Clinical Trial Protocol
Iranian Registry of Clinical Trials

02 Jun 2026

Clinical trial of the effect of Camellia sinensis L. and Melissa officinalis L. infusion on oxidative stress biomarkers (total antioxidant capacity, catalase and malondialdehyde) in welders

Protocol summary

Summary

Both of Camellia sinensis and Melissa officinalis have antioxidant effects but it is still not clear which is more effective. This study is a crossover randomized clinical trial on 20-50 years old individuals with one year welding history. They are randomly assigned into two groups, green tea (10 men) and Melissa officinalis (10 men), based on random numbers table. Participants receive green tea or Melissa officinalis as infusion 2 times a day, 2 gram each time for 4 weeks. After three weeks of washout, intervention of groups moved. Demographic information, dietary intake, anthropometric, physical activity, and oxidative stress markers (Malondialdehyde, Catalase, Total antioxidant capacity) are measured before and after of each intervention.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015103110826N18**
Registration date: **2017-02-23, 1395/12/05**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2017-02-23, 1395/12/05

Registrant information

Name

Azadeh Nadjarzadeh

Name of organization / entity

Shahid Sadoughi University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

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Email address

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Recruitment status

Recruitment complete

Funding source

Shahid Sadoughi University of Medical Sciences of Yazd

Expected recruitment start date

2015-11-22, 1394/09/01

Expected recruitment end date

2016-03-19, 1394/12/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Clinical trial of the effect of Camellia sinensis L. and Melissa officinalis L. infusion on oxidative stress biomarkers (total antioxidant capacity, catalase and malondialdehyde) in welders

Public title

Survey of the effect of Camellia sinensis L. and Melissa officinalis L. infusion on oxidative stress biomarkers in welders

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria: residing in Yazd; age between 20-50 years; welding as the main job with at least one year exposure; without chronic diseases such as hypertension, heart failure, cancer, thyroid disorders, asthma, diabetes and anemia diagnosed by a physician based on self-declarations; do not drug use; do not use alcohol and without regular intake of herbal infusions.

Excluding criteria: Taking antioxidant or vitamins supplements during study; radiation therapy during study; consume less than 80% packet tea; loss to follow-up or immigration.

Age
From **20 years** old to **50 years** old

Gender
Male

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **20**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description

Placebo
Not used

Assignment
Crossover

Other design features
compare the antioxidant effects of Camellia sinensis and Melissa officinalis is done for the first time

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Shahid Sadoughi University of Medical Sciences of Yazd

Street address
Alem Square, Shohadaye Gomnam Blvd, University of Medical Sciences

City
Yazd

Postal code

Approval date
2015-08-01, 1394/05/10

Ethics committee reference number
IR.SSU.SPH.REC.1394.25

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

Solids, liquids, gases or vapours

Primary outcomes

1

Description
Total antioxidant capacity

Timepoint
Before and after of each intervention

Method of measurement
Reduction 1,1-diphenyl-2-picrylhydrazyl

2

Description
Malondialdehyde

Timepoint
Before and after of each intervention

Method of measurement
Colorimetry

3

Description
catalase

Timepoint
Before and after of each intervention

Method of measurement
Sectrophotometry

Secondary outcomes

empty

Intervention groups

1

Description
Group 1 consume 4 grams brewed lemon balm and twice a day for 4 weeks, then after 3 weeks wash out; consume 4 grams brewed green tea twice a day for 4 weeks

Category
Other

2

Description
Group 2 brewed 4 grams green tea and consumed twice a day for 4 weeks, then after 2 weeks wash out; brewed 4 grams Melissa officinalis and consumed twice a day for 4 weeks

Category
Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Industrial centers with welders
Full name of responsible person
Street address
City
Yazd

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Shahid Sadoughi University of Medical Sciences and Health Services of Yazd
Full name of responsible person
Amirhoushang Mehrparvar
Street address
Alem Square- Shohadaye Gomnam Blvd- The campus of University of Medical Sciences
City
Yazd
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Shahid Sadoughi University of Medical Sciences and Health Services of Yazd
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
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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