

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jul 2026

The effect of addition of roasted chickpea flour on the glycemic index, glycemic load and satiety index of white bread

Protocol summary

2016-10-10, 1395/07/19

Summary

This study examined the effect of adding chickpea flour to glycemic index, glycemic load and satiety index of white wheat bread. Study has two parts: 1-Determine the glycemic index and glycemic load, 2- Determine the satiety index of breads made from a mixture of white wheat flour and chickpea flour. To determine the glycemic index of breads, 10 healthy subjects enrolled in the study on 4 separate days with 1 week interval. In each day, they were given glucose solution, white bread or bread made from a mixture of white wheat flour and chickpea flour (1/2 and 1/4). Blood sample were taken at fasting and at 15, 30, 45, 60, 90 and 120 minutes after food ingestion. Then the glycemic index and glycemic load were calculated using formula. In second part, for determining satiety index of breads, 20 healthy subjects enrolled in the study on three separate days with one week interval. In each day they are given white bread or bread made from a mixture of white wheat flour and chickpea flour. The satiety was measured at fasting and after bread ingestion, every 15min over the next 2 hours using a satiety questionnaire. Then the satiety index of breads calculated using formula. Finally the glycemic index, glycemic load and satiety index of the breads compared. In both parts of the study, each person consumed all test foods and they were their self-control.

Registrant information

Name

Farideh Shishehbor

Name of organization / entity

Ahvaz Jundishapur University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Deputy of Research Affairs of Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

Expected recruitment start date

2015-10-17, 1394/07/25

Expected recruitment end date

2016-02-06, 1394/11/17

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of addition of roasted chickpea flour on the glycemic index, glycemic load and satiety index of white bread

Public title

The effect of roasted chickpea flour on the glycemic index, glycemic load and satiety index of white bread

Purpose

Treatment

Inclusion/Exclusion criteria

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016061814680N4**

Registration date: **2016-10-10, 1395/07/19**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

Inclusion criterion: age 20-50 year; healthy; normal diet; normal weight. Exclusion criteria: abnormality of glucose metabolism; smoking; pregnancy; lactation; having metabolic disease; taking medicine that affect blood glucose metabolism; any gastrointestinal impairment; having a special diet.

Age

From **20 years** old to **50 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)**

Single blinded

Blinding description**Placebo**

Not used

Assignment

Crossover

Other design features**Secondary Ids**

empty

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

Vice Chancellor for Research and Technology
Development of Ahvaz Jundishapur University of
Medical S

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Ahvaz Jundishapur University of Medical Sciences,
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City

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6135715794

Approval date

2015-06-20, 1394/03/30

Ethics committee reference number

IR.AJUMS.REC.1394.232

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

healthy subjects

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

Satiety index

Timepoint

Determining satiety rate at fasting and every 15 minutes
after ingestion of breads for 2 hours

Method of measurement

Using VAS questionnaire and formula

2**Description**

Glycemic index

Timepoint

Measuring blood glucose at fasting and at 15, 30, 45, 60,
90 and 120 minutes after food ingestion in week 1, week
2 and week 3

Method of measurement

Using formula

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

glycemic load

Timepoint

week 1, week 2, week 3

Method of measurement

using formula

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

white wheat bread

Category

Lifestyle

2**Description**

Bread made from a mixture of white wheat flour and
chickpea flour (1/2 ratio)

Category

Lifestyle

3**Description**

Bread made from a mixture of white wheat flour and
chickpea flour (1/4 ratio)

Category

Lifestyle

Recruitment centers

1

Recruitment center

Name of recruitment center

Nutrition and Metabolic Disease Research Center

Full name of responsible person

Farideh Shishehbor

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Nutrition Department, Para-Medicine School, Ahvaz
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for Research and Technology
Development of Ahvaz Jundishapur University of
Medical

Full name of responsible person

Alireza Ekrami

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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 and Technology
Development of Ahvaz Jundishapur 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

Pardis Division of Ahvaz Jundishapur University of
Medical Sciences

Full name of responsible person

Elham Kazem Assareh

Position

M.Sc student of Nutrition sciences

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

Person responsible for scientific inquiries

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Full name of responsible person

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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