

Clinical Trial Protocol

Iranian Registry of Clinical Trials

05 Jul 2026

The effect of adding date seed powder on the glycemic index, glycemic load and satiety index of white bread in healthy subjects

Protocol summary

Study aim

The effect of date seed powder on the glycemic index, glycemic load and satiety index of white bread in healthy subjects

Design

Clinical trial, crossover, controlled

Settings and conduct

The study will be conducted at Ahvaz Jundishapur University of Medical Sciences. To determine the glycemic index and load, 10 healthy people with a normal blood sugar level will participate in the study. In each day of the study, people are referred to the laboratory for 4 different days after 10-12 hours fasting and a fasting blood sample is taken from them. Then glucose solution, white bread or two breads containing white flour and date seed powder are given to individuals. After that, blood samples will be taken at intervals of 30, 15, 45, 60, 90 and 120 minutes after eating. In order to determine the satiety index, 20 healthy people refer to the laboratory in the fasting state for three separate days after 10-12 hours fasting. Before and after eating white bread and breads containing white flour and date seed powder, the questionnaire will determine the amount of satiety of individuals at fasting times and every 15 minutes.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Both sexes; ages 20-40 years; FBS levels (< 110 mg / dl) and BMI (18.5 to 24.9 kg / m²) within the normal range; following a common diet
exclusion criteria: Pregnancy; lactation; the use of drugs and diseases that affect the metabolism of blood sugar and the amount of the satiety and hunger

Intervention groups

Healthy people consume white bread and bread mixed with white flour and date seed powder (with different proportions).

Main outcome variables

Glycemic index; glycemic load; satiety index

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20191126045509N1**

Registration date: **2019-12-30, 1398/10/09**

Registration timing: **registered_while_recruiting**

Last update: **2019-12-30, 1398/10/09**

Update count: **0**

Registration date

2019-12-30, 1398/10/09

Registrant information

Name

Fateme Kiany Servak

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 61 3373 8253

Email address

kiany.f@ajums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-12-22, 1398/10/01

Expected recruitment end date

2020-03-19, 1398/12/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of adding date seed powder on the glycemic index, glycemic load and satiety index of white bread in healthy subjects

IR.AJUMS.REC.1398.619

Public title

The effect of date seed powder on the glycemic index, glycemic load and satiety index

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

FBS levels < 110 mg / dl BMI(18.5 to 24.9 kg / m²) within the normal range following a common diet

Exclusion criteria:

Pregnancy lactation the use of drugs and diseases that affect the metabolism of blood sugar and the amount of the satiety and hunger

Age

From **20 years** old to **40 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

N/A

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

Ethics Committee of Ahwaz University of Medical Sciences

Street address

Golestan Highway

City

Ahvaz

Province

Khouzestan

Postal code

61357-15794

Approval date

2019-11-23, 1398/09/02

Ethics committee reference number

Health conditions studied

1

Description of health condition studied

healthy people

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Satiety index

Timepoint

Measure satiety in fasting and every 15 minutes after eating each bread for up to two hours in the first week, the second week and the third week

Method of measurement

Using the VAS Questionnaire and Formula

2

Description

Glycemic index

Timepoint

Blood glucose measurements in fasting state and 90, 60, 45, 30, 15 and 120 minutes after eating

Method of measurement

Using formula

Secondary outcomes

1

Description

Glycemic load

Timepoint

First week, second week, third week

Method of measurement

Using formula

Intervention groups

1

Description

Intervention group: Each individual will consume a bread made of white wheat flour, water, improver, salt and yeast. This bread should contain 50 grams of available carbohydrates and 1,000 Kilojoules (240 kilocalories) of energy.

Category

Lifestyle

2

Description

Intervention group: Each individual will consume a bread made of a mixture of 40% date seed powder and 60% white flour, water, improver, salt and dough. This bread should contain 50 grams of available carbohydrates and 1,000 Kilojoules (240 kilocalories) of energy.

Category

Lifestyle

3

Description

Intervention group: Each individual will consume a bread made of a mixture of 20% date seed powder and 80% white flour, water, improver, salt and dough. This bread should contain 50 grams of available carbohydrates and 1,000 Kilojoules (240 kilocalories) of energy.

Category

Lifestyle

4

Description

Intervention group: Glucose solution (50 g dissolved in 250 ml of water) used to determine the glycemic index as a reference food.

Category

Lifestyle

Recruitment centers

1

Recruitment center

Name of recruitment center

Nutrition and Metabolic Diseases Research Center, Ahvaz Jundishapur University of Medical Sciences

Full name of responsible person

Farideh Shishehbor

Street address

Golestan Highway

City

Ahvaz

Province

Khouzestan

Postal code

15794 -61357

Phone

+98 61 3373 8253

Fax

+98 61 3373 8253

Email

fari.shishehbor@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Ahvaz University of Medical Sciences

Full name of responsible person

Mohammad Badawi

Street address

Golestan Highway

City

Ahvaz

Province

Khouzestan

Postal code

61357-15794

Phone

+98 61 3336 2414

Fax

+98 61 3336 2414

Email

badavi-m@ajums.ac.ir

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Ahvaz University of Medical Sciences

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Ahvaz University of Medical Sciences

Full name of responsible person

Fateme Kiany Servak

Position

Master student

Latest degree

Bachelor

Other areas of specialty/work

Nutrition

Street address

Nutrition Department, Para-Medicine School, Ahvaz Jundishapur University of Medical Sciences, Golestan highway.

City

Ahvaz

Province

Khouzestan

Postal code

61357-15794

Phone

+98 61 3373 8383

Email

kiany.f@ajums.ac.ir

Person responsible for scientific inquiries

Contact

Name of organization / entity

Ahvaz University of Medical Sciences

Full name of responsible person

Farideh Shishebor

Position

PhD Nutrition

Latest degree

Ph.D.

Other areas of specialty/work

Nutrition

Street address

Golestan Highway

City

Ahvaz

Province

Khouzestan

Postal code

61357-15794

Phone

+98 61 3373 8317

Email

shishebor.f@ajums.ac.ir

Person responsible for updating data

Contact

Name of organization / entity

Ahvaz University of Medical Sciences

Full name of responsible person

Fateme Kiany Servak

Position

Master Student

Latest degree

Bachelor

Other areas of specialty/work

Nutrition

Street address

Nutrition Department, Para-Medicine School, Ahvaz Jundishapur University of Medical Sciences, Golestan Highway.

City

Ahvaz

Province

Khouzestan

Postal code

61357-15794

Phone

+98 61 3373 8383

Email

kiany.f@ajums.ac.ir

Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

Due to the financial support of this research project by Ahvaz Jundishapur University of Medical Sciences, the study data will not be allowed to be published after the intervention.

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available