Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Nov 2026

A comparative study of psychological state, oxidative stress and genotoxicity before and after use of lemon balm and cinnamon in car painters

Protocol summary

Summary

The aim of study is to explore the probable positive effects of Lemon balm and Cinnamomum zeylanicum on the paint 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 27-50 and the least 5 work history will be inclued 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 exclud from the study. The study will be perform on 27 male workers who work in an industrial and farm machinery producing company. The included subjectswill be administer Lemon balm and Cinnamon mixture infusion (1.5 and 0.25 g/100 mL) twice a day for 30 days at 7:00 AM and 2:00 PM every day. The Iranian version of General Health Questionnaire (GHQ28) will be use to single out high risk subjects for mental disorder, and the Iranian version of achievement motivation test (ACMT) and job satisfaction tests will be also use to evaluate achievement motivation and job satisfaction.To survey effect of infusion on oxidative stress, befor and after using mixture infusion blood sample will be collect.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013040610003N3**
Registration date: **2013-04-22, 1392/02/02**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2013-04-22, 1392/02/02

Registrant information

Name
Ali akbar Malekirad
Name of organization / entity
Payame Noor University
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Iran (Islamic Republic of)
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+98 86 2422 6073
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malekirad@tabrizu.ac.ir

Recruitment status

Recruitment complete

Funding source

Payame Noor University

Expected recruitment start date

2013-03-20, 1391/12/30

Expected recruitment end date

2013-05-31, 1392/03/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

A comparative study of psychological state, oxidative stress and genotoxicity before and after use of lemon balm and cinnamon in car painters

Public title

the effect of lemon balm and cinnamon on oxidative stress in paint workers

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion Criteria:age range 27-50;male;the least 5 work history;paint 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 **27 years** old to **50 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **27**

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

Tehran 1417614411

Approval date

2012-07-15, 1391/04/25

Ethics committee reference number

91-01-21:1-3

Health conditions studied

1

Description of health condition studied

مواجهه شغلی

ICD-10 code

Z57.5

ICD-10 code description

Occupational exposure to toxic agents in other industries

Primary outcomes

1

Description

total antioxidant capacity of serum

Timepoint

before and 30 day after intervention

Method of measurement

Ferric Reducing Ability of Plasma method

2

Description

total thiol groups

Timepoint

before and 30 day after intervention

Method of measurement

Hu method

3

Description

lipid peroxidation

Timepoint

before and 30 day after intervention

Method of measurement

thiobarbitturic acid method

4

Description

Myleoperoxidase 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

1

Description

General Health

Timepoint

befor the intervention

Method of measurement

GHQ qeustionaire

Intervention groups

1

Description
The included subjectswill be administer Lemon balm and Cinnamon mixture decoction (1.5 and 0.25 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
Hepco Company, Arak, Iran
Full name of responsible person
Ahmad Gogarzi
Street address
City
Arak

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Payame Noor University
Full name of responsible person
Mehdi Kiani
Street address
Amanipou Alley, Khoram Street, Payame Noor University
City
Arak
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Payame Noor University
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
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Contact
Name of organization / entity
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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