

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

Street address

59-moradian-navid

City

Arak

Province

Markazi

Postal code

3818136886

Phone

+98 86 3368 6942

Fax

Email

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

Street address

59-moradian-navid

City

Arak

Province

Markazi

Postal code

3818136886

Phone

+98 86 3368 6942

Fax**Email**

s_shahrjerdi@araKU.AC.IR

Person responsible for updating data

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

Street address

59-moradian-navid

City

Arak

Province

Markazi

Postal code

3818136886

Phone

+98 86 3368 6942

Fax**Email**

s_shahrjerdi@araKU.AC.IR

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