

Clinical Trial Protocol

Iranian Registry of Clinical Trials

26 Jul 2026

The effect of core stability exercises on pain and inflammation in patients with piriformis syndrome

Protocol summary

Study aim

The effect of core stability exercises on pain and inflammation in patients with piriformis syndrome

Design

The clinical trial has two experimental and control groups, non-blind, non-random and includes 20 patients.

Settings and conduct

In this study, among patients with piriformis syndrome referred to medical centers in Arak; 20 people are purposefully selected and non-randomly divided into two groups of 10 control and experimental. During a few sessions, the necessary explanations and explanations about the reason for conducting the research, the purpose and the possible useful results are made and the necessity of regular participation in the exercises and how to conduct the research is explained to the subjects. Then, written consent is obtained from all subjects and the personal information questionnaire is completed by them. Using the McGill Pain Questionnaire, the subjects' pain was assessed and recorded, and their inflammation was assessed by a physician using MRI images. After the implementation of the training protocol, the post-test is performed on the control and experimental groups.

Participants/Inclusion and exclusion criteria

Criteria for entering the research 1. The sexuality of the subjects is male. 2. The age range of the subjects is 25-40 years. 3. Patients must be approved by a rehabilitation specialist and a specialist doctor. Exclusion criteria 1. There is a history of any surgery or discomfort such as disc herniation, spondylitis, fracture, discopathy, etc. 2. Patients with metabolic and neurological diseases. 3. Patients with severe osteoarthritis and rheumatoid arthritis.

Intervention groups

Core stability exercises are exercises that improve and strengthen the central area of the body.

Main outcome variables

core stability exercises; pain and inflammation in patients with piriformis syndrome

General information

Reason for update

Acronym

(piriformis syndrome)PS

IRCT registration information

IRCT registration number: **IRCT20211003052662N1**

Registration date: **2021-11-01, 1400/08/10**

Registration timing: **registered_while_recruiting**

Last update: **2021-11-01, 1400/08/10**

Update count: **0**

Registration date

2021-11-01, 1400/08/10

Registrant information

Name

Rashid Doosti Irani

Name of organization / entity

The University of Arak

Country

Iran (Islamic Republic of)

Phone

+98 86 3262 0000

Email address

rashidoostiirani@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-10-27, 1400/08/05

Expected recruitment end date

2021-12-21, 1400/09/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of core stability exercises on pain and inflammation in patients with piriformis syndrome

Public title

The effect of core stability exercises on pain and inflammation in patients with piriformis syndrome

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

1. The sexuality of the subjects is male. 2. The age range of the subjects is 25-40 years. 3. Patients must be approved by a rehabilitation specialist and a specialist doctor.

Exclusion criteria:

1. There is a history of any surgery or discomfort such as disc herniation, spondylitis, fracture, discopathy, etc. 2. Patients with metabolic and neurological diseases. 3. Patients with severe osteoarthritis and rheumatoid arthritis.

Age

From **25 years** old to **40 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **20**

Randomization (investigator's opinion)

Not randomized

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

This study includes two control and experimental groups that the experimental group received one type of intervention and the control group did not receive any intervention in the relevant time period.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Arak University of Medical Sciences

Street address

Alam al-Huda St, Shahid Shiroodi St, Arak.

City

Arak

Province

Markazi

Postal code

3819693345

Approval date

2021-09-05, 1400/06/14

Ethics committee reference number

IR.ARAKMU.REC.1400.157

Health conditions studied

1

Description of health condition studied

piriformis syndrome

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

pain-In this study, pain intensity was measured using the McGill Pain Questionnaire and referred to scores that indicate the subject's pain.

Timepoint

Pain is measured before the test(training protocol) and after the exercises.

Method of measurement

The McGill Pain Questionnaire is used in this study to measure pain intensity. This questionnaire consists of 22 questions that the subjects fill in before the start and after the end of the exercises and their pain is evaluated and recorded.

2

Description

inflammation

Timepoint

Inflammation is assessed before the test (training protocol) and after the exercises.

Method of measurement

In this study, MRI images were used by a specialist physician to evaluate sciatica (with scores of zero and one).

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Core stability exercises_6 weeks Core stability stretching exercises, including piriformis muscle stretching exercises.

Category

Rehabilitation

2

Description

Control group: The control group will continue its normal life during the mentioned period.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Dr. Faraji Medical Clinic

Full name of responsible person

Fardin Faraji

Street address

Dey specialized medical complex, beginning of Shokraei St, Armenian Three Ways, Shahid Beheshti St, Arak.

City

Arak

Province

Markazi

Postal code

3819693345

Phone

+98 86 3224 6797

Email

fardin.faraji@yahoo.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Arak University

Full name of responsible person

Dr. Massoud Golpayegani

Street address

Arak University, Karbala Boulevard, Basij Square, Arak.

City

Arak

Province

Markazi

Postal code

3848177584

Phone

+98 86 3262 0000

Email

rashiddoostiirani@gmail.com

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Arak 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

The University of Arak

Full name of responsible person

Rashid Doosti Irani

Position

Master's Degree

Latest degree

Bachelor

Other areas of specialty/work

Corrective Exercises

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Person responsible for scientific inquiries

Contact

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The University of Arak

Full name of responsible person

Rashid Doosti Irani

Position

Master's Degree

Latest degree

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Person responsible for updating data

Contact

Name of organization / entity
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Full name of responsible person
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Position
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rashiddoostiirani@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

Misuse of relevant data by others.

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

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

Title and more details about the data/document

There is no more information.

When the data will become available and for how long

The access period starts from 1401.

To whom data/document is available

The information will be available only to researchers working in academic and scientific institutions.

Under which criteria data/document could be used

It is allowed to send the provided information without any changes.

From where data/document is obtainable

Rashid Doosti Irani Faculty of Sports Sciences, Arak University, Arak University. rashiddoostiirani@gmail.com

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

One week after the application is submitted, the relevant information will be provided to the applicant.

Comments