding

*empty*

#### Country of origin

#### Type of organization providing the funding

Industry

## Person responsible for general inquiries

#### Contact

##### Name of organization / entity

Arak University

##### Full name of responsible person

Maryam Nabiuni

##### Position

Student

##### Latest degree

Bachelor

##### Other areas of specialty/work

Sport Medicine

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3818136886

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s\_shahrjerdi@araKU.AC.IR

## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**

Arak University

**Full name of responsible person**

Shahnaz Shahrjerdi

**Position**

University faculty

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Sport Medicine

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## Person responsible for updating data

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**Name of organization / entity**

Arak University

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Maryam Nabiuni

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Student

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**Fax****Email**

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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**

Yes - There is a plan to make this available

**Data Dictionary**

Yes - There is a plan to make this available

**Title and more details about the data/document**

After making people unidentifiable, part of the data, such as information about the main outcome and an abstract of relevant information, will be shared in general.

**When the data will become available and for how long**

Since 2023

**To whom data/document is available**

Researchers working in academic and scientific institutions

**Under which criteria data/document could be used**

A person who intends to study this research can inform the researcher via email. Also, a person can use the information of the article.

**From where data/document is obtainable**

First, send a message to the email and then call the number below, and finally, you can visit the library of Arak University located in Sardasht, Karbala Blvd.09027776418

**What processes are involved for a request to access data/document**

The applicant can receive the documents after sending an email to the researcher and receiving confirmation from the researcher.

**Comments**