INFORMATION SHEET

The acute effects of a nutraceutical beverage on mood, energy and wellbeing in healthy adults: A randomised, double-blind, placebo-controlled, crossover trial

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Background

Nerol is an ingredient found in many plants and foods, such as lemongrass, hops, lemon balm, grapes, and black walnuts. It is a colourless liquid with a sweet rose odour used in perfumery, aromatherapy, and food flavouring. In this study, we are investigating its acute effects on mood and general wellbeing in healthy adults.

This study will be conducted by Dr Adrian Lopresti and Dr Stephen Smith (Clinical Research Australia).

Information about the funding source and declaration of interests

This study is funded by Asahi Quality & Innovations, Ltd, the company that distributes the ingredient that will be used in this study. However, this study is independently managed by Clinical Research Australia (CRA) without external influence from Asahi Quality & Innovations, Ltd.

Aim of the study

We would like to know whether the single ingestion of nerol as a liquid beverage will have an effect on mood and general wellbeing in healthy adults. Eligible participants will visit on 3 occasions and will ingest a beverage that may or may not contain nerol. Participants will be required to complete questionnaires before and 30 minutes after the ingestion of the beverage to assess their mood, general wellbeing, and perceptions of the taste and aroma of the beverage. Resting heart rates will also be monitored during these visits.

What does participation involve? **(see study flow chart on page 3)**

This study will comprise several steps as outlined below:

Step 1: Completion of initial online screening

This questionnaire consists of approximately 20 questions and takes approximately 5 to 10 minutes to complete. It provides us with information relating to the eligibility criteria. If, based on the results of the screening questionnaire, you are assessed as 'likely' eligible, you will be contacted for a phone interview. Ineligible volunteers will be informed by email that they do not fulfil the eligibility criteria.

Step 2: Phone Interview for an assessment of eligibility

If you are potentially eligible to participate in the study, you will be interviewed by a researcher. The interview will be conducted over the phone (approx. 20 minutes). The purpose of this interview is to obtain relevant background information (e.g., age, illnesses, medication use, etc.), provide you with further details about the study, and assess other relevant eligibility criteria. If you are assessed by the researcher as eligible to participate in this study, a face-to-face appointment at our office in Duncraig will be arranged for 1 to 7 days later.

Step 3: SCREENING VISIT 1: Face-to-face assessment (approx. 75 mins)

During this visit, the following tasks will be completed:

1. Measurement of your weight, height, and blood pressure
2. Ingest 200mls of water over a 15-minute period.
3. Complete several questionnaires assessing your mood and general wellbeing before and 30 minutes after you ingest the beverage.
4. Have your heart rate measured using a heart rate monitor connected to your chest.
5. To compensate you for your time, you will be given a $80 Coles Myer voucher.

Based on your responses during this screening visit, we will decide if you will be eligible to attend 2 more visits. Participants will generally be notified immediately if they are eligible to attend subsequent visits.

Step 4: VISIT 2: Face-to-face assessment (approx. 75 mins)

During this visit, the following tasks will be completed:

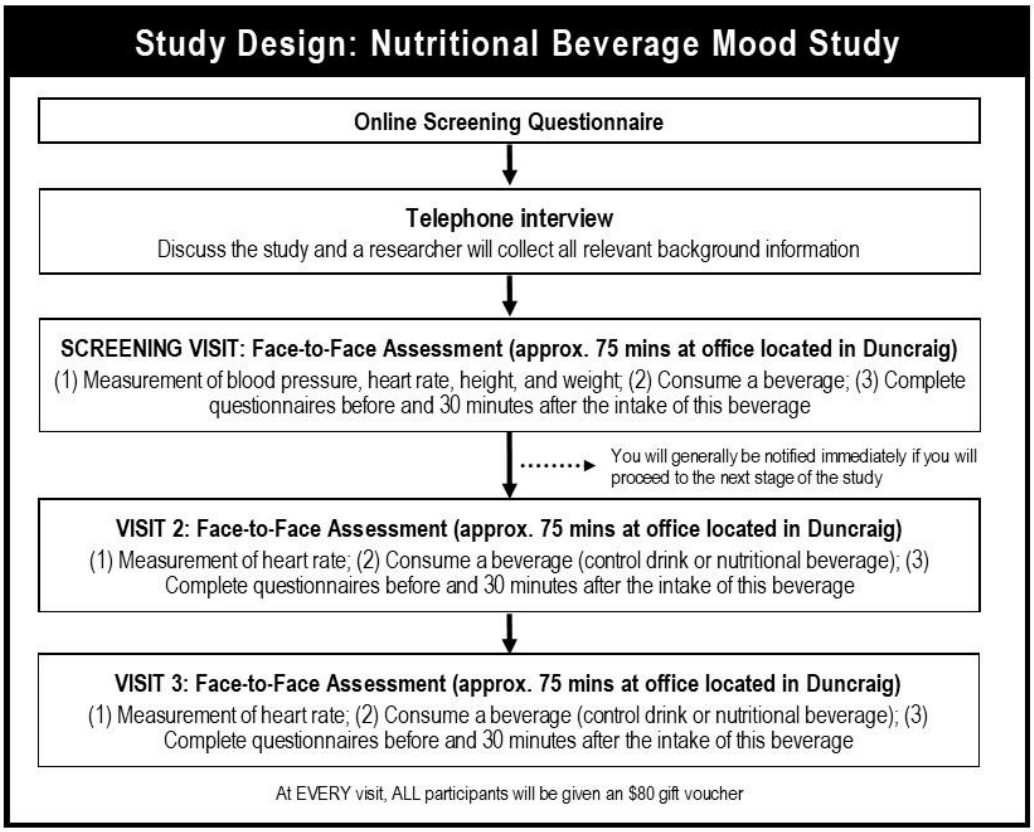
1. Ingest a sweet and sour liquid beverage that may or may not contain nerol
2. Complete several questionnaires assessing your mood and general wellbeing before and 30 minutes after you ingest the beverage.
3. Have your heart rate measured using a heart rate monitor connected to your chest.
4. To compensate you for your time, you will be given an $80 Coles Myer voucher

Step 5: VISIT 3: Face-to-face assessment (approx. 75 mins)

Approximately 1 to 7 days later, you will be asked to attend another assessment where the same process as visit 2 will occur. However, on this occasion, you will take the opposite beverage. If you consumed the beverage containing nerol on the first visit, you will be given the beverage without nerol on this occasion.

As this is a blinded study, we will not let you know which order you will be given the beverage. Furthermore, the investigator providing the beverage will not know the order of your randomisation.

* The control beverage used in this study will be sweet and sour beverage but without nerol.



Compensation for participating in this study

To compensate you for your travel costs and time associated with participating in this study, we will give you an $80 Coles Group voucher at the end of each face-to-face assessment.

Criteria for inclusion/ exclusion in this study

To be included in the study, the following inclusion criteria must be met:

1. You are a healthy adult (male or female) aged between 20 and 39 years
2. You have a body mass index (BMI) between 18 and 30 kg/m^2
3. You are a non-smoker
4. You are willing to provide a personally signed and dated informed consent form detailing all pertinent aspects of the trial

If any of the exclusion criteria below are met, you will not be suitable for participation in this study:

1. You are currently regularly taking any pharmaceutical medications
2. You are currently regularly taking nutritional or herbal supplements that might affect your mood, metabolism or sleep. You may be eligible to participate in the study if you can stop taking these supplements during the study (for approximately 1 week)
3. You suffer from a significant/uncontrolled medical condition
4. You currently suffer from significant allergies
5. You consume more than 6 standard drinks of alcohol per day
6. You have significant inconsistency in the timing of meals from day to day
7. You have an irregular sleep pattern (e.g., night shift worker)
8. You have participated in another clinical trial in the last month
9. You are pregnant or breastfeeding
10. In the last 3 months, you have experienced major stresses or lifestyle changes, or expect these to occur in the next month

Voluntary participation and withdrawal from the study

It is important that you understand that your involvement in this study is voluntary. While we are grateful to have you participate, we respect your right to decline. There will be no consequences to you if you decide not to participate, and this will not affect any future treatment/service. If you decide to discontinue participation at any time, you may do so without providing an explanation. If you withdraw, any assessments already conducted may continue to be used for analysis.

Please note that if you choose to commence a treatment to improve your cognitive performance or sleep or require treatment for any other condition during the study, this may result in withdrawal. Your health is the utmost priority, and your choice/need to commence a new treatment before completing this study is respected and supported.

Your privacy

Your privacy is very important to us. Your participation in this study and any information provided will be treated in a confidential manner. Your name and identifying details will not be used in any publication arising out of the research. Following the study, the data will be kept in a de-identified format, in a locked cabinet in the office of the Investigator and will be held for statistical analysis for future publication. Re-identifying codes will be retained for 6 months in case this is needed and will then be destroyed.

Possible benefits

Interest in natural ingredients to reduce stress and improve mood is increasing. However, clinical trials to investigate their benefits are important. If this nutraceutical beverage is found to be effective, it will provide us with a natural option to help support people during times of stress.

Possible risks

Nerol is found in many plants, such as lemongrass, hops, and lemon balm. Many foods such as grapes, black walnuts and thyme also contain nerol. Nerol has also been approved as a food additive in Japan and is certified as a food flavouring by the European Food Safety Authority or the Flavis Association of Flavor Manufacturers in the United States. In addition, based on an animal study, the maximum

concentration of nerol used in this study (max 2mg) is significantly lower than in acute toxicity animal studies. In two studies (one conducted in Japan and the other conducted by us in Australia), the test beverage was well tolerated, with no significant adverse effects reported. However, abdominal symptoms such as diarrhoea or bloating, which can be experienced after consuming a beverage, are possible.

What to do if you experience significant side effects

If you experience any significant illness, injuries, or side effects that have commenced since starting your tablets, please immediately contact Dr Adrian Lopresti or Dr Stephen Smith (contact details are below). You may be asked to stop participating in the study and to seek medical advice.

Dr Stephen Smith: Ph: 9448 7376 | Mob: 0412 813 518 | Email: steve@clinicalresearch.com.au

Dr Adrian Lopresti: Ph: 9448 7376 | Mob: 0411 969 797 | Email: adrian@clinicalresearch.com.au

Feedback on study results

As this is a pilot study to help guide the sponsors on future decisions about the test beverage, a summary of the overall study findings will not be provided.

Questions

If you would like to discuss any aspect of this study, please contact Dr Adrian Lopresti on 08 9448 7376.

We would like to thank you in advance for your assistance with this research project.

If you are interested in participating in this study, please contact Dr Adrian Lopresti on 9448 7376 or email adrian@clinicalresearch.com.au

This study has been approved by the National Institute of Integrative Medicine (NIIM) Human Research Ethics Committee (HREC) (Trial Reference Number: 0144E_2024). If you have any reservations or complaints about the ethical conduct of this research and wish to talk with an independent person, you may contact the NIIM Research Ethics Office (Tel. 03 9804 0646) or email hrec@niim.com.au). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.