

# A randomised double blind placebo controlled study to evaluate the effectiveness of purified d-Limonene as an agent to relieve the symptoms of indigestion and "heartburn"

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|----------------------------------------|---------------------------------------------------|------------------------------------------------------|
| <b>Submission date</b><br>02/08/2007   | <b>Recruitment status</b><br>No longer recruiting | <input type="checkbox"/> Prospectively registered    |
|                                        |                                                   | <input type="checkbox"/> Protocol                    |
| <b>Registration date</b><br>16/08/2007 | <b>Overall study status</b><br>Completed          | <input type="checkbox"/> Statistical analysis plan   |
|                                        |                                                   | <input type="checkbox"/> Results                     |
| <b>Last Edited</b><br>29/10/2021       | <b>Condition category</b><br>Digestive System     | <input type="checkbox"/> Individual participant data |
|                                        |                                                   | <input type="checkbox"/> Record updated in last year |

## Plain English summary of protocol

Not provided at time of registration

## Contact information

### Type(s)

Scientific

### Contact name

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### Contact details

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## Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers

N/A

## Study information

### Scientific Title

A randomised double blind placebo controlled study to evaluate the effectiveness of purified d-Limonene as an agent to relieve the symptoms of indigestion and "heartburn"

### Study objectives

Small doses of purified d-Limonene (approximately 1000 mg) will ameliorate symptoms of indigestion and heartburn.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

Members of the research team were affiliated with a University of Texas Medical Branch (UTMB) but WRC Labs has no affiliation with a university so approval from a University Institutional Review Board (IRB) could not be gained. Prior to initiating the study, an independent group from the university community was convened to review the study related to the three basic principles of ethics relevant to the protection of human subjects in research: respect for persons, beneficence and justice and they unanimously approved the study. Plans to seek University IRB approval will not be made unless a follow up study is performed.

### Study design

Randomised double blind placebo controlled study

### Primary study design

Interventional

### Secondary study design

Randomised controlled trial

### Study setting(s)

Not specified

### Study type(s)

Treatment

### Participant information sheet

### Health condition(s) or problem(s) studied

Gastrointestinal discomfort (indigestion/heartburn)

### Interventions

Participants were randomised to ten (10) capsules of d-Limonene or placebo and instructed to take capsules orally and report symptom relief as instructed on provided questionnaire daily.

Capsules taken daily for ten days or every other day for twenty days for relief of symptoms of indigestion/heartburn.

**Intervention Type**

Drug

**Phase**

Not Specified

**Drug/device/biological/vaccine name(s)**

Purified d-Limonene

**Primary outcome measure**

Relief of symptoms as reported subjectively by study participants daily for twenty days. Participants rated their symptom relief on the original questionnaires to day 20.

**Secondary outcome measures**

Continued relief of symptoms after completing 10 capsules. A follow up questionnaire was sent out at the six month time-point for feedback on continued relief of symptoms.

**Overall study start date**

01/09/2000

**Completion date**

30/06/2001

**Eligibility****Key inclusion criteria**

Adults over 18 years of age who have experienced symptoms of indigestion and/or heartburn for at least six months.

**Participant type(s)**

Patient

**Age group**

Adult

**Lower age limit**

18 Years

**Sex**

Not Specified

**Target number of participants**

50

**Key exclusion criteria**

1. Known sensitivity to citrus products or by products
2. Known sensitivity to soy bean oil
3. History of gastrointestinal bleeding or ulcers
4. Pregnancy

**Date of first enrolment**

01/09/2000

**Date of final enrolment**

30/06/2001

## **Locations**

**Countries of recruitment**

United States of America

**Study participating centre**

13266 FM 362

Navasota

United States of America

77868

## **Sponsor information**

**Organisation**

WRC Laboratories LP (USA)

**Sponsor details**

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United States of America

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**Sponsor type**

Industry

## **Funder(s)**

**Funder type**

Industry

**Funder Name**

WRC Laboratories LP (USA)

# Results and Publications

## Publication and dissemination plan

Not provided at time of registration

## Intention to publish date

## Individual participant data (IPD) sharing plan

Not provided at time of registration

## IPD sharing plan summary

Not provided at time of registration