

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

29 Jun 2026

### **Effect of combined suspension and core stability exercises on structural characteristic of intervertebral disc and functional disability in office workers with disc herniation.**

#### **Protocol summary**

##### **Study aim**

Comparison of the effect of 8 weeks of suspension and central stabilizer training on functional limitation (pain severity, personal hygiene, lifting of objects, walking, sitting, standing, sleeping, sexual activity, social life and travel) and structural features of lumbar disc (Intervertebral disk height and disk hernia index) in the administrative staff with herniated discs.

##### **Design**

Clinical trial with two experimental groups in parallel and without a control group and one blinded

##### **Settings and conduct**

This project was conducted in the form of a Ph.D. thesis of sport pathology and corrective movements in the University of Isfahan and in Mashhad, under the supervision of Mashhad University of medical sciences, with one-way blindness (supervisors and evaluators are not familiar with the research routine).

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

Employees with chronic lumbar disc herniation

##### **Intervention groups**

Experimental group 1 conventional exercises and experimental group 2 suspension exercises

##### **Main outcome variables**

Conventional and suspended central stabilizer exercises, structural features of intervertebral disc, functional limitation

#### **General information**

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

##### **Acronym**

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

IRCT registration number: **IRCT20190115042365N1**

Registration date: **2019-04-28, 1398/02/08**

Registration timing: **retrospective**

Last update: **2019-04-28, 1398/02/08**

Update count: **0**

##### **Registration date**

2019-04-28, 1398/02/08

##### **Registrant information**

###### **Name**

Reza Khanzadeh

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

Isfahan university

###### **Country**

Iran (Islamic Republic of)

###### **Phone**

+98 51 3891 8630

###### **Email address**

r.khanzadeh84@spr.ui.ac.ir

##### **Recruitment status**

###### **Recruitment complete**

##### **Funding source**

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

2018-09-23, 1397/07/01

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

2019-01-21, 1397/11/01

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

2018-09-23, 1397/07/01

##### **Actual recruitment end date**

2019-02-20, 1397/12/01

##### **Trial completion date**

2019-02-20, 1397/12/01

##### **Scientific title**

Effect of combined suspension and core stability exercises on structural characteristic of intervertebral disc and functional disability in office workers with disc herniation.

##### **Public title**

The effect of suspension and traditional exercises on

intervertebral disc herniation

### Purpose

Treatment

### Inclusion/Exclusion criteria

#### Inclusion criteria:

the People who sitting on the chair about 6 to 7 hours a day during the day. the People without history of trauma of the lumbar region. People without a history of surgery in the lumbar region. People with lateral posterior hernia in the L4-L5 and L5-S1 regions with orthopedic surgeon diagnosis. People who are authorized to perform exercises with orthopedic diagnosis

#### Exclusion criteria:

Individual desire to leave the research Failure to observe disciplinary during the training period The occurrence of medical problems or any kind of problem that prevents the continuation of the workout.

### Age

From **30 years** old to **50 years** old

### Gender

Male

### Phase

N/A

### Groups that have been masked

- Care provider
- Outcome assessor
- Data analyser

### Sample size

Target sample size: **30**

Actual sample size reached: **25**

### Randomization (investigator's opinion)

Randomized

### Randomization description

After determining the patients list and their numbering, randomly, the odd numbers in the first intervention group and the couples in the second intervention group were placed. This method is described in statistical books as one of the methods of random selection.

### Blinding (investigator's opinion)

Single blinded

### Blinding description

In this research, both groups (experimental 1 and 2) received intervention and the control group (without intervention therapy) was absent due to ethical considerations. meanwhile, those who supervised the exercises and the Doctor responsible for reviewing the results were not aware of the results of the job title. And solely on the correct way of exercising and evaluating.

### Placebo

Not used

### Assignment

Parallel

### Other design features

In this study, in collaboration with the Physical Education and Orthopedic Department, a chair was designed to perform suspended exercises.

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Ethics Committee of the University of Isfahan

##### Street address

Isfahan, Azadi Square, Isfahan University

##### City

isfahan

##### Province

Isfahan

##### Postal code

۸۱۷۴۶۷۳۴۴۱

#### Approval date

2017-08-25, 1396/06/03

#### Ethics committee reference number

نامه ارسالی از طرف کمیته اخلاق دانشگاه IR.UI.REC.1396.063  
اصفهان نیز به ایمیل ذیل که توسط داور محترم ذکر شده است ارسال شد. با سلام مجدد من به ایمیل ارسالی توسط ادمین محترم پاسخ دادم و شماره عضویت و کارآزمایی به ایشان اعلام شد.

## Health conditions studied

### 1

#### Description of health condition studied

Intervertebral disc herniation

#### ICD-10 code

M51.1†

#### ICD-10 code description

M51.1†Lumbar and other intervertebral disc disorders with radiculopathy (G55.1\*)

## Primary outcomes

### 1

#### Description

Change the level of functional limitation of individuals and change the structural characteristics of the intervertebral disc

#### Timepoint

8 weeks after exercises

#### Method of measurement

MRI imaging apparatus and Oswestry questionnaire and functional tests

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

The conventional stabilizer exercises included abdominal and pelvic floor exercises in 24 sessions of 30 minutes, based on previous studies.

#### Category

Treatment - Devices

2

### Description

Intervention group: The group performed the conventional stabilizer exercises in the first intervention group in a suspended state with the help of a device designed in which case the individual seat was suspended and exercised.

### Category

Treatment - Devices

## Recruitment centers

1

### Recruitment center

#### Name of recruitment center

Therapeutic Clinic of Khorasan Razavi Oil and Gas Co.

#### Full name of responsible person

dr Mohammad Bagheri Ghouzhd

#### Street address

Sazeman Ab Boulevard, Oil and Gas Company  
Therapeutic Clinic

#### City

Mashhad

#### Province

Razavi Khorasan

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#### Phone

+98 51 3726 6045

#### Email

asndr70267@yahoo.com

## Sponsors / Funding sources

1

### Sponsor

#### Name of organization / entity

Isfahan University

#### Full name of responsible person

Reza Mahdavinezhad

#### Street address

Azadi Square Isfahan University

#### City

Isfahan

#### Province

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8174673441

#### Phone

+98 31 3793 2128

#### Email

r.mahdavinejad@spr.ui.ac.ir

#### Grant name

#### Grant code / Reference number

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

Yes

### Title of funding source

Isfahan 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

Isfahan University

#### Full name of responsible person

Reza Khanzadeh

#### Position

Phd student

#### Latest degree

Master

#### Other areas of specialty/work

Sport Pathology and Corrective Exercises

#### Street address

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## Person responsible for scientific inquiries

### Contact

#### Name of organization / entity

University of Isfahan

#### Full name of responsible person

Reza Mahdavinejad

#### Position

Associate Professor

#### Latest degree

Ph.D.

#### Other areas of specialty/work

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

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**Position**

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**Latest degree**

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**Other areas of specialty/work**

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Isfahan

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Isfahan

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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**

Undecided - It is not yet known if there will be a plan to make this available

**Clinical Study Report**

Yes - There is a plan to make this available

**Analytic Code**

Not applicable

**Data Dictionary**

Not applicable

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

The effects of these exercises will be presented in the form of scientific papers and PhD theses

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

Starting the access period from 1398

**To whom data/document is available**

Usability will be free to the public

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

All data will be accessible to patients except personal information.

**From where data/document is obtainable**

They can be contacted by email

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

After receiving the email from the applicants and checking their requests, they will be answered promptly

**Comments**