

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jun 2026

Comparison of Whole Body Vibration alone and with dynamic exercise on body composition in healthy adults

Protocol summary

Summary

The aim of this study was to evaluate the effect of Whole Body Vibration on body composition parameters in healthy adults. The study was performed on 40 obese or overweight healthy volunteers (35-18 years). Main inclusion criteria are obesity or overweight and main exclusion criteria include factors that affect body weight and cases of contraindications of Whole Body Vibration. Volunteers informed about the experimental procedure and purpose of this study. Subsequently, their written informed consent is obtained. After the registration of demographic data including age, weight, body mass index. volunteers will be randomly assigned in one of three groups: control, whole body vibration and whole body vibration with exercise. Intervention: The control group do not receive any intervention and only participate in measurements. Whole body vibration (WBV) at 30-50 HZ frequency and high amplitude is conducted for 20 minutes in the two groups. In WBV with exercise group the samples perform five dynamic exercises (biceps curl, leg abduction, lunge, calf raise, squatting) during WBV. Interventions are done 3 times per week for 8 weeks. Before and after the intervention subcutaneous fat is measured using Sahan caliper and Sonography. Measurements were performed in women in five region (Tricep, Abdominal, Thigh, Supra iliac, Subscapular) . Measurements were performed in men in 4 region (Tricep, Abdominal, Thigh, Supra iliac) . The fat percentage is calculated based on the formula Jackson & pollock. Waist and hip circumference are measured with a tape. Weight scales with a precision of 0.1 kg and height tape with a precision of 0.1 cm is measured and recorded.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201405044549N7**

Registration date: **2014-06-23, 1393/04/02**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2014-06-23, 1393/04/02

Registrant information

Name

Elham Fatemy

Name of organization / entity

Semnan University Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 23 1335 4180

Email address

fatemy@sem-ums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Semnan University of Medical Sciences

Expected recruitment start date

2014-06-22, 1393/04/01

Expected recruitment end date

2014-09-21, 1393/06/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of Whole Body Vibration alone and with dynamic exercise on body composition in healthy adults

Public title

The effect of whole body vibration on obesity in healthy adults

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: obesity or overweight, non athlete healthy adults. Exclusion criteria: weight loss program, Irregularities in menstruation, gynecological disease, pregnancy, History of participation in strength training during the last 6 months, Medical conditions that may prohibit the patient to exercise (neck and low back pain...), Uncontrolled hypertension, Use of drugs and other medications that effect on body composition, Neuromuscular disorders, Musculoskeletal disorder, Lower limb and spinal fracture and surgery, epilepsy, Migraine, Diabetes, Presence of renal failure, Replacement of the hip and knee, pacemaker, (Intra uterine device) IUD, internal fixator, tumors.

Age

From **18 years** old to **35 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Not blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features

Sampling is convenience and the volunteers randomly are allocated to three groups by lottery.

Secondary Ids

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee of Semnan University of Medical Sciences

Street address

Kilometer 5, Damghan Road

City

Semnan

Postal code**Approval date**

2014-04-28, 1393/02/08

Ethics committee reference number

93/435928

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

Obesity

ICD-10 code

E65-E68

ICD-10 code description

Obesity and other hyperalimentation

Primary outcomes**1****Description**

local fat thickness

Timepoint

Before and a day after intervention completion

Method of measurement

caliper-sonography

Secondary outcomes**1****Description**

Waist circumference

Timepoint

Before and a day after intervention completion

Method of measurement

Meter

2**Description**

Thigh circumference

Timepoint

Before and a day after intervention Completion

Method of measurement

Meter

Intervention groups**1****Description**

Whole body vibration at 30-50 HZ frequency is used in the Whole body vibration group. The intervention is done 3 times per week for 12 weeks.

Category

Treatment - Other

2**Description**

In WBV with exercise group the samples perform five dynamic exercises (biceps curl leg abduction, lunge, calf

raise, squatting) during WBV.

Category

Other

3**Description**

In control group no intervention will be done.

Category

Treatment - Other

Recruitment centers**1****Recruitment center****Name of recruitment center**

Neuromuscular Rehabilitation Research Center,
Semnan University of Medical Sciences.Semnan,Iran

Full name of responsible person

Elham Fatemy

Street address**City**

Semnan

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Vice chancellor for research,Semnan University of
Medical Sciences

Full name of responsible person

Ali Rashidipour

Street address

Kilometer 5, Damghan Road

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Semnan

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,Semnan University of
Medical Sciences

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

empty

Person responsible for general inquiries**Contact****Name of organization / entity**

Semnan University of Medical Sciences

Full name of responsible person

Elham fatemy

Position

MS.c-Instructor

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Full name of responsible person

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Web page address**Sharing plan****Deidentified Individual Participant Data Set (IPD)**

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty