

Clinical Trial Protocol

Iranian Registry of Clinical Trials

04 Aug 2026

Effects of resistance training and exercise in water on visfatin and insulin levels in women with gestational diabetes

Protocol summary

Summary

The purpose of this study was to determine the effect of aerobic and resistance exercise on serum levels of visfatin, insulin sensitivity, glycosylated hemoglobin, serum glucose and insulin resistance in women with gestational diabetes. The 45 women with gestational diabetes, with an age range of 20 to 35 years and 21 to 27 weeks gestational age, which have not a barrier to doing physical activity, Voluntarily entered the study. In the first, subjects voluntarily divided to aerobic exercise, resistance training and control groups before Began Interventions and after 8 weeks the intervention, will be taken 10 cc of blood to measure factors visfatin, insulin sensitivity, glycosylated hemoglobin, insulin resistance and blood sugar levels. Assessment resulting from a blood test will show whether physical activity has a positive effect or not and which type of activity is effective as an adjunctive therapy.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2014031717035N1**

Registration date: **2015-04-03, 1394/01/14**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2015-04-03, 1394/01/14

Registrant information

Name

Maryam Kasraeian

Name of organization / entity

Shiraz University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

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Email address

kasraeem@sums.ac.ir

Recruitment status

Recruitment complete

Funding source

Shiraz University of Medical Sciences

Expected recruitment start date

2015-01-20, 1393/10/30

Expected recruitment end date

2015-12-22, 1394/10/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects of resistance training and exercise in water on visfatin and insulin levels in women with gestational diabetes

Public title

Effect of Exercise on gestational diabetes

Purpose

Health service research

Inclusion/Exclusion criteria

(Inclusion criteria: Women with gestational diabetes¹; In the 21 to 28 weeks of their pregnancy; According to the guidelines of the American College of Obstetrics and Gynecology, they do not have any absolute prohibition of the exercise; Age: 20 to 35 years of age; they do not use smoking, drugs and alcohol; they are untrained Exclusion criteria: People with a history of proven infectious diseases and autoimmune diseases such as lupus Erythematosus and rheumatoid arthritis, thyroid disease, epilepsy, high blood pressure, leg pain, cervical

insufficiency, anemia or other blood disorders, bleeding during pregnancy, placenta previa, respiratory problems, heart disease or any heart disease, obesity or excessive weight loss and Any disease that can be prevented the exercise, have be excluded from the study)

Age

From **20 years** old to **35 years** old

Gender

Female

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **45**

Randomization (investigator's opinion)

Randomized

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

Double blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

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

Shiraz University Of Medical Science

Street address

Building of Shiraz University Of Medical Science, Zand street, Shiraz

City

Shiraz

Postal code**Approval date**

2015-01-05, 1393/10/15

Ethics committee reference number

CT-P-9378-7928

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

Gesttational diabets

ICD-10 code

O24.4

ICD-10 code description

Diabetes mellitus arising in pregnancy, Gestational diabetes mellitus NOS

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

Enterlucin serm

Timepoint

Before intervntion and after 8 weeks intervention

Method of measurement

Kit

2**Description**

- Exercise intensity

Timepoint

Before intervntion and after 8 weeks intervention

Method of measurement

Is measured according to the Rating of perved exertion (RPE).

3**Description**

Visfatin Serum

Timepoint

Before intervntion and after 8 weeks intervention

Method of measurement

Kit

4**Description**

Insulin sensitivity

Timepoint

Before intervntion and after 8 weeks intervention

Method of measurement

Kit

5**Description**

Glycosylated hemoglobin

Timepoint

Before intervntion and after 8 weeks intervention

Method of measurement

Kit

6**Description**

Insulin resistance and serum glucose

Timepoint

Before intervntion and after 8 weeks intervention

Method of measurement

Kit

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

Nutrition

Timepoint

Before the research began

Method of measurement

Fed with the same diet

2**Description**

Activity level before sampling

Timepoint

Before the research began

Method of measurement

level of physical activity using a physical activity questionnaire

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

Control group: This group is not just any kind of sporting activity takes place in the routine treatment.

Category

Other

2**Description**

Intervention group: This group is for 8 weeks, 3 sessions of 45 minutes of physical activity per week (water sports and clubs) are given.

Category

Prevention

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

Hafez hospital

Full name of responsible person

Dr nasibe kazemi

Street address**City**

Shiraz

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

Shiraz University of Medical Sciences

Full name of responsible person

Seyed basir hashemi

Street address

7th Floor dean of research, Building of University Of Medical Sciences, Zand

City

Shiraz

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Shiraz 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**

Shiraz University Of Medical Sciences

Full name of responsible person

Dr Nasebe kazemi

Position

Student

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

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City

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

Shiraz University of Medical Sciences

Full name of responsible person

Maryam Kasraeian

Position

Assistant professor

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

Hafez Hospital

City

Shiraz

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Email
Web page address

Person responsible for updating data

Contact

Name of organization / entity
Maternal-fetal medicine Research Center
Full name of responsible person
Khadije Bazrafshan
Position
Master
Other areas of specialty/work
Street address
City
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Phone
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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