

Clinical Trial Protocol

Iranian Registry of Clinical Trials

19 Sep 2026

The Effect of vitamins C and E on the serum resistin level and insulin resistance index in type 2 diabetic patients

Protocol summary

Summary

Resistin, an adipose tissue hormone, is a potential link between insulin resistance and type 2 diabetes in rodent. In humans, the role of resistin in regulating insulin resistance and type 2 diabetes is also unclear. In this study we investigated the effects of vitamin C and vitamin E on serum levels of resistin and HOMA-IR in 120 type 2 diabetic patients in pre and post case control study. Inclusion criteria include of patients who had type 2 diabetes and Exclusion criteria include of patients who had liver diseases, Kidney disease, Hypo- or Hyper-thyroidism or used to vitamin C and E, were excluded from the study . This clinical trial study consisting of 40 patients with type 2 diabetes who has received 1000 mg vitamin C as vitamin C group and 40 patients with type 2 diabetes who has received 400 IU vitamin E as vitamin E group and 40 patients with type 2 diabetes who has not received any things as a control group for 4 weeks. Before and after intervention glucose ,profile lipids ,insulin,hs-CRP, HOMA-IR and serum resistin in three groups were measured by standard method. The results were analyzed by students T-test and Ancova.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201111088025N1**

Registration date: **2011-12-18, 1390/09/27**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2011-12-18, 1390/09/27

Registrant information

Name

Mohammad Ali Ghaffari

Name of organization / entity

Ahwaz Joundishapour University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Vice chancellor for research(Research and Technology),
Ahwaz Jondishapur University of Medical Sciences

Expected recruitment start date

2011-02-20, 1389/12/01

Expected recruitment end date

2011-04-20, 1390/01/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Effect of vitamins C and E on the serum resistin level and insulin resistance index in type 2 diabetic patients

Public title

The Effect of vitamins C and E on the serum resistin level in type 2 diabetic patients

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria: Patients who had type 2 diabetes.

Exclusion criteria: Patients who had liver diseases;

Kidney disease; Hypo- or Hyper- thyroidism; myocard

infraction or blood disorders and used to drugs

containing estrogen; progesterone; Diuretics; lower blood

pressure and vitamin C and E; were excluded from the study

Age

From **35 years** old to **65 years** old

Gender

Both

Phase

2

Groups that have been masked

No information

Sample size

Target sample size: **120**

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

1**Registry name**

Non

Secondary trial Id

Non

Registration date

empty

Ethics committees

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

Ethics Committee Ahwaz Jondishapur University of Medical Sciences

Street address

Postbox 45, Postcode 6135715794, Vice chancellor for research, Ahwaz Jondishapur University of Medical Sciences, Shahre Daneshgahi, Ahwaz

City

Ahwaz

Postal code

6135715794

Approval date

2011-02-26, 1389/12/07

Ethics committee reference number

ETH-123

Health conditions studied

1**Description of health condition studied**

Diabetic mellitus 2

ICD-10 code

E11

ICD-10 code description

Non-insulin-dependent diabetes mellitus

Primary outcomes

1**Description**

Resistin

Timepoint

Before and one month after the intervention

Method of measurement

by ELIZA method (ng/ml)

2**Description**

HOMA-IR(Homeostasis Model Assessment-Index Resistance)

Timepoint

Before and one month after the intervention

Method of measurement

By using formula (HOMA-IR = fasting serum glucose x fasting serum insulin / 22.5)

Secondary outcomes

1**Description**

Cholestrol

Timepoint

Before and one month after the intervention

Method of measurement

Autoanalyzer (mg/dl)

2**Description**

HDL

Timepoint

Before and one month after the intervention

Method of measurement

Autoanalyzer (mg/dl)

3**Description**

hs-CRP

Timepoint

Before and one month after the intervention

Method of measurement

Autoanalyzer (mg/dl)

Intervention groups

1

Description

GROUP 1: consumption of 1000 mg of vitamin C per day for 4 weeks

Category

Prevention

2

Description

GROUP 2: Consumption of 400 IU of vitamin E per day for 4 weeks

Category

Prevention

3

Description

Control Group : Did not receive vitamin for 4 weeks

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Golestan Hospital

Full name of responsible person

Ashraf Azizollahi

Street address

Postcode 6135715794, Golestan Hospital next to Diabetes Research Center,Ahwaz Jondishapur University of Medical Sciences, Shahre Daneshgahi, Ahwaz

City

Ahwaz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research (Research and technology),Ahwaz Jondishapur University of Medical Sc

Full name of responsible person

Dr. Mostafa Feghi

Street address

Postbox 45, Postcode 6135715794, Vice chancellor for research(Research and technology), Ahwaz Jondishapur University of Medical Sciences, Shahre Daneshgahi, Ahwaz

City

Ahwaz

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 (Research and technology),Ahwaz Jondishapur University of Medical Sc

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

Ahwaz Jondishapur University of Medical Sciences

Full name of responsible person

Mozhgan Noor Behbahani

Position

Expert of Laboratory Sciences

Other areas of specialty/work

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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