

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 2026

Comparing the effectiveness of eight weeks of dynamic neuromuscular stability training on improving balance and lower limb strength in elderly men

Protocol summary

Study aim

Comparing the effectiveness of eight weeks of dynamic neuromuscular stability training on improving balance and lower limb strength in elderly men

Design

The clinical trial has two groups, a control group and an exercise group, and is randomized.

Settings and conduct

This clinical study aims to investigate the effectiveness of exercise on elderly men in Sanandaj. 22 participants from a nursing home will be randomly divided into two groups of 11: an exercise intervention group and a control group.

Participants/Inclusion and exclusion criteria

Inclusion criteria for the study: Age range between 60 and 79 years, no history of acute injury in different parts of the body, no problems with vision, hearing, and vestibular function, no history of stroke or inner ear disorders, obtaining a minimum score of 24 on the Mental State Examination (MMSE), the ability to walk independently, and negative responses to all questions on the Physical Activity Readiness Questionnaire (PAR-Q). The exclusion criteria for subjects from the study were missing three sessions of the exercise program, not being present at the pre-test and post-test, taking medications that affect balance, and reporting a history of imbalance and dizziness.

Intervention groups

Exercise group The exercise phase will include a dynamic neuromuscular stabilization exercise protocol. The exercise period will be 8 weeks, three sessions per week, and each session will be 50 minutes. Each session will include 5 minutes of warm-up exercises, 40 minutes of dynamic neuromuscular stabilization exercises, and 5 minutes of cool-down exercises. Exercise movements will include diaphragmatic breathing, supine 90-90, prone, rolling, side sitting, oblique sitting, three-legged

standing, kneeling, squatting, and standing up The control group will not do any activity

Main outcome variables

Muscular strength, static balance, dynamic balance

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20260417069089N2**

Registration date: **2026-06-01, 1405/03/11**

Registration timing: **prospective**

Last update: **2026-06-01, 1405/03/11**

Update count: **0**

Registration date

2026-06-01, 1405/03/11

Registrant information

Name

Saber Saedmocheshi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 918 999 5148

Email address

metabolism1393@gmail.com

Recruitment status

recruiting

Funding source

Expected recruitment start date

2026-06-22, 1405/04/01

Expected recruitment end date

2026-09-23, 1405/07/01

Actual recruitment start date

empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Comparing the effectiveness of eight weeks of dynamic neuromuscular stability training on improving balance and lower limb strength in elderly men

Public title
Comparing the effectiveness of eight weeks of dynamic neuromuscular stability training on improving balance and lower limb strength in elderly men

Purpose
Supportive

Inclusion/Exclusion criteria
Inclusion criteria:
 No history of acute injury Not having vision problems Not having a hearing problem Ear and ear canal disorders No history of stroke
Exclusion criteria:

Age
From **60 years** old to **79 years** old

Gender
Male

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **22**

Randomization (investigator's opinion)
Randomized

Randomization description
 This study will use a simple randomization method. Participants will be randomly assigned to two groups: an exercise intervention group and a control group. Randomization will be performed at the individual level, with each of the 22 study participants placed in one of the two groups. A computer sequence will be used to randomly assign participants to each group. This method provides high precision and reproducibility and minimizes selection bias. The sequence of participant allocation was generated using a block randomization method with variable block sizes (e.g., 4 and 8) and a 1:1 allocation ratio to ensure a balanced distribution of participants across the two groups. This randomization sequence was generated by a dedicated computer program or a validated statistical software. Specifically, SPSS version 26 was used to generate the allocation sequence.

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

university of kurdistan

Street address

university

City

sanandaj

Province

Kurdistan

Postal code

6639115831

Approval date

2025-11-03, 1404/08/12

Ethics committee reference number

ir.uok.rec.1404.006

Health conditions studied

1

Description of health condition studied

AGEING

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

STRENGHT MUSCLE

Timepoint

Before the start of the intervention and 60 days after the start of the intervention

Method of measurement

Before the start of the intervention and 60 days after the start of the intervention

2

Description

BALANCE

Timepoint

Before the start of the intervention and 60 days after the start of the intervention

Method of measurement

Using functional tests

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Intervention group: The training steps will include a dynamic neuromuscular stabilization exercise protocol. The training period will be 8 weeks, three sessions per week, and each session will be 50 minutes. Each session will include 5 minutes of warm-up exercises, 40 minutes of dynamic neuromuscular stabilization exercises, and 5 minutes of cool-down exercises. The training movements will include diaphragmatic breathing, supine 90-90, prone, rolling, side sitting, oblique sitting, three-legged standing, kneeling, squatting, and standing.

Category

Rehabilitation

2

Description

Control group: NON-ACTIVITY

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

university of kurdistan

Full name of responsible person

saber saedmocheshi

Street address

university

City

sanandaj

Province

Kurdistan

Postal code

6639115831

Phone

Email

saedmocheshi@uok.ac.ir

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

university of kurdistan

Full name of responsible person

saber saedmocheshi

Street address

university

City

sanandaj

Province

Kurdistan

Postal code

6639115831

Phone

Email

saedmocheshi@uok.ac.ir

Grant name

Grant code / Reference number

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

Yes

Title of funding source

university of kurdistan

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

university of kurdistan

Full name of responsible person

saber saedmocheshi

Position

faculty

Latest degree

Ph.D.

Other areas of specialty/work

Sport Medicine

Street address

university

City

sanandaj

Province

Kurdistan

Postal code

6639115831

Phone

0098 87 334600

Email

saedmocheshi@uok.ac.ir

Person responsible for scientific inquiries

Contact

Name of organization / entity

university of kurdistan

Full name of responsible person

saber saedmocheshi

Position

faculty

Latest degree

Ph.D.

Other areas of specialty/work

Sport Medicine

Street address

university

City

sanandaj

Province

Kurdistan

Postal code

6639115831

Phone

0098 87 334600

Fax**Email**

saedmocheshi@uok.ac.ir

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

university of kurdistan

Full name of responsible person

saber saedmocheshi

Position

faculty

Latest degree

Ph.D.

Other areas of specialty/work

Sport Medicine

Street address

university

City

sanandaj

Province

Kurdistan

Postal code

663915831

Phone

0098 87 334600

Email

saedmocheshi@uok.ac.ir

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

Yes - There is a plan to make this available

Clinical Study Report

Not applicable

Analytic Code

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

En All data is potentially shareable after de-identifying individuals.

When the data will become available and for how long

One years AFTER publication

To whom data/document is available

All people who study ageing in scientific institutions, as well as ageing people themselves

Under which criteria data/document could be used

The information extracted from the present work can be used by sports coaches who are designing training programs, older adults, and gerontology specialists to improve their performance.

From where data/document is obtainable

After publishing the data in reputable journals, the reader, after studying and being interested in the topic in question, is first referred to the author responsible for the work whose email address and phone number are mentioned in the article. In the second stage, the other authors of the article are contacted using your email. In the third stage, they can go to the place where the research was conducted, i.e. the university, and obtain information from the university's research department.

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

Since the publication of the article takes one year, readers who are interested in this field can immediately message or email the responsible author after one year and when the article is published. The responsible author will provide the person with relevant data and appropriate information as soon as possible and on the same day.

Comments