

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### **Effect of lumbar stabilization with and without abdominal drawing-in maneuver on functional disability, respiratory parameters and posterior oblique sling EMG of subjects with non-specific chronic low back pain.**

#### **Protocol summary**

abdominal drawing-in maneuver on various parameters related to chronic low back pain.

#### **Study aim**

Comparison of the effects of eight weeks of lumbar stabilization exercises with and without the abdominal drawing-in maneuver on pain, functional disability, respiratory capacities (FVC, FEV1), and electromyographic activity of the posterior oblique sling muscles during hip extension in individuals with chronic low back pain

#### **Design**

The study is a quasi-experimental, parallel-group clinical trial (two training groups) with purposive sampling.

#### **Settings and conduct**

The present study was conducted at the Specialized Sports Science Laboratory of Yazd University in Yazd, Iran.

#### **Participants/Inclusion and exclusion criteria**

Inclusion criteria: Individuals aged 30 to 45 years  
Diagnosis of non-specific chronic low back pain for at least 3 months  
Ability to perform the exercises (with medical approval from a specialist to participate in the training protocol)  
Pain level ranging from 25 to 50 on the Quebec scale  
Exclusion criteria: Severe or noticeable musculoskeletal deformities in the spine  
History of spinal surgery

#### **Intervention groups**

The training protocols were conducted in two groups: lumbar stabilization exercises with and without the abdominal drawing-in maneuver. Both groups performed the exercises with identical warm-up and cool-down routines, under full supervision, for 8 weeks, 5 days per week. The main exercises included Bridge, Bird Dog, Dead Bug, Kneeling Shoulder Taps, and Side Plank. Participants in the abdominal drawing-in group performed each of these exercises while maintaining the abdominal drawing-in maneuver.

#### **Main outcome variables**

The effects of lumbar stabilization exercises with the

#### **General information**

##### **Reason for update**

##### **Acronym**

ADIM

##### **IRCT registration information**

IRCT registration number: **IRCT20250921067315N1**

Registration date: **2025-10-15, 1404/07/23**

Registration timing: **prospective**

Last update: **2025-10-15, 1404/07/23**

Update count: **0**

##### **Registration date**

2025-10-15, 1404/07/23

##### **Registrant information**

##### **Name**

Behnam Sharifi Ardani

##### **Name of organization / entity**

University of Isfahan

##### **Country**

Iran (Islamic Republic of)

##### **Phone**

+98 35 3821 0167

##### **Email address**

sharifi.behnam70@gmail.com

##### **Recruitment status**

**Recruitment complete**

##### **Funding source**

##### **Expected recruitment start date**

2025-10-12, 1404/07/20

##### **Expected recruitment end date**

2025-10-12, 1404/07/20

##### **Actual recruitment start date**

2025-10-23, 1404/08/01

**Actual recruitment end date**

2025-10-23, 1404/08/01

**Trial completion date**

2025-10-27, 1404/08/05

**Scientific title**

Effect of lumbar stabilization with and without abdominal drawing-in maneuver on functional disability, respiratory parameters and posterior oblique sling EMG of subjects with non-specific chronic low back pain.

**Public title**

The impact of abdominal drawing-in, on pain, breathing, and muscle activity in subjects with chronic low back pain.

**Purpose**

Treatment

**Inclusion/Exclusion criteria**

**Inclusion criteria:**

Individuals aged 30 to 45 years No severe or noticeable musculoskeletal deformities in the spine No history of spinal surgery Voluntary consent to participate in the study Diagnosis of non-specific chronic low back pain for at least 3 months Ability to perform the exercises (with medical approval from a specialist to participate in the training protocol) Pain level ranging from 25 to 50 on the Quebec scale

**Exclusion criteria:**

Irregular participation in training sessions (absence from three consecutive sessions or five non-consecutive sessions) Withdrawal of the volunteer from further participation in the study Failure to complete the study assessments Occurrence of any unforeseen problem preventing the participant from continuing in the study

**Age**

From **20 years** old to **45 years** old

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

No information

**Sample size**

Target sample size: **31**

Actual sample size reached: **31**

**Randomization (investigator's opinion)**

Not randomized

**Randomization description**

**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 University of Isfahan

**Street address**

No. 90, Fazilat Ave., Esalat Blvd., Yazd Town,

**City**

Yazd

**Province**

Fars

**Postal code**

8915116790

**Approval date**

2025-09-22, 1404/06/31

**Ethics committee reference number**

IR.UI.REC.1402.143

**Health conditions studied**

**1**

**Description of health condition studied**

Low Back Pain

**ICD-10 code**

**ICD-10 code description**

**Primary outcomes**

**1**

**Description**

Oswestry Low Back Pain Disability

**Timepoint**

Before and after the training protocol

**Method of measurement**

Oswestry Low Back Pain Disability Questionnaire

**2**

**Description**

Forced Vital Capacity

**Timepoint**

Before and after the training protocol

**Method of measurement**

spirometry

**3**

**Description**

Forced expiratory volume in one second

**Timepoint**

Before and after the training protocol

**Method of measurement**

spirometry

**4**

**Description**

EMG

## Timepoint

قبل و بعد از پروتکل تمرینی

## Method of measurement

Electromyography

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Intervention group: lumbar stabilization training

#### Category

Rehabilitation

### 2

#### Description

Intervention group: lumbar stabilization with abdominal drawing-in maneuver

#### Category

Rehabilitation

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Yazd university

##### Full name of responsible person

Dr Hamid Abbasi

##### Street address

Danedhgah Blvd

##### City

Yazd

##### Province

Fars

##### Postal code

8915818411

##### Phone

+98 35 3123 4444

##### Email

habbassi@yazd.ac.ir

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

University of Isfahan

##### Full name of responsible person

Dr Babak Safari

##### Street address

Hezarjarib Blvd

##### City

Isfahan

##### Province

Isfahan

##### Postal code

8174673441

##### Phone

+98 31 3793 2128

##### Email

info@ui.ac.ir

#### Grant name

#### Grant code / Reference number

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

No

#### Title of funding source

Univerdity of Isfahan

#### 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

University of Isfahan

##### Full name of responsible person

Dr Gholamali Ghasemi

##### Position

Professor

##### Latest degree

Ph.D.

##### Other areas of specialty/work

Sport Medicine

##### Street address

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##### Province

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##### Phone

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##### Email

gh.ghasemi@spr.ui.ac.ir

## Person responsible for scientific inquiries

#### Contact

##### Name of organization / entity

University of Isfahan

##### Full name of responsible person

Behnam Sharifi Ardani

##### Position

Student

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Sport Medicine

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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**

Undecided - It is not yet known if there will be 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**

Some data, such as information related to spirometry and functional disability, can be shared.

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

Access period begins after results are printed.

**To whom data/document is available**

For everyone

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

There is no limit.

**From where data/document is obtainable**

sharifi.behnam@gmail.com

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

1week

**Comments****Person responsible for updating data****Contact****Name of organization / entity**

Univerdity of Isfahan

**Full name of responsible person**

Behnam Sharifi Ardani

**Position**

student

**Latest degree**

Master

**Other areas of specialty/work**

Sport Medicine

**Street address**

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