

Clinical Trial Protocol

Iranian Registry of Clinical Trials

16 Sep 2026

The effect of 8 weeks aquatic and land exercise on postural control and balance recovery strategy and determine their relation to strength, proprioception and reaction time in elderly men

Protocol summary

Summary

Objective: The purpose of this study is to assess the effect of 8 weeks aquatic and land exercise on postural control and balance recovery strategy and also determine their relation to strength, proprioception and reaction time in elderly men. Design: In this clinical trial, 45 persons will be divided randomly in three groups of aquatic exercise, land exercise and control. Setting and conduct: Aquatic and land exercise groups will participate in training sessions for 8 weeks while the control group will not receive the intervention. Major inclusion and exclusion criteria: Inclusion criteria include: Age between 60 and 70; no specific sport activity during study. Exclusion criteria from the study include: Congenital disorders; previous surgery or injury especially in lower extremities; use of sedative and analgesic drugs that disrupt proprioception and balance (especially 24 hours before the test); non-normal body mass index; specific diseases; use of cane or walker to walk; visual, vestibular and neuromuscular disease; inability to do pre and post intervention tests; doing effective exercises in order to improving balance and no completion of training sessions. Interventions: Aquatic exercise and land exercise. Main outcome variables: Before and after intervention, all subjects will be assessed for postural control, balance recovery strategy, reaction time, strength and proprioception.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016031227022N1**
Registration date: **2016-04-24, 1395/02/05**
Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2016-04-24, 1395/02/05

Registrant information

Name

Ramin Beyranvand

Name of organization / entity

Shahid Bahonar University of Kerman

Country

Iran (Islamic Republic of)

Phone

+98 66 1422 1367

Email address

r_beyranvand@ut.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice Chancellor for Research, Shahid Bahonar University of Kerman

Expected recruitment start date

2016-04-20, 1395/02/01

Expected recruitment end date

2016-05-21, 1395/03/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of 8 weeks aquatic and land exercise on postural control and balance recovery strategy and determine their relation to strength, proprioception and reaction time in elderly men

Public title

The effect of 8 weeks aquatic and land exercise on postural control and balance recovery strategy in elderly men

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria include: Age between 60 and 70; no specific sport activity during study. Exclusion criteria from the study include: congenital disorders; previous surgery or injury especially in lower extremities; use of sedative and analgesic drugs that disrupt proprioception and balance (especially 24 hours before the test); non-normal body mass index; specific diseases; use of cane or walker to walk; visual, vestibular and neuromuscular disease; Inability to do pre and post intervention tests; doing effective exercises in order to improving balance and no completion of training sessions.

Age

From **60 years** old to **70 years** old

Gender

Male

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **45**

Randomization (investigator's opinion)

Randomized

Randomization description

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 Kerman University of Medical Science

Street address

Somayeh Crossroads, Kerman

City

Kerman

Postal code

Approval date

2016-03-09, 1394/12/19

Ethics committee reference number

IR.KMU.REC.1394.598

Health conditions studied

1

Description of health condition studied

Falling (Loss of balance)

ICD-10 code

W01

ICD-10 code description

Fall on same level from slipping, tripping and stumbling

2

Description of health condition studied

Falling (Loss of balance)

ICD-10 code

W10

ICD-10 code description

Fall on and from stairs and steps

3

Description of health condition studied

Falling (Loss of balance)

ICD-10 code

W17

ICD-10 code description

Other fall from one level to another

4

Description of health condition studied

Falling (Loss of balance)

ICD-10 code

W18

ICD-10 code description

Other fall on same level

5

Description of health condition studied

Falling (Loss of balance)

ICD-10 code

W19

ICD-10 code description

Unspecified fall

6

Description of health condition studied

Falling (Loss of balance)

ICD-10 code

R29.6

ICD-10 code description

Tendency to fall, not elsewhere classified

7

Description of health condition studied

Falling (Loss of balance)

ICD-10 code

R54

ICD-10 code description

Senility

Primary outcomes

1

Description

Postural control

Timepoint

Before, during (mid test) and after intervention.

Method of measurement

By Biodex

2

Description

Balance recovery strategy

Timepoint

Before, during (mid test) and after intervention.

Method of measurement

By Motion Analysis System

3

Description

Strength

Timepoint

Before, during (mid test) and after intervention.

Method of measurement

By Hand Held Dynamometer

4

Description

Proprioception

Timepoint

Before, during (mid test) and after intervention.

Method of measurement

By Photography

5

Description

Reaction Time

Timepoint

Before, during (mid test) and after intervention.

Method of measurement

By Motion Analysis System

Secondary outcomes

empty

Intervention groups

1

Description

The control group will not receive the intervention

Category

N/A

2

Description

Aquatic exercise group will participate in training sessions for 8 weeks and their status will be evaluated before, during and after intervention.

Category

Prevention

3

Description

Land exercise group will participate in training sessions for 8 weeks and their status will be evaluated before, during and after the intervention.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Mehr Retirement Home

Full name of responsible person

Mr Soleimani

Street address

Farhangian Cross Road, Jomhuri Eslami Blv, Kerman

City

Kerman

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for Research, Shahid Bahonar University of Kerman

Full name of responsible person

Dr Maryam Ehtesham Zadeh

Street address

Shahid Bahonar University, Pajohesh Square, Kerman

City

Kerman

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Vice Chancellor for Research, Shahid Bahonar University of Kerman

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin
Type of organization providing the funding
empty

+98 66 1422 1367
Fax
Email
ramin_beyranvand@yahoo.com
Web page address

Person responsible for general inquiries

Contact

Name of organization / entity
Shahid Bahonar University of Kerman
Full name of responsible person
Ramin Beyranvand
Position
Ph.D Student
Other areas of specialty/work
Street address
Shahid Bahonar University, Pajohesh Square, Kerman
City
Kerman
Postal code
Phone
+98 66 1422 1367
Fax
Email
ramin_beyranvand@yahoo.com
Web page address

Person responsible for scientific inquiries

Contact

Name of organization / entity
Shahid Bahonar University of Kerman
Full name of responsible person
Ramin Beyranvand
Position
Ph.D Student
Other areas of specialty/work
Street address
Shahid Bahonar University, Pajohesh Square, Kerman
City
Kerman
Postal code
Phone

Person responsible for updating data

Contact

Name of organization / entity
Shahid Bahonar University of Kerman
Full name of responsible person
Ramin Beyranvand
Position
Ph.D student
Other areas of specialty/work
Street address
Shahid Bahonar University, Pajohesh Square, Kerman
City
Kerman
Postal code
Phone
+98 66 1422 1367
Fax
Email
ramin_beyranvand@yahoo.com
Web page address

Sharing plan

Deidentified Individual Participant Data Set (IPD)
empty
Study Protocol
empty
Statistical Analysis Plan
empty
Informed Consent Form
empty
Clinical Study Report
empty
Analytic Code
empty
Data Dictionary
empty