Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Sep 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
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Iran (Islamic Republic of)
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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 Eratosthenes 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 perveived 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
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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
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Assistant professor
Other areas of specialty/work
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Hafez Hospital
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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

Postal code

Phone

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Fax

Email

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