Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

Effect of camel milk on blood sugar, insulin resistance, lipid profile and blood pressure in type 2 diabetic patients.

Protocol summary

Summary

Objective: Evaluation of the effects of camel milk, camel dough and cow milk on blood glucose, insulin resistance, lipid profile and blood pressure in patients with type 2 diabetes. Design: Randomized, Single blind Setting and conduct: A- Participants including major eligibility criteria - Major inclusion criteria: Patients with type 2 diabetes - Major exclusion criteria: Insulin injection and having cardiovascular and renal diseases - Sample size: 45 B- Intervention: 500 cc camel milk, caw milk or camel dough C- Intervention Time: 2 months D- Main outcome: Blood sugar, insulin resistance, lipid profile and blood pressure

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201302044794N7**
Registration date: **2013-02-18, 1391/11/30**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2013-02-18, 1391/11/30

Registrant information

Name

Fereidoun Azizi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 2240 9309

Email address

azizi@endocrine.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice chancellor for Research Institute for Endocrine Sciences, Shahid Beheshti University of Medical Sciences

Expected recruitment start date

2012-12-21, 1391/10/01

Expected recruitment end date

2013-08-21, 1392/05/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of camel milk on blood sugar, insulin resistance, lipid profile and blood pressure in type 2 diabetic patients.

Public title

camel milk and type 2 diabetes

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion Criteria: Patients with type 2 diabetes; age range: 20 to 70 years old; treatment with diet or oral anti-diabetic drugs. Exclusion Criteria: Treatment with insulin; pregnancy or lactation; smoking and alcohol consumption; body mass index greater than 35 kg/m2 ; Lactose intolerance; taking estrogenic drugs and corticosteroids; having cardiovascular disease, liver, lung, kidney and Chronic gastrointestinal and thyroid dysfunction; following from the weight loss diets two months prior to study; weight changes (increase or decrease) more than 5 kg two months prior to study

Age

From **20 years** old to **70 years** old

Gender

Both

Phase
2-3
Groups that have been masked
No information
Sample size
Target sample size: **45**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Single blinded
Blinding description
Placebo
Used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics committee, Research Institute For Endocrine Sciences, Shahid Beheshti University of Medical S
Street address
Chamran Exp, Yemen street, Shahid Aerabi street, NO. 24
City
Tehran
Postal code
Approval date
2012-11-27, 1391/09/07
Ethics committee reference number
07/09/91 424 EC

Health conditions studied

1

Description of health condition studied
Type 2 diabetes
ICD-10 code
E11
ICD-10 code description
Non-insulin-dependent diabetes mellitus

Primary outcomes

1

Description
Fasting blood glucose
Timepoint
Baseline, after 1 month, and after 2 months
Method of measurement
Biochemical analysis

2

Description
Hemoglobin A1c
Timepoint
Baseline, and after 2 months
Method of measurement
Biochemical analysis

3

Description
Insulin resistance
Timepoint
Baseline, after 1 month, and after 2 months
Method of measurement
HOMA-IR index

4

Description
Blood pressure
Timepoint
Baseline, after 1 month, and after 2 months
Method of measurement
sphygmomanometer

5

Description
Lipid profile: total cholesterol, Triglyceride, HDL, LDL
Timepoint
Baseline, after 1 month, and after 2 months
Method of measurement
Biochemical analysis

Secondary outcomes

1

Description
Dietary Factors
Timepoint
Baseline, after 1 month, and after 2 months
Method of measurement
24h dietary recall

2

Description
Body mass index
Timepoint
Baseline, after 1 month, and after 2 months
Method of measurement
Anthropometric measurements

Intervention groups

1

Description
Intervention group: camel milk, 500 ml/day
Category

Other

2

Description
Intervention group: camel dough, 500 ml/day
Category
Other

3

Description
Control group: cow milk, 500 ml/day
Category
Placebo

Recruitment centers

1

Recruitment center
Name of recruitment center
Diabetes Clinic of Taleghani Hospital
Full name of responsible person
Dr Fereidoun Azizi
Street address
Chamran Exp, Yemen street, Shahid Aerabi street, NO. 24
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice chancellor for Research Institute for Endocrine Sciences, Shahid Beheshti University of Medical
Full name of responsible person
Fereidoun Azizi
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Research Institute For Endocrine Sciences, NO. 24, Shahid Aerabi st, Yemen st, Chamran Exp
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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 Institute for Endocrine Sciences, Shahid Beheshti University of Medical
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
Research Institute for Endocrine Sciences, Shahid Beheshti University of Medical Sciences
Full name of responsible person
Fereidoun Azizi
Position
Ph.D of Endocrine Sciences
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Person responsible for updating data

Contact
Name of organization / entity
Nutrition and Endocrine Research Center, Research Institute for Endocrine Sciences, Shahid Beheshti
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Hanieh Sadat Ejtahed
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MSc of Nutrition Science

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