# Clinical Trial Protocol
# Iranian Registry of Clinical Trials

17 Sep 2026

## Comparison the effect of garlic with lemon juice on the level of blood pressure and comfort of patients with hypertension Referring to Farshchian Medical Center in Hamedan, 1397

## Protocol summary

**Study aim**
The purpose of this study was to compare the effect of garlic consumption with lemon juice on the blood pressure and comfort of patients with hypertension.

**Design**
Randomized clinical trial with three groups and control group

**Settings and conduct**
This study is a clinical trial of three groups before and after the Farshchian heart center of Hamadan. Pateints will be randomly divided into three groups: the Lemon juice group, the recipient of the garlic and the control group. The first group will eat 10 grams of garlic after breakfast and 10 grams of garlic after dinner for 20 days and then relax for a week, during this one week of relaxation measure the blood pressure and comfort of the patient. We take 10 grams of garlic after breakfast and 10 grams of garlic after dinner for another 20 days. We measure blood pressure and comfort again. The second group feeds 10 cc lemon juice a day after breakfast and 10 cc after dinner for 20 days and then resting for a week. In this week, we measure the amount of blood pressure and comfort of the patient. And again for another 20 days, he consumes 10 cc lemon juice a day after breakfast and 10 cc after dinner. We measure the blood pressure and patient comfort again. The third group will receive just the usual treatment.

**Participants/Inclusion and exclusion criteria**
Inclusion criteria: Age is between 18 and 60 years, Have complete and informed consent to participate in the study. No other disease Exclusion criteria: patient death, Unwillingness to continue participating in the stud

**Intervention groups**
In the first group, 20 grams of garlic per day for 20 days, and in the second group 10 cc of lemon juice for 20 days will be given daily, and the blood pressure of the patients and their degree of comfort will be evaluated and compared. In the control group, no special action will be taken.

**Main outcome variables**
Blood pressure, comfort

## General information

**Reason for update**

**Acronym**

**IRCT registration information**
IRCT registration number: **IRCT20160110025929N14**
Registration date: **2018-09-28, 1397/07/06**
Registration timing: **registered_while_recruiting**

Last update: **2018-09-28, 1397/07/06**
Update count: **0**

**Registration date**
2018-09-28, 1397/07/06

**Registrant information**

**Name**
Mehdi Molavi Vardanjani

**Name of organization / entity**

**Country**
Iran (Islamic Republic of)

**Phone**
+98 81 3422 5056

**Email address**
m.molavi@umsha.ac.ir

**Recruitment status**
**Recruitment complete**

**Funding source**

**Expected recruitment start date**
2018-09-23, 1397/07/01

**Expected recruitment end date**
2019-09-23, 1398/07/01

**Actual recruitment start date**

empty

**Actual recruitment end date**

empty

**Trial completion date**

empty

**Scientific title**

Comparison the effect of garlic with lemon juice on the level of blood pressure and comfort of patients with hypertension Referring to Farshchian Medical Center in Hamedan, 1397

**Public title**

Comparison the effect of garlic with lemon juice on the level of blood pressure and comfort of patients with hypertension

**Purpose**

Supportive

**Inclusion/Exclusion criteria**

**Inclusion criteria:**

Age is between 40 and 65 years Have complete and informed consent to participate in the study No other disease

**Exclusion criteria:**

Patient death Unwillingness to continue participating in the stud

**Age**

From **40 years** old to **65 years** old

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **105**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

105 patients will be selected as available, then using random blocking method, three groups of intervention, placebo and control group will be placed.

**Blinding (investigator's opinion)**

Not blinded

**Blinding description**

**Placebo**

Not used

**Assignment**

Parallel

**Other design features**

## Secondary Ids

empty

## Ethics committees

**1**

**Ethics committee**

**Name of ethics committee**

Ethics Committee of Hamadan University of Medical Sciences

**Street address**

Shahid Fahmideh St., Hamadan University of Medical Sciences, Hamadan

**City**

Hamedan

**Province**

Hamadan

**Postal code**

38698-65178

**Approval date**

2018-09-01, 1397/06/10

**Ethics committee reference number**

IR.UMSHA.REC.1397.406

## Health conditions studied

**1**

**Description of health condition studied**

Essential (primary) hypertension

**ICD-10 code**

I10

**ICD-10 code description**

Essential (primary) hypertension

## Primary outcomes

**1**

**Description**

Blood pressure

**Timepoint**

Before and after intervention

**Method of measurement**

Checklist

**2**

**Description**

comfort

**Timepoint**

Before and after intervention

**Method of measurement**

Visual Analog Scale (VAS)

## Secondary outcomes

empty

## Intervention groups

**1**

**Description**

Intervention group1: The first group will eat 10 grams of garlic after breakfast and 10 grams of garlic after dinner for 20 days and then relax for a week, during this one week of relaxation measure the blood pressure and comfort of the patient. We take 10 grams of garlic after breakfast and 10 grams of garlic after dinner for another 20 days. We measure blood pressure and comfort again.

**Category**
Other

**2**

**Description**
Intervention group2: The second group feeds 10 cc lemon juice a day after breakfast and 10 cc after dinner for 20 days and then resting for a week. In this week, we measure the amount of blood pressure and comfort of the patient. And again for another 20 days, he consumes 10 cc lemon juice a day after breakfast and 10 cc after dinner. We measure the blood pressure and patient comfort again.
**Category**
Other

**3**

**Description**
Control group: No special action will be taken.
**Category**
Other

## Recruitment centers

**1**

**Recruitment center**
**Name of recruitment center**
Farshchian Hospital
**Full name of responsible person**
Khodayar Oshvandi
**Street address**
Shahid Fahmideh St., Farshchian Hospital, Hamadan
**City**
Hamadan
**Province**
Hamadan
**Postal code**
38698-65178
**Phone**
+98 81 3838 0535
**Email**
oshvandi2005@yahoo.com

## Sponsors / Funding sources

**1**

**Sponsor**
**Name of organization / entity**
Hamedan University of Medical Sciences
**Full name of responsible person**
Saeed Bashirian
**Street address**
Shahid Fahmideh St., Hamadan University of Medical Sciences, Hamadan
**City**
Hamadan
**Province**
Hamadan
**Postal code**
38698-65178
**Phone**
+98 81 3838 0535
**Email**
s-bashirian@umsha.ac.ir
**Grant name**
**Grant code / Reference number**
**Is the source of funding the same sponsor organization/entity?**
No
**Title of funding source**
Deputy of research and technology
**Proportion provided by this source**
100
**Public or private sector**
Public
**Domestic or foreign origin**
Domestic
**Category of foreign source of funding**
*empty*
**Country of origin**
**Type of organization providing the funding**
Academic

## Person responsible for general inquiries

**Contact**
**Name of organization / entity**
Hamedan University of Medical Sciences
**Full name of responsible person**
Khodayar Oshvandi
**Position**
Associate Professor
**Latest degree**
Ph.D.
**Other areas of specialty/work**
Nursery
**Street address**
Shahid Fahmideh St., Hamadan University of Medical Sciences, Hamadan
**City**
Hamadan
**Province**
Hamadan
**Postal code**
38698-65178
**Phone**
+98 81 3838 0535
**Email**
oshvandi2005@yahoo.com

## Person responsible for scientific inquiries

**Contact**
**Name of organization / entity**
Hamedan University of Medical Sciences
**Full name of responsible person**
Khodayar Oshvandi
**Position**
Associate Professor

**Latest degree**
Ph.D.
**Other areas of specialty/work**
Nursery
**Street address**
Shahid Fahmideh St., Hamadan University of Medical Sciences, Hamadan
**City**
Hamadan
**Province**
Hamadan
**Postal code**
38698-65178
**Phone**
+98 81 3838 0535
**Email**
oshvandi2005@yahoo.com

## Person responsible for updating data

**Contact**
**Name of organization / entity**
Hamedan University of Medical Sciences
**Full name of responsible person**
Shahaboddin Bahrani
**Position**
Student
**Latest degree**
Bachelor
**Other areas of specialty/work**
Nursery
**Street address**
Shahid Fahmideh St., Hamadan University of Medical Sciences, Hamadan
**City**
Hamadan
**Province**
Hamadan
**Postal code**
38698-65178
**Phone**
+98 81 3838 0535
**Email**
shahabbahrani72@gmail.com

## Sharing plan

**Deidentified Individual Participant Data Set (IPD)**
Undecided - It is not yet known if there will be a plan to make this available
**Study Protocol**
Undecided - It is not yet known if there will be a plan to make this available
**Statistical Analysis Plan**
Undecided - It is not yet known if there will be a plan to make this available
**Informed Consent Form**
Undecided - It is not yet known if there will be a plan to make this available
**Clinical Study Report**
Undecided - It is not yet known if there will be a plan to make this available
**Analytic Code**
Undecided - It is not yet known if there will be a plan to make this available
**Data Dictionary**
Undecided - It is not yet known if there will be a plan to make this available