# 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"

	Prospectively registered
02/08/2007 No longer recruiting	☐ Protocol
Overall study status	Statistical analysis plan
Completed	Results
Condition category	Individual participant data
Digestive System	Record updated in last year
	Completed  Condition category

## 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

**Protocol serial number** 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

#### Study type(s)

Treatment

#### 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(s)

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.

#### Key secondary outcome(s))

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.

#### 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** 

#### Healthy volunteers allowed

No

#### Age group

Adult

#### Lower age limit

18 years

#### Sex

**Not Specified** 

#### 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

# Sponsor information

## Organisation

WRC Laboratories LP (USA)

# Funder(s)

# Funder type

Industry

#### Funder Name

WRC Laboratories LP (USA)

# **Results and Publications**

# Individual participant data (IPD) sharing plan

Not provided at time of registration

## IPD sharing plan summary

Not provided at time of registration