

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

19 Jun 2026

### The effect of two intensity of resistance training on hepcidin levels, iron status and some inflammatory markers in obese/overweight girls with and without iron stores deficient

#### Protocol summary

##### Study aim

improved iron status with resistance training

##### Design

clinical training without control group intense training- ferritin under 30 moderate training- ferritin under 30 intense training- ferritin more than 30 moderate training- ferritin more than 30

##### Settings and conduct

use of elastic band for resistance training start training with blue elastic band continue training with 25% increase in tension after 4 week doing exercise for 10 week in salon

##### Participants/Inclusion and exclusion criteria

entry BMI more than 25

##### Intervention groups

intervention in this study was resistance training with moderate and high intense

##### Main outcome variables

reduce inflammation in obese girl , reduce fat mass in obese girl with elastic band, improved iron status, doing resistance training in home

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20200406046974N1**

Registration date: **2020-04-13, 1399/01/25**

Registration timing: **retrospective**

Last update: **2020-04-13, 1399/01/25**

Update count: **0**

##### Registration date

2020-04-13, 1399/01/25

##### Registrant information

##### Name

nasim behzadnezhad

##### Name of organization / entity

Isfahan university

##### Country

Iran (Islamic Republic of)

##### Phone

+98 31 3559 7904

##### Email address

nbehzadnezhad@spr.ui.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2019-10-26, 1398/08/04

##### Expected recruitment end date

2019-11-10, 1398/08/19

##### Actual recruitment start date

2019-11-05, 1398/08/14

##### Actual recruitment end date

2019-11-13, 1398/08/22

##### Trial completion date

2020-01-21, 1398/11/01

##### Scientific title

The effect of two intensity of resistance training on hepcidin levels, iron status and some inflammatory markers in obese/overweight girls with and without iron stores deficient

##### Public title

resistance training, iron status in obese/overweight girls

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

**Inclusion criteria:**

BMI>۲۵

**Exclusion criteria:**

use iron pill in recent 6 month doing exercise in recent 6 month

### Age

From **18 years** old to **22 years** old

### Gender

Female

### Phase

N/A

### Groups that have been masked

*No information*

### Sample size

Target sample size: **40**

Actual sample size reached: **40**

### Randomization (investigator's opinion)

Randomized

### Randomization description

simple randomization

### 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

•Ethics committee of isfahan University

##### Street address

factulity of physical education in isfahan university,  
azadi squer

##### City

Isfahan

##### Province

Isfahan

##### Postal code

8174643441

##### Approval date

2018-01-09, 1396/10/19

##### Ethics committee reference number

ir.ui.rec.1396.038

## Health conditions studied

### 1

#### Description of health condition studied

iron status

#### ICD-10 code

#### ICD-10 code description

## Primary outcomes

### 1

#### Description

hepcidin, iron status

#### Timepoint

before intervention, after 8 week intervention

#### Method of measurement

sample blood

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

Intervention group:

#### Category

Lifestyle

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

labratory of physical education

##### Full name of responsible person

volga hosepian

##### Street address

azadi squar

##### City

Isfahan

##### Province

Isfahan

##### Postal code

8174643441

##### Phone

+98 31 3793 4207

##### Email

n.behzadnezhad8884@gmail.com

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Isfahan university

##### Full name of responsible person

Dr Fahimeh Esfarjani

##### Street address

azadi squar

##### City

Isfahan

##### Province

Isfahan

##### Postal code

8174643441

**Phone**

+98 31 3793 4283

**Email**

f.esfarjani@yahoo.com

**Grant name**

**Grant code / Reference number**

**Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Isfahan university

**Proportion provided by this source**

20

**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**

Isfahan university

**Full name of responsible person**

nasim behzanezhad

**Position**

phd student

**Latest degree**

Master

**Other areas of specialty/work**

Physiology

**Street address**

azadi squar

**City**

Isfahan

**Province**

Isfahan

**Postal code**

8174643441

**Phone**

+98 31 3793 2197

**Email**

n.behzadnezhad8884@gmail.com

**Person responsible for scientific inquiries**

**Contact**

**Name of organization / entity**

Isfahan university

**Full name of responsible person**

nasim behzanezhad

**Position**

phd student

**Latest degree**

Master

**Other areas of specialty/work**

Physiology

**Street address**

azadi squar

**City**

Isfahan

**Province**

Isfahan

**Postal code**

8174643441

**Phone**

+98 31 3793 2197

**Email**

n.behzadnezhad8884@gmail.com

**Person responsible for updating data**

**Contact**

**Name of organization / entity**

Isfahan university

**Full name of responsible person**

nasim behzanezhad

**Position**

phd student

**Latest degree**

Master

**Other areas of specialty/work**

Physiology

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azadi squar

**City**

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**Province**

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**Postal code**

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**Phone**

+98 31 3793 2197

**Email**

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**Sharing plan**

**Deidentified Individual Participant Data Set (IPD)**

Yes - There is a plan to make this available

**Study Protocol**

Undecided - It is not yet known if there will be 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**

Not applicable

**Data Dictionary**

Not applicable

**Title and more details about the data/document**

shared with others

**When the data will become available and for how long**

4 month after published

**To whom data/document is available**

researchers in this field

**Under which criteria data/document could be used**

doing training protocol in this study

**From where data/document is obtainable**

email address of corresponding author

**What processes are involved for a request to access data/document**

after one month survey by corresponding author

**Comments**