Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

Investigating the effect of stabilizer exercises and maintaining functional stability of the pelvis on improving chronic pain in the lumbopelvic region and lower extremities in traffic police with prolonged standing time.

Protocol summary

Study aim
To investigate the effect of stabilizing exercises and maintaining functional stability of the pelvis on improving chronic pain in the lumbopelvic area and lower limbs in traffic police officers.

Design
Research with intervention group (McGill exercises) and control group. Among the 30 available subjects who meet the study entry criteria, the names of the individuals are written inside sealed envelopes and randomly placed in one of these two groups.

Settings and conduct
The study location is the sports hall of the Rudaki Traffic Police Headquarters in Tehran. The study population includes people with chronic lower limb pain. Blinding is not performed in this study.

Participants/Inclusion and exclusion criteria
Inclusion criteria: Age between 18-45 years; having at least 2 out of 3 cases of lumbo-pelvic, knee and ankle pain; back pain without any specific cause that has been present for more than six months without pain radiating to the lower limbs; standing for long periods of time during the day (on average at least 4 hours). Exclusion criteria: A willingness to perform professional sports exercises and other rehabilitation activities during the research; a history of surgery or severe muscle tear in any part of the lower limbs.

Intervention groups
Intervention group: McGill exercises (15 people). This group will perform the McGill exercises for 24 sessions over a period of 2 months. This group will have a pre and a post-test. Control group: This group will consist of 15 people who will not receive any exercise intervention for 2 months and will only participate in the pre and post-test.

Main outcome variables
Chronic back and lower limb pain

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20260530069573N1**
Registration date: **2026-06-27, 1405/04/06**
Registration timing: **prospective**

Last update: **2026-06-27, 1405/04/06**
Update count: **0**

Registration date
2026-06-27, 1405/04/06

Registrant information

Name
Amirmohammad Ramzi araghi

Name of organization / entity

Country
Iran (Islamic Republic of)

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2026-07-23, 1405/05/01

Expected recruitment end date
2026-08-23, 1405/06/01

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Investigating the effect of stabilizer exercises and maintaining functional stability of the pelvis on improving chronic pain in the lumbopelvic region and lower extremities in traffic police with prolonged standing time.

Public title
The effect of McGill exercises on improving chronic pain in the lower extremities.

Purpose
Supportive

Inclusion/Exclusion criteria

Inclusion criteria:
Age between 18 and 45 years. Having at least 2 out of 3 symptoms of low back, pelvic, knee, and ankle pain. Back pain without any specific cause that has been present for more than six months without radiating pain to the lower extremities. Standing for long periods of time throughout the day (on average at least 4 hours).

Exclusion criteria:
History of surgery in any of the back, hip, spine, knee, or ankle areas History of severe muscle tear in any of the back, hip, spine, knee, or ankle areas A willingness to perform professional sports exercises and other rehabilitation activities during the research.

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

Gender
Male

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **30**

Randomization (investigator's opinion)
Randomized

Randomization description
After reaching 30 individuals who meet the inclusion criteria for the study, each individual's name is placed in a sealed envelope, and the research supervisor randomly selects 15 envelopes that will be considered as the control group and the remaining 15 envelopes will be considered as the intervention group.

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 Shahid Beheshti University of Medical Sciences

Street address
Second Floor, Shahid Beheshti University of Medical Sciences Headquarters , Building No. 2 , Next to Ayatollah Taleghani Hospital, Parvaneh Street, Tabnak Street, Shahid Chamran Highway

City
Tehran

Province
Tehran

Postal code
19395-4631

Approval date
2026-05-30, 1405/03/09

Ethics committee reference number
IR.SBMU.TEB.POLICE.REC.1405.004

Health conditions studied

1

Description of health condition studied
Chronic non-specific back pain

ICD-10 code
M54.5

ICD-10 code description
Low back pain

Primary outcomes

1

Description
The extent and severity of chronic low back pain measured by a visual pain questionnaire

Timepoint
Once before starting the training protocol and once after completing the two-month training protocol. (3 training sessions are performed each week)

Method of measurement
Visual Analogue Scale

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: The intervention group will receive the McGill exercise protocol. Pre-test and post-test will be conducted for this group. The McGill protocol is a set of corrective exercises designed to increase spinal stability and reduce back pain. These exercises include 3 main exercises. These three movements include “Curl-up” (a modified sit-up), “Side Bridge” and “Bird Dog”, which focus not on excessive spinal mobility, but on maintaining a neutral position and strengthening the

deep abdominal and back muscles (such as the transverse abdominis and the multifidus). Instead of placing additional pressure on the discs, these exercises help create a secure “muscle belt” around the trunk so that the load on the spine is optimally distributed during daily activities. To implement this protocol properly, you should note that the quality of the movement is much more important than the number of repetitions. In the Curl-up exercise, the goal is to activate the abdominal muscles without bending the cervical and lumbar vertebrae; In Side Bridge, the goal is to improve lateral stability by maintaining a straight body line; and in Bird Dog, the goal is to maintain balance and core stability while moving your arms and legs. McGill recommends doing these exercises daily, using a “hold” technique rather than rapid, repetitive movements, to build the muscular endurance needed to protect your spine in the long run. The total number of sessions for the protocol is 24, which will be conducted over two months, meaning 3 training sessions per week, with each session lasting 45 to 60 minutes.

Category

Rehabilitation

2

Description

Control group: The control group will only participate in the pre-test and post-test to measure pain intensity and will not receive any intervention

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Valiasr FARAJA Hospital

Full name of responsible person

Amir Fallah Nejad Mojarad

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Faraja Vice President for Research and Technology

Full name of responsible person

Elham Naseri

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Davazdah Farvardin Complex , Attar Square, Vanak Square, Tehran.

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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

Faraja Vice President for Research and Technology

Proportion provided by this source

100

Public or private sector

Private

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Persons

Person responsible for general inquiries

Contact

Name of organization / entity

University of Tehran

Full name of responsible person

Amirmohammad Ramzi Araghi

Position

Research Soldier

Latest degree

Master

Other areas of specialty/work

Sports pathology and corrective exercises

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Person responsible for scientific inquiries

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Name of organization / entity
Deputy of Science, Research and Technology of the Police Command of the Islamic Republic of Iran

Full name of responsible person
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Position
Professor, academic supervisor, introduced by the Vice Chancellor of FARAJA

Latest degree
Ph.D.

Other areas of specialty/work
Others

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Position
Research Soldier

Latest degree
Master

Other areas of specialty/work
Sports pathology and corrective exercises

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

Analytic Code
Not applicable

Data Dictionary
Not applicable