

Clinical Trial Protocol

Iranian Registry of Clinical Trials

16 Sep 2026

Effect of Core Stability Exercises on Pain and Function of Musicians with Chronic Low Back Pain

Protocol summary

Study aim

Effect of core stability exercise on pain and function in musicians with low back pain

Design

Clinical trial is an interventional study with control group, parallel, double-blind and randomized. Blinding will be done as simple individual blinding with sealed envelope. Phase 3 clinical trial

Settings and conduct

The study will be done at Sina hospital. After primary assessment, subject will randomly put in one of the groups. Intervention group will receive core stability exercises and the control group will educate about posture during playing and activity daily and non-related back exercises. Pain and function will assess again at 12 and 24th week. Participants, the researcher who collects data on outcome variables and the individual who analyzes the data are blind to the type of intervention.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Musicians 18 to 45 years old History of low back pain within one recent month Piano, Violin and Cello playing Exclusion criteria include: History of trauma History of spinal surgery Any structural defect in the spine Neurologic defect Radicular pain in the lower extremity Pregnancy Any non-exercise therapy including physiotherapy while doing research Unwillingness to participate in the study

Intervention groups

Intervention group will receive core stability exercise in addition to correct posture during instrument playing. Control group will receive training about correcting posture during instrument playing and activity daily.

Main outcome variables

Pain will assess with Visual Analogue Scale and function will assess with Oswestry Disability Index Questionnaire.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20191222045849N1**

Registration date: **2020-01-23, 1398/11/03**

Registration timing: **registered_while_recruiting**

Last update: **2020-01-23, 1398/11/03**

Update count: **0**

Registration date

2020-01-23, 1398/11/03

Registrant information

Name

Maryam Mirshahi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 6634 8500

Email address

m-mirshahi@sina.tums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-12-31, 1398/10/10

Expected recruitment end date

2020-01-30, 1398/11/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of Core Stability Exercises on Pain and Function of Musicians with Chronic Low Back Pain

Public title

Effect of core stability exercises on low back pain

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

Musicians 18 to 45 years old History of low back pain within one recent month Piano, Violin and Cello playing

Exclusion criteria:

History of trauma History of spinal surgery Any structural defect in the spine Neurologic defect Radicular pain in the lower extremity Pregnancy Any non-exercise therapy including physiotherapy while doing research Unwillingness to participate in the study

Age

From **18 years** old to **45 years** old

Gender

Both

Phase

3

Groups that have been masked

- Participant
- Outcome assessor
- Data analyser

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

Randomization will be done as simple method with card. The type of intervention will be put in sealed envelopes. Individuals are listed in order of attendance. After including the study, the envelopes will shuffling and each person is asked to select an envelope. The subjects will be asked to select one envelope. According to the predicted sample size, the number of envelope will provide. Therefore, any selected envelope will not return to randomization sequence. This type of randomization can result to have the same number of individuals in both groups.

Blinding (investigator's opinion)

Double blinded

Blinding description

Participants are blind to the type of intervention (core stability exercise). The treatment group will receive core stability exercises and the control group will educate about posture during playing and non-related back exercises. The researcher who collects data on outcome variables is also blind to the intervention as well as the individual who analyzes the data.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Tehran University of Medical Sciences.

Street address

Sina Hospital, Imam Khomeini Ave., Hassan Abad Sq., Tehran, Iran

City

Tehran

Province

Tehran

Postal code

1136746911

Approval date

2018-12-29, 1397/10/08

Ethics committee reference number

IR.TUMS.MEDICINE.REC.1397.686

Health conditions studied

1

Description of health condition studied

Low back pain

ICD-10 code

M54.5

ICD-10 code description

Low back pain

Primary outcomes

1

Description

Pain score

Timepoint

At the starting of the study, 8 and 24 weeks after starting of the intervention

Method of measurement

Visual Analogue Scale (VAS)

2

Description

Function

Timepoint

At the starting of the study, 8 and 24 weeks after starting of the intervention

Method of measurement

Oswestry Disability Index Questionnaire

Secondary outcomes

1

Description

Core muscle strength

Timepoint

At the starting of the study and at 24th week

Method of measurement

Straight leg lowering test (SLLT)

2**Description**

Spinal posture and alignment

Timepoint

At the starting of the study and at 24th week

Method of measurement

Flexible ruler and checkerboard

Intervention groups**1****Description**

Intervention group: Core stability exercises with hip abductor muscle strengthening exercise will educate. This strengthening exercise design for Transvers abdominis and Multifidus muscles (Drawing in, co-contraction Multifidus, bridge, cat-camel, quadruped exercise and concentric hip abduction). Subjects will be asked to do exercises three times a day, ten repeats and hold every contraction for 10 seconds. At the same time, a brochure containing how to do exercise will be given to patients. Patients in the intervention group will visit four weeks later to get more exercise. In addition to exercise therapy, correct ergonomics about playing will be educated.

Category

Rehabilitation

2**Description**

Control group: Training on correcting posture when playing the instrument and the correct posture during daily activity in addition to non-related back exercise

Category

Lifestyle

Recruitment centers**1****Recruitment center****Name of recruitment center**

Sina hospital

Full name of responsible person

Maryam Mirshahi

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Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Tehran University of Medical Sciences

Full name of responsible person

Mohammadali Sahraian

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Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Tehran 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**

Tehran University of Medical Sciences

Full name of responsible person

Maryam Mirshahi

Position

Sport Medicine Specialist

Latest degree

Specialist

Other areas of specialty/work

Sport Medicine

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Person responsible for scientific inquiries

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

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

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