

# 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**

ay.naderi@shahroodut.ac.ir

**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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**Postal code**

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**Phone**

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**Email**

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## Sponsors / Funding sources

### 1

**Sponsor****Name of organization / entity**

Shahrood University of Technology

**Full name of responsible person**

Aynollah Naderi

**Street address**

Tehran avenue, Shahrood, Semnan province

**City**

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**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

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## Person responsible for scientific inquiries

### Contact

**Name of organization / entity**

Shahrood University of Technology

**Full name of responsible person**

Aynollah Naderi

**Position**

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**Latest degree**

Ph.D.

**Other areas of specialty/work**

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**Province**

Semnan

**Postal code**

3619995161

**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