Clinical Trial Protocol
Iranian Registry of Clinical Trials

24 Nov 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 Analoge 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

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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 envelops 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 Analoge 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 ergonomy 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
Street address
Sina Hospital, Imam Khomeini Ave., Hassan Abad Sq., Tehran, Iran
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m-mirshahi@sina.tums.ac.ir

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Tehran University of Medical Sciences
Full name of responsible person
Mohammadali Sahraian
Street address
Sina Hospital, Imam Khomeini Ave., Hassan Abad Sq., Tehran, Iran
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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
Street address
Sina Hospital, Emam Khomeini Ave, Hassan Abad Sq.
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Person responsible for updating data

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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