

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effects of Recreational Table Tennis on an Bone Health, Body composition, Lipid Profile and Physical Function in Older Men

Protocol summary

Study aim

Investigating the effect of recreational tennis table on the bone health, body composition, lipid profiles and physical function of older men.

Design

The present research is a randomized, controlled, prospective clinical trial with parallel groups. The population of the study consisted of elderly people in Shahrood. The subjects of the study are 40 older adults with table tennis experience that selected on the basis on inclusion and exclusion criteria. Participants are enrolled by one of the research colleagues. An independent assessor, blinded person who had no further involvement in the study made a random allocation sequence using a computer Software prior to the initiation of the study that was used to randomize participants with 1:1 allocation ratio in control group (n=20) and table tennis group (n=20). A block randomization design (block size of 2, 4) were applied to ensure an equal number of participants in each group. Group allocation was concealed in sequentially numbered, opaque, sealed envelopes, and corresponding envelopes were opened after enrolled participants completed all baseline assessments.

Settings and conduct

The location of this research is at Nursing homes and community of Shahrood. As it is impossible to blind, participants and sport science specialist providing the tennis table training were not blinded to group allocation. Laboratory specialists assessing the variables and data analyst were blinded to the allocation.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Age over 60 years; Independent living in the community; Lack of regular participation in other physical activities (such as walking, fitness classes); Last participate in table tennis for more than 5 years ago; Ensuring of participants safety during physical activity based on Physical Fitness Readiness Questionnaire; Independence in daily life activities; Physician

certification for participation in the study; Signing a confirmation form for informed participation in the research. Exclusion criteria: History of bone metabolic disease and corticosteroids consumption; history of severe musculoskeletal disorders (such as lower back , knee or hip joint arthritis) and / or arthroscopy and artificial implants; history of neurological complications/problems (such as Parkinson's disease, stroke, spinal cord injury and cerebral palsy); history of endocrine disorders such as hypothyroidism and hyperthyroidism.

Intervention groups

Table Tennis Group: This group receives a 24-week table tennis training program that runs three sessions each week for a period of 1.5 hours in each session. Control group: During the duration of the this research, they continue their usual routine activities.

Main outcome variables

Bone density; Body composition; Lipid profile; Physical Function

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20170114031942N4**
Registration date: **2018-02-25, 1396/12/06**
Registration timing: **registered_while_recruiting**

Last update: **2018-02-25, 1396/12/06**

Update count: **0**

Registration date

2018-02-25, 1396/12/06

Registrant information

Name

Aynollah Naderi

Name of organization / entity

Shahrood University of Technology

Country

Iran (Islamic Republic of)

Phone

+98 917 721 7462

Email address

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Recruitment status

Recruitment complete

Funding source**Expected recruitment start date**

2018-02-19, 1396/11/30

Expected recruitment end date

2018-09-22, 1397/06/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects of Recreational Table Tennis on an Bone Health, Body composition, Lipid Profile and Physical Function in Older Men

Public title

Recreational Table Tennis and Physical Health of Older Men

Purpose

Supportive

Inclusion/Exclusion criteria**Inclusion criteria:**

Age over 60 years; Independent living in the community; Lack of regular participation in other physical activities (such as walking, fitness classes); Last participate in table tennis for more than 5 years ago; Ensuring of participants safety during physical activity based on Physical Fitness Readiness Questionnaire; Independence in daily life activities; Physician certification for participation in the study; Signing a confirmation form for informed participation in the research.

Exclusion criteria:

History of bone metabolic disease and corticosteroids consumption; history of severe musculoskeletal disorders (such as lower back , knee or hip joint arthritis) and / or arthroscopy and artificial implants; history of neurological complications/problems (such as Parkinson's disease, stroke, spinal cord injury and cerebral palsy); history of endocrine disorders such as hypothyroidism and hyperthyroidism.

Age

From **60 years** old to **75 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

Participants are enrolled by one of the research colleagues. An independent assessor, blinded person who had no further involvement in the study made a random allocation sequence using a computer Software prior to the initiation of the study that was used to randomize participants with 1:1 allocation ratio. A block randomization design (block size of 2, 4) were applied to ensure an equal number of participants in each group. Group allocation was concealed in sequentially numbered, opaque, sealed envelopes, and corresponding envelopes were opened after enrolled participants completed all baseline assessments. As it is impossible to blind, participants and sport science specialist providing the tennis table training were not blinded to group allocation. Laboratory specialists assessing the variables and data analyst were blinded to the allocation.

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**

دانشگاه علوم پزشکی شاهرود

Street address

Semnan Province, Shahroud, shahroud medical university

City

Shahrood

Province

Semnan

Postal code

۳۶۱۴۷۷۳۹۴۷

Approval date

2018-01-28, 1396/11/08

Ethics committee reference number

IR.SHMU.REC.1396.167

Health conditions studied**1****Description of health condition studied**

Old adult health

ICD-10 code**ICD-10 code description**

Primary outcomes

1

Description

Bone density

Timepoint

Before starting the study and after completing the study

Method of measurement

dual-energy X-ray absorptiometry (DXA)

2

Description

Body composition

Timepoint

Before starting the study and after completing the study

Method of measurement

dual-energy X-ray absorptiometry (DXA)

3

Description

Lipid profile

Timepoint

Before starting the study and after completing the study

Method of measurement

Blood sampling

4

Description

Physical Function

Timepoint

Before starting the study and after completing the study

Method of measurement

Static balance by FICSIT-4, dynamic balance by the dynamic walking index and physical performance by the short physical performance battery will be evaluated .

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Perform a 24-week table tennis training that runs three times a week And the duration of each session will be 1.5 hours.

Category

Prevention

2

Description

Control group: Continuing the activities of daily living

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Nursing homes in the city

Full name of responsible person

Aynollah Naderi

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Shahrood University of Technology, Tehran Road

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Shahrood University of Technology

Full name of responsible person

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Street address

Tehran avenue, Shahrood, Semnan province

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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

Shahrood University of 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

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Shahrood University of Technology

Full name of responsible person

Aynollah Naderi

Position

Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

Physical Education and Sports Science

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Person responsible for updating data

Contact

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Full name of responsible person

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Latest degree

Ph.D.

Other areas of specialty/work

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Semnan

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Phone

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 more 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