

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jun 2026

Effect of Rubber Band Resistance Exercise on Serum Adropin, Copeptin Levels and Insulin Resistance in Older Women

Protocol summary

Study aim

Investigating the effect of 12-weeks of rubber band resistance exercise on serum levels of adropin, copeptin and insulin resistance in elderly women.

Design

This quasi-experimental study has a pre-test-post-test with experimental and control groups.

Settings and conduct

The statistical population of this research is 55 women aged older people who are more elderly. The number of 30 of them will be selected based on inclusion criteria. Then, they will be randomly divided into experimental (15) and control (15) groups.

Participants/inclusion and exclusion criteria

The criteria for entering the study included the age range of 65-80 years, the absence of chronic diseases, respiratory and pulmonary disease, renal, psychiatric, cardiac arrhythmias and diabetic foot ulcers and nephropathy, and lack of motor limitation.

Intervention groups

Intervention 1: Experimental group: Perform rubber band resistance exercise for 12 weeks, 3 sessions per week and 55 minutes for each session. Exercise intensity will be determined based on the elastic band colors.

Interventions 2: Control group: This group did not receive any interventions.

Main outcome variables

Serum levels of adropin; Serum levels of copeptin; Insulin resistance

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190305042941N1**

Registration date: **2019-08-01, 1398/05/10**

Registration timing: **retrospective**

Last update: **2019-08-01, 1398/05/10**

Update count: **0**

Registration date

2019-08-01, 1398/05/10

Registrant information

Name

Esmaeil Moradi sartashnizi

Name of organization / entity

The University of Shahrekord

Country

Iran (Islamic Republic of)

Phone

+98 35 3272 4183

Email address

emoradi70@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-01-30, 1397/11/10

Expected recruitment end date

2019-02-09, 1397/11/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of Rubber Band Resistance Exercise on Serum Adropin, Copeptin Levels and Insulin Resistance in Older Women

Public title

Effect of Selected Rubber Band Resistance Training in Older Women

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

The age range is 80-65 years BMI Between 25-30 Lack of chronic diseases such as diabetes, high blood pressure and cardiovascular disease

Exclusion criteria:

Has a special diet Motor restrictions Taking medications like insulin Heart arrhythmias Nephropathy

Age

From **65 years** old to **80 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

Subjects will be selected based on the criteria for entering the study as well as other necessary examinations. Then, the subjects will be randomly assigned (simple lottery) to the experimental and control groups.

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

Research Ethics Committee of Sport Sciences

Street address

No.3,5 th st.,Mir emad St.,Motahari Ave

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tehran

Province

Tehran

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1587958711

Approval date

2019-01-23, 1397/11/03

Ethics committee reference number

IR.SSRC.REC.1397.008

Health conditions studied

1

Description of health condition studied

Serum levels of adropine, copleptin and insulin resistance

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Serum Adropin

Timepoint

Before and after 12 weeks elastic band strength training

Method of measurement

با استفاده از کیت الیزا

2

Description

Serum copeptin

Timepoint

Before and after 12 weeks elastic band strength training

Method of measurement

Using ELISA Kit

Secondary outcomes

1

Description

Insulin resistance

Timepoint

Before and after 12 weeks of resistance training with elastic bands

Method of measurement

The glucose and insulin levels are measured using the kit and the insulin resistance is measured by the HOMA formula.

Intervention groups

1

Description

Intervention group:Experimental group: resistance training exercises for 12 weeks, 3 sessions per week and 55 minutes each session. Exercise intensity will increase with the use of elastic band colors.

Category

Lifestyle

2

Description

Control group: This group did not receive any sports intervention.

Category

Lifestyle

Recruitment centers

1

Recruitment center

Name of recruitment center
Centers for Elderly
Full name of responsible person
Esmaeil Moradi Sarteshnizi
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Sponsors / Funding sources

1

Sponsor

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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
Shahrekord University
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
Persons

Person responsible for general inquiries

Contact

Name of organization / entity
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Fax**Email**

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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

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