# Clinical Trial Protocol
# Iranian Registry of Clinical Trials

22 Nov 2026

## Comparision of trunk muscle stabilization exercise and Williams exercise on choronic low back pain

### Protocol summary

**Study aim**
Comparision of trunk muscle stabilization exercise and Williams exercise on choronic low back pain

**Design**
The clinical trial has a control group of 100 patients, after introduced by a specialist; they are randomly divided into two groups including trunk stability exercises and Williams exercises.

**Settings and conduct**
This study is performed in the physiotherapy center of Shahid Beheshti hospital in Yasuj. Study population is patients with chronic low back pain who are referred by specialist physicians and they are randomly divided into two groups but no blinding is performed.

**Participants/Inclusion and exclusion criteria**
Inclusion criteria: minimum age 35 and maximum 65 years; at least 3 months have passed since the person's back pain; the chronic back pain should be confirmed by an orthopedic specialist. Non-inclusion criteria: fracture or surgery in the vertebral column; using walking aids; presence of movement restriction in the lower limbs; existence of severe cardiovascular disease or mental illness

**Intervention groups**
Intervention group: Trunk muscle stabilization exercise group that performs resistance exercises for eight weeks. Control group: Williams Exercise group, who performs Williams exercise for eight weeks.

**Main outcome variables**
The mean of visual analogue scale (VAS); The mean of Oswestry disability index (ODI); The mean of Lumbar functional index (LFI); The mean of Fingertip-to-Floor Test (FFT)

### General information

**Reason for update**

**Acronym**

**IRCT registration information**
IRCT registration number: **IRCT20210803052062N1**
Registration date: **2021-10-31, 1400/08/09**
Registration timing: **registered_while_recruiting**

Last update: **2021-10-31, 1400/08/09**
Update count: **0**

**Registration date**
2021-10-31, 1400/08/09

**Registrant information**

**Name**
Hamdollah Ḏelaviz

**Name of organization / entity**

**Country**
Iran (Islamic Republic of)

**Phone**
+98 74 3323 6302

**Email address**
delavizhamdi83@gmail.com

**Recruitment status**
**Recruitment complete**

**Funding source**

**Expected recruitment start date**
2021-09-01, 1400/06/10

**Expected recruitment end date**
2023-09-01, 1402/06/10

**Actual recruitment start date**
empty

**Actual recruitment end date**
empty

**Trial completion date**
empty

**Scientific title**
Comparision of trunk muscle stabilization exercise and Williams exercise on choronic low back pain

**Public title**
Resistance exercise for back pain

**Purpose**
Treatment
**Inclusion/Exclusion criteria**
**Inclusion criteria:**
Minimum age 35 and maximum 65 years old At least 3 months have passed since the person had low back pain Chronic back pain should be confirmed by an orthopedic specialist
**Exclusion criteria:**
History of surgery or fractures in the spine Use walking aids Movement restriction in the lower limbs Pressure on nerve roots Spinal canal stenosis, Presence of intervertebral disc herniation Presence of spondylolisthesis, Presence of severe cardiovascular disease or metabolic disease Suffering from mental illness Use of anticonvulsant drugs
**Age**
From **35 years** old to **56 years** old
**Gender**
Both

**Phase**
N/A
**Groups that have been masked**
*No information*
**Sample size**
Target sample size: **90**
**Randomization (investigator's opinion)**
Randomized
**Randomization description**
Patients are randomly divided into two groups. For this purpose, 90 pieces of paper with the same shape and color are prepared. The number one is written on 45 prepared papers and the number two is written on the other 45 papers. Number one is considered for patients who do trunk muscle stabilization exercise and number 2 is considered for patients who do Williams exercises. Then all the papers are placed in a box. After the patient's visit, the papers are taken out one by one until the sample size is complete.
**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 Yasuj University of Medical Sciences
**Street address**
Unit 1, No 22, Bahonar1 avenue
**City**
Yasuj
**Province**
Kohgilouyeh-va-Boyrahmad
**Postal code**
7591951176
**Approval date**
2021-06-02, 1400/03/12
**Ethics committee reference number**
IR.YUMS.REC.1400.092

## Health conditions studied

### 1

**Description of health condition studied**
Chronic low back pain
**ICD-10 code**
M54.5
**ICD-10 code description**
Low back pain

## Primary outcomes

### 1

**Description**
Mean pain intensity
**Timepoint**
Before treatment and 4 weeks and 8 weeks after treatment
**Method of measurement**
Based on visual analog scale

### 2

**Description**
Mean Disability Index
**Timepoint**
Before treatment and 4 weeks and 8 weeks after treatment
**Method of measurement**
Based on Oswestry disability index (ODI)

### 3

**Description**
Mean Lumbar functional index
**Timepoint**
Before treatment and 4 weeks and 8 weeks after treatment
**Method of measurement**
Base on Lumbar functional index

### 4

**Description**
Mean Fingertip-to-Floor distance
**Timepoint**
Before treatment and 4 weeks and 8 weeks after treatment
**Method of measurement**

Based on Fingertip-to-Floor Test

## Secondary outcomes

empty

## Intervention groups

### 1

**Description**

Intervention group: The patient is instructed to perform 5 exercises including elbow-toe, hand-knee, curl-up, side side, and back bridge as follows on the floor or a stable surface. For doing elbow-toe the subject was instructed to maintain a prone plank position on the floor, such that the elbows were beneath the shoulders and the upper arms were perpendicular to the floor. In this position, only the toes and forearms were touching the floor. Back Bridge The subject was supine on the floor, with feet flat on the ground, knees bent at 90°, toes facing forwards, and hands on the floor by the sides, palms facing down. The subject raised the pelvis to achieve and maintain a neutral hip flexion angle. Hand-Knee The subject assumed a quadruped position and was asked to hold a neutral pelvis position as well as to breathe normally. The subject then lifted the right upper extremity and held it straight, while simultaneously lifting the left lower extremity and holding it straight also. Side Bridge The subject was positioned in right sidelying, with the right elbow directly beneath the shoulder and upper arm perpendicular to the ground. The subject raised the pelvis so that the spine was straight, thereby achieving a position supported only by the right elbow and the side of the right foot. Curl-up the subject was supine, with hips at 45° and knees at 90° and hands behind the head. The subject tucked in chin and curled the upper trunk by lifting the thoracic spine off the floor. With the exercise performed optimally, the curl up was performed so that the scapulae were off the floor. Once in this position, the subject was asked to breathe deeply. After training, and ensuring that the exercises are done correctly, patients do these exercises three times a day, three days a week for eight weeks.

**Category**

Rehabilitation

### 2

**Description**

Control group: The patient is instructed to perform 5 exercises including pelvic tilt exercises, partial sit-ups, knee-to-chest, hamstring stretching, Standing lumbar flexion. To perform pelvic tilt exercises, patient lie on back with knees bent, feet flat on floor. Then flatten the back against the floor, without pushing down with the legs. To perform Partial sit-ups patient lies supine with knees bent and feet flat on floor. With hands behind his or her head, elevates the upper torso until the scapulae clear the resting surface and stress is placed on the rectus abdominus. To perform knee-to-chest lie on his back with knees bent and feet flat on the floor. Then slowly pull right knee toward your and hold 5 to 10 seconds, lower the knee and repeat with the other knee. To perform a hamstring stretch, patient sits with the knees extension and side by side. Then raises the upper limbs parallel to the lower limbs and pushes the trunk forward and toward the legs and holds for 5 seconds. To perform standing lumbar flexion patient Stand upright with feet spread shoulder width apart. Slowly bend forward, sliding hands down legs, until he/she feels tension in the back. After training, and ensuring that the exercises are done correctly, patients do these exercises three times a day, three days a week for eight weeks.

**Category**

Rehabilitation

## Recruitment centers

### 1

**Recruitment center**

**Name of recruitment center**
Physiotherapy clinic center

**Full name of responsible person**
Hamdollah Delaviz

**Street address**
Physiotherapy center; Shahid Behshti hospital, Malem Ave 1

**City**
Yasuj

**Province**
Kohgilouyeh-va-Boyrahmad

**Postal code**
75917 94857

**Phone**
+98 74 3322 1813

**Email**
delavizhamdi83@gmail.com

## Sponsors / Funding sources

### 1

**Sponsor**

**Name of organization / entity**
Yasouj University of Medical Sciences

**Full name of responsible person**
Hossin Mari Oriad

**Street address**
Shahid Montazeri avenue

**City**
Yasuj

**Province**
Kohgilouyeh-va-Boyrahmad

**Postal code**
7591875114

**Phone**
+98 74 3334 6078

**Email**
delaviz.h@yums.ac.ir

**Grant name**

**Grant code / Reference number**

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

Yes

**Title of funding source**
Yasouj University of Medical Sciences

**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**
Yasouj University of Medical Sciences

**Full name of responsible person**
Hamdollah Delaviz

**Position**
Faculty of medicine

**Latest degree**
Ph.D.

**Other areas of specialty/work**
Anatomy

**Street address**
Unit 1, No 22, Bahonar 1 avenue

**City**
Yasuj

**Province**
Kohgilouyeh-va-Boyrahmad

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7591951176

**Phone**
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**Email**
delavizhamdi83@gmail.com

## Person responsible for scientific inquiries

**Contact**

**Name of organization / entity**
Yasouj University of Medical Sciences

**Full name of responsible person**
Hamdollah Delaviz

**Position**
Faculty of Medicine

**Latest degree**
Ph.D.

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Anatomy

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**Email**
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## Person responsible for updating data

**Contact**

**Name of organization / entity**
Yasouj University of Medical Sciences

**Full name of responsible person**
Hamdollah Delaviz

**Position**
Faculty of medicine

**Latest degree**
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## 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**
Because I do not have any experience in this field

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

**Statistical Analysis Plan**
Not applicable

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

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

**Analytic Code**
Not applicable

**Data Dictionary**
Not applicable