Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Nov 2026

Comparison of the Effects of Aerobic Exercise and Resistance on Changes in the Risk Factors of Cardiovascular Diseases in Elderly People with Hypertension in Kermanshah Elderly Houses

Protocol summary

Study aim
Determination of the effects of aerobic and resistive and combination exercises on changes in risk factors of cardiovascular disease in the elderly with hypertension living in elderly homes in Kermanshah

Design
The present study is a randomized controlled clinical trial. The units were divided into three groups: control group, aerobic exercise and resistance exercises, based on simple random sampling. For the first three groups, The risk will be measured by a pre-test (blood test) and will be completed at the end of the project by post-test.

Settings and conduct
Kermanshah nursing home. Before and after the intervention, a blood test is taken from all three groups and the risk criteria are compared.

Participants/Inclusion and exclusion criteria
Entry requirements: Lack of chronic diseases, No surgery, Regular inactivity, Sports inactivity in the last month and.... Exit criteria: The lack of cooperation or the death of the elderly Leave the sanatorium for any reason Blood pressure greater than 136 | 196 mm Hg and ....

Intervention groups
The present study is a randomized controlled clinical trial that measures the risk factors of cardiovascular disease in elderly people with high blood pressure by measuring subterranean aerobic exercise (slow walking), resistance exercise (independent variable).

Main outcome variables
Sex, Age, Job, Literacy, Cholesterol, Triglyceride, LDL, HDL, Blood glucose, BMI

General information

Reason for update
Acronym
IRCT registration information

IRCT registration number: **IRCT20170614034529N2**
Registration date: **2020-05-19, 1399/02/30**
Registration timing: **prospective**

Last update: **2020-05-19, 1399/02/30**
Update count: **0**

Registration date
2020-05-19, 1399/02/30

Registrant information
Name
Name of organization / entity
Country
Iran (Islamic Republic of)
Phone
+98 83 3426 7275
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fatemeh.kamosi@kums.ac.ir

Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2020-05-21, 1399/03/01
Expected recruitment end date
2021-07-21, 1400/04/30
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Comparison of the Effects of Aerobic Exercise and Resistance on Changes in the Risk Factors of Cardiovascular Diseases in Elderly People with Hypertension in Kermanshah Elderly Houses

Public title
Comparison of the Effects of Aerobic Exercise and Resistance on Changes in the Risk Factors of Cardiovascular Diseases in Elderly People with Hypertension
Purpose
Prevention
Inclusion/Exclusion criteria
Inclusion criteria:
Lack of chronic diseases No surgery Not having history of acute and chronic kidney failure, Cushing's disease and aortic quorum phaeochromocytoma Regular inactivity Sports inactivity in the last month No smoking Non-use of pharmaceutical supplements No addiction Having ages 90-65 years Catching blood pressure Having mental health Awareness and hearing and speaking to an extent that does not prevent research
Exclusion criteria:
The lack of cooperation or the death of the elderly Leave the sanatorium for any reason Blood pressure greater than 136 | 196 mm Hg Hospitalization in the health sector Failure to implement the sport protocol Unstable angina Cardiac insufficiency not compensated Myocardial infarction over the past 4 weeks Ventricular arrhythmias
Age
From **65 years** old to **90 years** old
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **57**
Randomization (investigator's opinion)
Randomized
Randomization description
According to the number of samples examined, from the table of random numbers, single-digit numbers between 0 and 9 will be selected. For studies with two groups, the numbers 0-9 are divided into two equal blocks that the probability of allocating the individual to each block is 0.5. Block 0-4 can be used for the first group and block 5-9 for the second group. Based on the numbers selected from the table of random numbers and the determination of the blocks, it is clear in which group each person entering the study will be placed.
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
National Ethics Committee for Biomedical Research
Street address
Thirteenth floor,.Block A,.Irn Street - Cenan-Ira Headquarters of the Ministry of Health and Medical Education,.Between South Felamak and Zarafshan
City
Kermanshah
Province
Kermanshah
Postal code
148
Approval date
2018-06-12, 1397/03/22
Ethics committee reference number
IR.KUMS.REC.1397.141

Health conditions studied

1

Description of health condition studied
Risk factors for cardiovascular disease
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
Cholesterol, triglycerides, LDL, HDL, blood sugar
Timepoint
Before the intervention, after the intervention
Method of measurement
blood test

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group 1: For the aerobic exercise group, a regular exercise program in the form of sub-aerobic aerobic exercise for 12 weeks and 3 sessions per week with a duration of 45 minutes per session will be provided. Exercise will be present and the checklist designed by the researcher will be evaluated with the correct amount of performance. For each group, an explanatory training session will be held in one of the nursing home halls. In all three groups, the risk factors will be measured and recorded first by performing a pre-test (blood test).And at the end of the project, a post-test

is done.

Category
Lifestyle

2

Description
Intervention group2: In the Resistance Sports Group, using a physiotherapy exercise, they are taught how to perform movements that stand one meter away from the wall and connect the Traband to the wall. Kneel on each knee for 4 minutes. And in 12 weeks and 3 sessions per week with a time of 16 minutes in each session (according to the physiotherapist) will be presented.Exercise will be present and the checklist designed by the researcher will be evaluated with the correct amount of performance. For each group, an explanatory training session will be held in one of the nursing home halls. In all three groups, the risk factors will be measured and recorded first by performing a pre-test (blood test).And at the end of the project, a post-test is done.

Category
Lifestyle

3

Description
Control group: There is no intervention for the control group

Category
N/A

Recruitment centers

1

Recruitment center

Name of recruitment center
Mehrvarzan Elderly Care Center

Full name of responsible person
Fatemeh Kamousi Pak

Street address
Golestan crossroads, Bahram Janjani alley

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Kermanshah University of Medical Sciences

Full name of responsible person
Deputy Research and Technology

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Shahid Beheshti Blvd

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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
Kermanshah University of Medical Sciences

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
Kermanshah University of Medical Sciences

Full name of responsible person
Samira Fattahi

Position
Instructor-faculty

Latest degree
Master

Other areas of specialty/work
Nursery

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Person responsible for updating data

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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
Undecided - It is not yet known if there will be a plan to make this available
Statistical Analysis Plan
Undecided - It is not yet known if there will be a plan to make this available
Informed Consent Form
Undecided - It is not yet known if there will be a plan to make this available
Clinical Study Report
Undecided - It is not yet known if there will be a plan to make this available
Analytic Code
Undecided - It is not yet known if there will be a plan to make this available
Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available