

Clinical Trial Protocol

Iranian Registry of Clinical Trials

08 Jun 2026

the effect of antioxidative capacity of cinnamon tea and Vaccinium myrtillus on oxidative stress in petrochemical worker

Protocol summary

Summary

The aim of study is to explore the probable positive effects of vaccinium myrtillus and Cinnamomum zeylanicum on the petrochemical workers through measuring blood oxidative stress markers such as total antioxidant capacity (TAC), total thiol molecules (TTM), lipid peroxidation (LPO), myeloperoxidase (MPO), and DNA damage as the marker of genotoxicity. Male painter with age range 25-45 and the least 5 work history will be included the study. Individuals with chronic disease, alcohol consumption, antioxidant consumption, and/or under drug treatment, or exposure to toxic materials, radiation therapy, or substance abuse will be excluded from the study. The study will be performed on 50 male workers who work in petrochemical company. The included subjects will be administered vaccinium myrtillus and Cinnamon mixture infusion (3 and 0.5 g/100 mL) twice a day for 30 days at 7:00 AM and 2:00 PM every day. To survey the effect of infusion on oxidative stress, before and after using mixture infusion blood sample will be collected.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2014010810003N6**

Registration date: **2014-09-07, 1393/06/16**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2014-09-07, 1393/06/16

Registrant information

Name

Ali akbar Malekirad

Name of organization / entity

Payame Noor University

Country

Iran (Islamic Republic of)

Phone

+98 86 2422 6073

Email address

malekirad@tabrizu.ac.ir

Recruitment status

Recruitment complete

Funding source

Islamic University of Damghan Branch

Expected recruitment start date

2014-09-06, 1393/06/15

Expected recruitment end date

2014-10-07, 1393/07/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

the effect of antioxidative capacity of cinnamon tea and Vaccinium myrtillus on oxidative stress in petrochemical worker

Public title

the effect of Vaccinium myrtillus and cinnamon on oxidative stress in petrochemical workers

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion Criteria: age range 25-45; male; the least 5 work history; petrochemical workers
Exclusion Criteria: Individuals with chronic disease; alcohol consumption; antioxidant consumption; and/or under drug treatment; or exposure to toxic materials; radiation therapy; or substance abuse

Age

From **25 years** old to **45 years** old

Gender

Male

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **50**

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

Pharmaceutical Sciences Research Center, Tehran
University of Medical Science

Street address

Pharmaceutical Sciences Research Center, Faculty of
Pharmacy, Tehran University of Medical Science, 16
Azar Street, Tehran 1417614411, Iran

City

Tehran

Postal code

1417614411

Approval date

2012-07-15, 1391/04/25

Ethics committee reference number

91-01-21:1-4

Health conditions studied

1

Description of health condition studied

Occupational exposure

ICD-10 code

Z57.5

ICD-10 code description

Occupational exposure to toxic agents in other industries

Primary outcomes

1

Description

total thiol groups

Timepoint

before and 30 day after intervention

Method of measurement

Hu method

2

Description

total antioxidant capacity of serum

Timepoint

before and 30 day after intervention

Method of measurement

Ferric Reducing Ability of Plasma method

3

Description

lipid peroxidation

Timepoint

before and 30 day after intervention

Method of measurement

thiobarbituric acid method

4

Description

Myeloperoxidase activity

Timepoint

before and 30 day after intervention

Method of measurement

Elisa Method

5

Description

deoxyribonucleic acid Damage

Timepoint

before and 30 day after intervention

Method of measurement

Elisa method

Secondary outcomes

empty

Intervention groups

1

Description

The petrochemical workers will be administer vaccinium myrtillus and Cinnamon mixture decoction (3 and 0.5 g/100 mL) twice a day for 30 days at 7:00 AM and 2:00 PM every day.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Bandar Imam Petrochemical Complex

Full name of responsible person

Ali Akbar Malekirad

Street address

Bandar Imam Petrochemical Complex- Mahshahr- Iran

City

mahshahr

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University of Damghan Branch

Full name of responsible person

Gholamhassan Vaezi

Street address

Islamic Azad University of Damghan Branch,
Damghan, Iran

City

damghan

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Islamic Azad University of Damghan Branch

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

Payame Noor University

Full name of responsible person

Ali Akbar Malekirad

Position

PhD.assistant prof.

Other areas of specialty/work

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Person responsible for updating data

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Position

PhD.assistant prof.

Other areas of specialty/work

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Web page address

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