

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 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

**City**

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**

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**Other areas of specialty/work****Street address**

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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*