Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

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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
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Kilometer 5, Damghan Road
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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
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

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Name of organization / entity
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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