

Clinical Trial Protocol

Iranian Registry of Clinical Trials

08 Jun 2026

Comparing the effect of 12 weeks of Pilates and Aquatic training on balance, muscle strength and range of motion in patients with Parkinson's disease

Protocol summary

Study aim

Comparing the Effect of Twelve weeks Pilates and Aquatic Training on Balance, Muscle strength and Range of Motion in Patients with Parkinson's Disease

Design

This research is semi-experimental and applied. Among the male patients referred to AlZahra Isfahan Hospital, 50 people were selected as a sample and divided into three groups of Pilates, water exercise and control in a non-random manner.

Settings and conduct

Isfahan University

Participants/Inclusion and exclusion criteria

1. Absence of cardiovascular diseases 2. Not suffering from mental illnesses 3. No history of metabolic diseases 4. Age range 35-75 years 5. No history of orthopedic diseases 6. Not participating in regular sports activities in the two months before the study 7. All the subjects had passed at least one year since the diagnosis of their disease. 8. The gender variable was controlled (all subjects of the research were men). 9. Subjects were selected from AlZahra Hospital, Isfahan. 10. The subjects were in stage 2 and 3 of Hun and Yahr scale.

Intervention groups

1. Pilates 2. Aquatic training 3. Control

Main outcome variables

Balance Muscle strength Range of motion

General information

Reason for update

Adding the rest of the measured factors and other information needed to complete the study information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015120825436N1**
Registration date: **2015-12-30, 1394/10/09**

Registration timing: **retrospective**

Last update: **2023-05-09, 1402/02/19**

Update count: **1**

Registration date

2015-12-30, 1394/10/09

Registrant information

Name

Hakimeh Baziyar

Name of organization / entity

-

Country

Iran (Islamic Republic of)

Phone

+98 38 3422 7674

Email address

hakimehbaziyar@yahoo.com

Recruitment status

Recruitment complete

Funding source

Vice Chancellor for research of Isfahan University

Expected recruitment start date

2012-03-19, 1390/12/29

Expected recruitment end date

2013-03-20, 1391/12/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparing the effect of 12 weeks of Pilates and Aquatic training on balance, muscle strength and range of motion in patients with Parkinson's disease

Public title

Comparing the effect of Pilates and Aquatic training in treatment of Parkinson's disease

Purpose

Other

Inclusion/Exclusion criteria

Inclusion criteria:

Based on the neurologist's diagnosis, the patients have mild to moderate Parkinson's disease (stage 1 to 3). No diagnosis of musculoskeletal problems is evident. No defects are observed in the organs. No cardiovascular disease or acute illness has been reported and they are not undergoing physical therapy, but they have the ability and willingness to do Pilates and hydrotherapy exercises.

Exclusion criteria:

Age

No age limit

Gender

Male

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: 50

Randomization (investigator's opinion)

Not 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 Isfahan University

Street address

Isfahan University, Hezaar Jerib Street, Isfahan

City

Isfahan

Province

Isfahan

Postal code

8871916797

Approval date

2022-11-23, 1401/09/02

Ethics committee reference number

IR.UI.REC.1401.109

Health conditions studied

1

Description of health condition studied

Parkinson's disease

ICD-10 code

G30, G31,

ICD-10 code description

Other degenerative diseases of the nervous system

Primary outcomes

1

Description

balance

Timepoint

before intervention-three months after the intervention

Method of measurement

Berg Balance Scale

2

Description

Muscle strength

Timepoint

before intervention-three months after the intervention

Method of measurement

Isokinetic Biodex system (3)

3

Description

Range of motion

Timepoint

before intervention-three months after the intervention

Method of measurement

Isokinetic Biodex system (3)

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: for 12 weeks took part in 3 sessions (each 60 minutes) of Aquatic training and Pilates, as well as taking medication

Category

Rehabilitation

2

Description

Control group: medication

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Alzahra Hospital

Full name of responsible person

Dr Ahmad Chitsaz

Street address

Alzahra Hospital, Sofeh Boulevard, Shahid Keshvari Highway, Isfahan

City

Isfahan

Province

Isfahan

Postal code

887191677

Phone

+98 913 979 4823

Email

hakimehbaziyar@yahoo.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for research of Isfahan University

Full name of responsible person

Dr Mehdi Kargarfard

Street address

Faculty of Physical Education, Isfahan University

City

Isfahan

Province

Isfahan

Postal code

887191677

Phone

+98 913 979 4823

Email

hakimehbaziyar@yahoo.com

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 of Isfahan University

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

دانشگاه اصفهان

Full name of responsible person

Hakimeh Baziyar

Position

PhD student of Exercise Physiology

Latest degree

Master

Other areas of specialty/work

Physiology

Street address

No. 17, 27 Street, Bouali Boulevard, Borujen

City

Boroujen

Province

Chahar-Mahal-va-Bakhtiari

Postal code

887116797

Phone

+98 38 3422 7674

Fax**Email**

Hakimehbaziyar@yahoo.com

Web page address

Person responsible for scientific inquiries

Contact

Name of organization / entity

Isfahan Uni

Full name of responsible person

Hakimeh Baziyar

Position

PhD of Exercise Physiology

Latest degree

Master

Other areas of specialty/work

Physiology

Street address

No. 17, 27 Street, Bouali Boulevard, Borujen

City

Boroujen

Province

Chahar-Mahal-va-Bakhtiari

Postal code

887116797

Phone

+98 913 979 4823

Fax**Email**

Hakimehbaziyar@yahoo.com

Web page address

Person responsible for updating data

Contact

Name of organization / entity

Isfahan Uni

Full name of responsible person

Hakimeh Baziyar

Position

PhD of exercise physiology

Latest degree

Master

Other areas of specialty/work

Physiology

Street address

Borujen - Buali Boulevard - Bagheral Uloom Alley -
Plate 17

City

Boroujen

Province

Chahar-Mahal-va-Bakhtiari

Postal code

887191677

Phone

+98 38 3422 7674

Fax**Email**

Hakimehbaziyar@yahoo.com

Web page address

Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

There is no further information

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available