

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

06 Jul 2026

### Effect of moderate and high resistant training on the inflammatory markers and cardiovascular risk factors in non-athlete students

#### Protocol summary

##### Summary

The present study was designed to see the effect of moderate and high intensity resistant training on the inflammatory markers and cardiovascular risk factors in non-athlete students. For this purpose 30 healthy students (20 to 26 years old) with no previous record of any chronic diseases or using any specific drugs who did not do any regular exercises in the past two years were selected. 24 hours before starting the experiment a sample of venous blood was collected from each individual. Subjects were divided randomly into three equal groups (N=10). First two groups underwent moderate and severe resistance exercises training for six consecutive weeks. The third group was considered as control group. At the end of the study a sample of venous blood was collected from all subjects and was analyzed for inflammatory and other cardiovascular risk factors including HDL, LDL, ApoA, ApoB, Cholesterol, Triglyceride, LPL and fibrinogen. systolic and diastolic blood pressures and body mass index before and after intervention were measured and compared.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT138809042770N1**

Registration date: **2010-10-12, 1389/07/20**

Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2010-10-12, 1389/07/20

##### Registrant information

##### Name

Slahadin Ahmadi

##### Name of organization / entity

Kurdistan University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 87 1613 1399

##### Email address

slahadin@muk.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

kurdistan University of Medical Sciences & Kurdistan University

##### Expected recruitment start date

2008-01-30, 1386/11/10

##### Expected recruitment end date

2009-01-30, 1387/11/11

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Effect of moderate and high resistant training on the inflammatory markers and cardiovascular risk factors in non-athlete students

##### Public title

Effect of moderate and high resistant training on the inflammatory markers and cardiovascular risk factors in non-athlete students

##### Purpose

Health service research

##### Inclusion/Exclusion criteria

Inclusion Criteria: Healthy young students with no previous record of any specific drug use and routine regular exercises during the last two years. Exclusion: Unhealthy, Doing regular exercise during the last two

years.

**Age**

From **20 years** old to **26 years** old

**Gender**

Male

**Phase**

N/A

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **30**

**Randomization (investigator's opinion)**

Randomized

**Randomization description****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**

Kurdistan University of Medical Sciences

**Street address**

vice chancellor for research, Kurdistan University of  
Medical Sciences

**City**

sanandaj

**Postal code**

6617713446

**Approval date**

2009-03-17, 1387/12/27

**Ethics committee reference number**

12093پ/14/پ

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

cardiovascular risk factor and inflammatory markers

**ICD-10 code**

I70

**ICD-10 code description**

Atherosclerosis

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

Triglyceride, High-density lipoprotein, Low-density lipoprotein, Total cholesterol, ApoA, ApoB

**Timepoint**

6 weeks

**Method of measurement**

by collecting venous blood and measuring serum levels of related variables before and at the end of the study.

**2****Description**

Lipoprotein Lipase

**Timepoint**

6 weeks

**Method of measurement**

by collecting venous blood before and at the end of study and measuring serum levels using LPL kit

**3****Description**

Interleukin1 and Interleukin 6

**Timepoint**

6 weeks

**Method of measurement**

by collecting venous blood before and at the end of study and measuring serum levels of related factors using Enzyme-linked immunosorbent assay (ELISA)

**4****Description**

hs-CRP (high-sensitivity CRP) and fibrinogen

**Timepoint**

6 weeks

**Method of measurement**

by collecting venous blood before and at the end of study and measuring serum levels using related kits

**5****Description**

Body Mass Index

**Timepoint**

6 weeks

**Method of measurement**

by body composition analyzer (Biospace CO, Ltd)

**6****Description**

Waist Hip Ratio

**Timepoint**

6 weeks

**Method of measurement**

By measuring Hip and Waist circumferences by measuring tape

**7****Description**

Systolic and diastolic Blood pressure

**Timepoint**

6 weeks

**Method of measurement**

sphygmomanometer

**Secondary outcomes**

empty

**Intervention groups**

**1**

**Description**

Subjects in high intensity resistance group underwent exercise regime consist of three sessions of resistance training per week for six consecutive weeks. In each session they did three sets of 4-6 repetitions at intensity of 80-90% of 1-RM (one repetition maximum).

**Category**

Other

**2**

**Description**

Subjects in moderate intensity resistance group underwent exercise regime consist of three sessions of resistance training per week for six consecutive weeks. In each session they did three sets of 10-12 repetitions at intensity of 45-55% of 1-RM (one repetition maximum).

**Category**

Other

**3**

**Description**

Subjects of the control group did not do any regular physical activities during the period of study.

**Category**

Other

**Recruitment centers**

**1**

**Recruitment center**

**Name of recruitment center**

Kurdistan university

**Full name of responsible person**

Slahadin Ahmadi

**Street address**

Pasdaran street

**City**

Sanandaj

**Sponsors / Funding sources**

**1**

**Sponsor**

**Name of organization / entity**

Kurdistan University of Medical Sciences, vice chancellor for research

**Full name of responsible person**

Ataollah Haidari

**Street address**

Kurdistan University of Medical Sciences

**City**

Sanandaj

**Grant name**

**Grant code / Reference number**

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

Yes

**Title of funding source**

Kurdistan University of Medical Sciences, vice chancellor for research

**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**

Kurdistan University of Medical Sciences

**Full name of responsible person**

Slahadin Ahmadi

**Position**

Assistant professor, Ph.D

**Other areas of specialty/work**

**Street address**

Department of Physiology, School of Medicine

**City**

Sanandaj

**Postal code**

66177-13446

**Phone**

+98 87 1662 1399

**Fax**

**Email**

slahadin@yahoo.com; slahadin@gmail.com;

slahadin@muk.ac.ir

**Web page address**

**Person responsible for scientific inquiries**

**Contact**

**Name of organization / entity**

Kurdistan University of Medical Sciences

**Full name of responsible person**

Slahadin Ahmadi

**Position**

Assistant professor , Ph.D

**Other areas of specialty/work**

**Street address**

Department of Physiology, School of Medicine

**City**

Sanandaj

**Postal code**

66177-13446

**Phone**

+98 87 1662 1399

**Fax**

**Email**

slahadin@yahoo.com; slahadin@gmail.com;

slahadin@muk.ac.ir

**Web page address**

**Person responsible for updating data**

**Contact**

**Name of organization / entity**

Kurdistan University of Medical Sciences

**Full name of responsible person**

Slahadin Ahmadi

**Position**

Assistant professor/ PhD

**Other areas of specialty/work**

**Street address**

Department of Physiology, School of Medicine

**City**

Sanandaj

**Postal code**

**Phone**

+98 87 1662 1399

**Fax**

**Email**

slahadin@yahoo.com slahadin@gmail.com

slahadin@muk.ac.ir

**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*