

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

07 Jul 2026

### Investigating relationship between dietary intake of frequently consumed dried fruits in Iran with urinary excretion of 5-Hydroxymethylfurfuraldehyde, 5-hydroxymethyl-2-furoic acid, 8-Oxo-2'-deoxyguanosine

#### Protocol summary

##### Summary

Aim of the current study is to investigate relationship between dietary intake of frequently consumed dried fruits in Iran with urinary excretion of 5-Hydroxymethylfurfuraldehyde (HMF), 5-hydroxymethyl-2-furoic acid(HMFA) and 8-Oxo-2'-deoxyguanosine(8-OHdG) among healthy volunteers. The dried fruits selected are currant, apricot, plum, date and fruit bread. The study will be continued for five consecutive weeks. Total of 75 healthy male and female adults aging between 20 and 30 will be invited to participate in the study. Those with any metabolic disorders, autoimmune, chronic renal failure, cancer, neurologic disorders and smokers will be excluded. After an overnight fasting, the participants will be requested to consume 100 grams of each dried fruits for five weeks. Two urine samples will be collected from each participant before and 5 five hours after consumption of the dried fruits and will be subjected for HPLC analysis of HMF and HMFA. Also levels of 8-OHdG will be determined using ELISA.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT2014090311288N8**

Registration date: **2014-10-04, 1393/07/12**

Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2014-10-04, 1393/07/12

##### Registrant information

##### Name

Mohammad Alizadeh

##### Name of organization / entity

Tabriz University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

+98 41 1335 7313

##### Email address

mdalizadeh@tbzmed.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Deputy for research affairs, Tabriz University of Medical Sciences

##### Expected recruitment start date

2014-02-20, 1392/12/01

##### Expected recruitment end date

2014-05-22, 1393/03/01

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Investigating relationship between dietary intake of frequently consumed dried fruits in Iran with urinary excretion of 5- Hydroxymethylfurfuraldehyde, 5-hydroxymethyl-2-furoic acid, 8-Oxo-2'-deoxyguanosine

##### Public title

Food safety issues in dried fruits

##### Purpose

Prevention

##### Inclusion/Exclusion criteria

Inclusion Criteria: agreement to participate in the study; subjects with 20-30 years old, No history of food allergies, BMI equal 18.5-25 kg/m<sup>2</sup>. Exclusion Criteria: any metabolic disorder, autoimmune, chronic, renal failure, cancer, neurological disorders, smoking, alcoholics.

#### Age

From **20 years** old to **30 years** old

#### Gender

Both

#### Phase

N/A

#### Groups that have been masked

No information

#### Sample size

Target sample size: **75**

#### Randomization (investigator's opinion)

N/A

#### Randomization description

#### Blinding (investigator's opinion)

Not blinded

#### Blinding description

#### Placebo

Not used

#### Assignment

Single

#### Other design features

## Secondary Ids

empty

## Ethics committees

### 1

#### Ethics committee

##### Name of ethics committee

Ethics Committee of Tabriz University of Medical Sciences

##### Street address

Vice - Chancellor for Research No 2 Central Building, Tabriz University of Medical Sciences, University Daneshgah St, PO Box :51664,

##### City

Tabriz

##### Postal code

5166614711

#### Approval date

2014-01-25, 1392/11/05

#### Ethics committee reference number

9390

## Health conditions studied

### 1

#### Description of health condition studied

Cancer

#### ICD-10 code

C15-C26

#### ICD-10 code description

Malignant neoplasms of digestive organs

## Primary outcomes

### 1

#### Description

5- Hydroxymethylfurfuraldehyde

#### Timepoint

before and 5 hours after consumption of dried fruits

#### Method of measurement

HPLC

### 2

#### Description

5-hydroxymethyl-2-furoic acid

#### Timepoint

five hours after consumption of dried fruits

#### Method of measurement

HPLC

### 3

#### Description

8-Oxo-2'-deoxyguanosine

#### Timepoint

before and 5 hours after consumption of dried fruits

#### Method of measurement

special kits

## Secondary outcomes

empty

## Intervention groups

### 1

#### Description

consumption of 100 g date in the breakfast

#### Category

Other

### 2

#### Description

consumption of 100 g apricot in the breakfast

#### Category

Other

### 3

#### Description

consumption of 100 g currant in the breakfast

#### Category

Other

### 4

#### Description

consumption of 100 g plum in the breakfast

#### Category

Other

**5**

**Description**

consumption of 100 g fruit bread in the breakfast

**Category**

Other

**Recruitment centers**

**1**

**Recruitment center**

**Name of recruitment center**

Faculty of Nutrition, Tabriz University of Medical Sciences

**Full name of responsible person**

Mohammad Alizadeh

**Street address**

Department Of Nutrition, Faculty of Nutrition , Tabriz University of Medical Sciences, Ghol-Ghasht st.

**City**

Tabriz

**Sponsors / Funding sources**

**1**

**Sponsor**

**Name of organization / entity**

Deputy for research affairs, Tabriz University of Medical Sciences

**Full name of responsible person**

Mohammad-Reza Rashidi

**Street address**

Med Chem Dept, School of Pharmacy, Tabriz University of Medical Sciences.

**City**

Tabriz

**Grant name**

بودجه دانشگاه

**Grant code / Reference number**

Not Applicable

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

Yes

**Title of funding source**

Deputy for research affairs, Tabriz 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**

**Person responsible for scientific inquiries**

**Contact**

**Name of organization / entity**

Faculty of Nutrition

**Full name of responsible person**

Mohammad Alizadeh

**Position**

Assistant Professor of Nutrition, Ph.D., M.D

**Other areas of specialty/work**

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http://www.tbzmed.ac.ir

**Person responsible for updating data**

**Contact**

**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