

Mental Health & Nutrition Research Group

Department of Psychology

University of Canterbury

Private Bag 4800

Christchurch

New Zealand

## PARTICIPANT INFORMATION SHEET

**Study title:** The effectiveness of micronutrients as a treatment for anxiety and depression: A community trial.

**Principal investigator:** Meredith Blampied

*Phone:* 022 153 3702

*Email:* mindmappsychology@gmail.com

**Research co-ordinator & PhD student:** Meredith Blampied

*Phone:* 022 153 3702

*Email:* mindmappsychology@gmail.com

**Locality:** University of Canterbury, Christchurch, New Zealand

**Ethics ref:** 17/STH/131

**Other investigators: Professor Julia Rucklidge, Dr Caroline Bell, Claire Gilbert, Aaron Stevens, Prof Martin Kennedy.**

You are invited to take part in a study investigating the impact of a micronutrient (vitamin and mineral) formula for adults experiencing symptoms of depression and anxiety. Diagnosis of clinical depression or anxiety is not required for entry into this study although this will be measured as part of the study. **The product we use is not the recommended intervention for clinical depression or anxiety.** The recommended intervention for anxiety and depression is psychotherapy and antidepressant medication. Should you wish to find out more about the recommended interventions, please discuss these options with your GP.

Whether or not you take part is your choice. If you don’t want to take part, you don’t have to give a reason, and it won’t affect the care you receive. If you do want to take part now, but change your mind later, you can pull out of the study at any time.

This participant information sheet will help you decide if you’d like to take part. It sets out why we are doing the study, what your participation would involve, what the benefits and risks to you might be, and what would happen after the study ends. We will go through this information with you and answer any questions you may have. You do not have to decide today whether or not you will participate in this study. Before you decide you may want to talk about the study with other people, such as family, whānau, friends, or healthcare providers. Feel free to do this.

If you agree to take part in this study, you will be asked to provide written consent by signing at the bottom of this page Please make sure you have read and understood all the information on this form, including the consent form and list of ingredients of the products we use.

## What is the purpose of the study?

This study will examine the effect of a micronutrient (vitamin and mineral) formula in adults who experience symptoms of depression and anxiety. The study will explore lots of different symptoms of anxiety and depression and will also look at other parts of physical and mental health, such as visits to the GP and other medication you might get prescribed during the study. Understanding these parts of depression and anxiety will help us understand how nutrients work and the effect they have on your mood. The product we are studying has been researched previously and has shown to have beneficial effects on depression, anxiety and stress. However, the benefits of this formula have not yet been studied in a community setting.

## What will be studied?

The formula we are studying is called *Daily Essential Nutrients*, a revised formula of the product we’ve tested in previous research. This product contains a blend of vitamins, minerals, amino acids and antioxidants and is consumed in capsule form. The product will be compared to a placebo which looks identical to the micronutrient product. The placebo only contains one ingredient that is also contained in the product, riboflavin. Riboflavin has been added to the placebo as it often turns urine bright yellow and therefore ensures you don’t know whether you are taking the product or the placebo. Lists of ingredients for the product and the placebo are at the bottom of this webpage. During the trial, it is important that you do not share the product we provide you with anyone else.

## How will it be studied?

This study will use the best method of testing known as a randomised, double-blind, placebo controlled trial (RCT). This means that if you decide to participate in the trial you will have a 50% chance of receiving either the productor the placebo and neither you nor the researchers will know which product you are taking.

Each person who participates in the trial will take either the micronutrient product or the placebo for 10 weeks (plus two weeks where you don’t take anything but we track your anxiety and depression symptoms). *After* 12 weeks, all participants will be offered the micronutrients for another 10 weeks. Only at the end of the trial (i.e. when all participants have finished) will you find out whether you were taking the micronutrient product or the placebo during the first 10 weeks.

## What will my participation involve?

We will be recruiting adults between the ages of 18-65 who are experiencing symptoms of depression and anxiety and who are not currently taking any psychiatric medication. If you are taking any psychiatric medication, please let us know. We do not want you to stop taking medication in order to be in this trial. Please discuss any decision to stop taking medication with your GP. Approximately 200 adults living in the Canterbury region will be recruited to participate in this study.

You and your GP will decide if you may be suitable to participate in this study. If, after discussions with your GP, you decide to participate in this study, your GP will either give you contact details for the principal investigator for you to make contact or, if you prefer, your GP will make an electronic referral directly to the study. If an electronic referral is received, you will be contacted by the principal investigator over the phone or you can ring the principal investigator yourself.

The principal investigator will have a conversation with you over the phone to ask some final questions about the study and whether you are eligible to participate. This screening will provide us with an overall assessment of your health and wellbeing. At this time, you will also be able to ask any questions you may have about the study. Providing you are eligible from this screening, you will be asked to provide written consent for the study. You will then be directed to a website where you will create a unique, confidential and secure log-in. Via the website, you will complete a series of questionnaires about your mental health, your general wellbeing and information about your life more generally (e.g. work, education). The questionnaires will take between 30 to 40 minutes approximately to complete.

Your GP will be contacted to let them know whether or not you are eligible for and decided to participate in the study. This is to ensure your safety and to make sure you have the best access to suitable treatment and support.

Once you have completed the questionnaires on the website, you will then start two weeks of monitoring your overall levels of anxiety, depression, stress and if you think your ability to function is improving or declining. You will not take either the nutrients or placebo during this time. The purpose of these two weeks is to provide a baseline of your symptoms. We can then measure any change during the next part of the trial against these first two weeks. For a select group of women, we will ask that a blood test be taken.

At the end of the two weeks, you will be sent the first four weeks supply of either nutrients or placebo. Neither you nor the researcher will know which you will be taking. When you start taking the capsules, you will be asked to begin taking one capsule three times per day and increase the dose by three capsules every second day until a maximum dose of four capsules taken three times per day is achieved. This means that a total of 12 capsules will be taken per day. You will be asked to continue taking the maximum dose of 12 capsules per day for 12 weeks. Please hold on to any unused/missed capsules as you will be asked to photograph these every two weeks. It is important to remember not to give this product to anyone else.

During the randomized phase, you will be monitored every week via online questionnaires, taking approximately 10 minutes to complete. These will be available through the website. At the end of the randomized phase, you will be asked to complete the same assessments that you completed at the beginning of the study, again these questionnaires will be available through the website. If you are unable to complete these questionnaires, please let the principal investigator know by email or phone call as they can ring you to discuss alternatives. For those of you who have consented to the blood test, a second draw will be arranged towards the end of the RCT.

## What are the possible benefits of this study?

There may or may not be any benefit to you as a result of taking part in this study. Previous research has shown beneficial effects of micronutrient formulas on mood and anxiety in children as well as adults. The research suggests that your symptoms of depression and anxiety may improve as a result of taking the product; however, there is no guarantee that your symptoms will improve and you may experience an increase in your symptoms.

## What are the possible risks of this study?

There are risks when taking an experimental treatment. Side effects reported by people taking the micronutrients include headaches, stomach aches and nausea. These side effects are typically mild and transitory and can be avoided by taking capsules **on a full stomach**. We therefore suggest that you *always take your capsules with food and plenty of water.* Another way to prevent these side effects is to increase the dose more slowly. Please don’t hesitate to contact us at any stage to discuss side effects or dosing of the nutrients. Information on how to contact the principal investigator is on the website and will be on your pill bottle. We will review side effects with you every week and make a referral to a medical practitioner if necessary.

## Can I take other medications?

The product you will be taking has the potential to interact with other medication or drugs so if possible you should avoid taking other medicines or supplements for the duration of the study. For this reason, we are only including individuals in the study who *are not being concurrently treated for their illness using prescribed medications.* With respect to other medications, such as over the counter medications to treat colds, flu, stomach upset, sleep problems, you should first discuss with a pharmacist before use as such medications may interact with the product. Pain relief medication such as aspirin, paracetamol, ibruprofen, Neurofen and Panadol have not shown to interact with the product and would be safe to take alongside the capsules.

If you need to take an antibiotic or antifungal agent orally at any time during the trial, please let us know. We ask this because antibiotics and antifungal drugs may interfere with the absorption of the micronutrients. Additionally, you will be asked to avoid trying any alternative medicines, supplements or other forms of therapy until after completion of this study.

## What if my symptoms increase or I have a reaction to the product?

**Your safety** is of the utmost importance. If you experience an increase in symptoms please let us know as, in discussion with you, we may decide to start you on the micronutrient open label phase early (see below for an explanation of the open label phase). If we feel your symptoms have increased to a clinically significant degree or that the product is causing any harm, we may discuss with you the possibility of withdrawing you from the trial or may decide that you should discontinue your participation in the trial. If at any time you do discontinue the trial we will follow up with you. In the event of a psychiatric emergency or if you feel at risk to harming yourself or others, you must contact the Crisis Resolution Team on 0800 920 092 or visit the emergency department immediately. Information about what to do if you need emergency mental health support is on the website.

Should you experience any serious physical symptoms after taking the capsules, you should go immediately to the emergency department. All bottles of pills have a contact number which you should provide to the physician so that they can call to obtain information about the study and the ingredients of the capsules you are taking.

It is possible to find out whether you are taking the micronutrients or the placebo should your treating physician be concerned about your health and safety at any time in order to assist with your care.

## Who pays for the study?

Participation in this study will not incur any costs to you. The product we are testing is provided free of charge by the manufacturers. The manufacturer (Hardy Nutritionals) do not provide any financial support and are not involved in the study in any other way. There are no restrictions on any publications from this research. The costs of this study are being funded by the University of Canterbury and the University of Canterbury Foundation. This funding will cover the costs of a $10 petrol voucher you will receive if you need to visit the university in order to reimburse you with transportation costs. You will also have access to a free car park at the university when you attend appointments for this study. For those of the you participating in the blood test, you will be compensated $20 dollars per visit to cover parking and travel.

## What if something goes wrong?

In the unlikely event of a physical injury as a result of your participation in this study, you must first present to the emergency department. You may be eligible for compensation from ACC under the Injury Prevention, Rehabilitation and Compensation Act. ACC cover is not automatic, and your case will need to be assessed by ACC according to the provisions of the 2001 Injury Prevention Rehabilitation and Compensation Act. If your claim is accepted by ACC, you still may not receive any compensation – as compensation depends on a number of factors. ACC usually provides only partial reimbursement of costs and expenses and there may be no lump sum compensation payable. There is no cover for mental injury unless it is a result of physical injury. If you have ACC cover, generally this will affect your right to sue the investigators. If you have any questions about ACC, please contact your nearest ACC office, or one of the investigators. If you have private health insurance, you may wish to check with your insurer that taking part in this study won’t affect your cover.

## What are my rights?

Participation in this part of the study is entirely voluntary (your choice). You are free to decline to participate or withdraw from the research at any time without experiencing disadvantage in any way. Declining or withdrawing participation from the study will in no way affect your continuing health care. However, if you do decide to withdraw from the study at any time, we will contact your GP to inform them. The researchers may also contact you at a later stage to ensure your wellbeing. You have the right to access any information collected about you as part of the study and will be told of any new information about any adverse or beneficial effects related to the study that becomes available and may have an impact on your health.

All information collected in this study will remain strictly confidential. The only people who will have access to the information are the study investigators and designated staff. We are very careful in dealing with confidential information. Any information you disclose will be kept in a confidential file, which will be stored in a locked filing cabinet at all times.

Members of all cultures will be encouraged to participate in the study. Respect for Māori customs and traditions are of the highest priority and, if necessary, any appointments at the university can include a cultural advisor. The researchers are available to discuss the research with the whanau to assist in developing their understanding of the clinical disorders and how the disorders can impact the te taha hinengaro (mental wellbeing), whanaungatanga (family relationships), taha wairua (spiritual wellbeing) and taha tinana (physical wellbeing).

## What happens after the study or if I change my mind?

At the end of the 12 weeks, you will be invited to participate in what we call an open-label trial where you will be given the opportunity to take the micronutrient product for a further 10 weeks. Participation in the open-label trial will be of no cost to you; the product will be provided free of charge. If you wish to continue into the open-label trial, we will provide you with a new information sheet and review consent with you prior to beginning.

After you have completed the study, you will not receive any further funded micronutrients. If you wish to purchase the micronutrients, we will assist you to do so at your own cost.

Whether or not you decide to participate in the open-label trial or should you withdraw during the first 12 weeks of the trial, we will follow up with you at one year after your baseline assessment to check your wellbeing and to complete the same online assessments you completed at the beginning of the trial using the same study website. If you are unable to complete these assessments for any reason, please let the research know and we will ring you to discuss alternatives.

All data that you provide will be stored at the University of Canterbury for 10 years after collection, in accordance with university and health regulations, and will be destroyed securely in accordance with the university guidelines. With your permission, data from this study may be used in future related studies, which have been given ethical approval from the Health and Disability Ethics Committee.

The study findings will be published in a peer reviewed scientific journal and disseminated at conference presentations. We can send you a summary of the results should you wish. However, please be aware that a significant delay may occur between data collection and publication of the results.

## What is the purpose of the Blood test?

As part of this research, we are also looking at whether or not micronutrient treatment influences mitochondrial function in women with depression. Mitochondria are the site within the cell where energy is produced. A decline in mitochondrial function is a central component of many human diseases. There is a growing body of evidence supporting a central role for mitochondrial function in the onset of depression. Micronutrients play a central role in the biological pathways used by mitochondria for the production of energy; however, the effect of taking a micronutrient supplement on the function of mitochondria is not known.

In order to assess the effect of the micronutrients on the mitochondria, two blood tests are required, one before taking the pills and one eight weeks later. You will attend a research laboratory at the Christchurch School of Medicine where the research team will take a blood test and run analyses on the cells found in your blood, particularly looking at how well the mitochondria are working and the impact of oxidative stress on your cells. You do not need to remain in the lab after your blood is taken. Once the tests are complete, the lab will dispose of the cells. No genetic information will be taken. Should you consent to participate in mitochondria sampling for the proposed study, this will not be construed as creating any right or claim on the part of the researcher to your genetic information.

This part of the study is additional and voluntary. You will be asked to specifically consent to the blood work part of the trial. If you do not consent to the blood work **you will still be able to participate in the micronutrient trial.** There will be no changes to your participation if you do not consent to the blood work.

If you consent to participating in the mitochondrial study, you will be contacted by a separate researcher who will explain specific details and arrange a time for you to receive a blood test. All blood tests do need to be conducted in the morning. You will be compensated with a 20 dollar voucher for each visit to cover the costs of travel and parking.

## Who do I contact for more information or if I have any concerns?

If you have and questions, concerns or complaints about the study at any stage, you can contact the principal investigator:

**Principal investigator:** Meredith Blampied

*Phone:* 022 153 3702

*Email:* mindmappsychology@gmail.com

If you want to talk to someone who isn’t involved in the study, you can contact an independent health and disability advocate on:

*Phone*: 0800 555 050
*Fax:* 0800 2 SUPPORT (0800 2787 7678)
*Email:* advocacy@hdc.org.nz

You can also contact the Health and Disability Ethics Committee (HDEC) that approved this study on:

*Phone*: 0800 4 ETHICS

*Email:* hdecs@moh.govt.nz

This study has been reviewed and given ethical approval by the Human and Disabilities Ethics Committee and the Human Ethics Committee at the University of Canterbury. This means that the committee may check at any time that the study is adhering to ethical procedures. We have also consulted with Te Komiti Whakarite and the Māori Research Advisory Group at the University of Canterbury. Part of this research study will contribute towards a PhD qualification undertaken by Meredith Blampied.

**Thank you for taking the time to read this information sheet.**

**Should you decide to participate in this research, you will be asked to read the consent form below and indicate your consent.**



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## CONSENT FORM

**If you need an interpreter, please let us know**

**Please read and sign if you consent to the following:**

|  |  |  |
| --- | --- | --- |
| I have read and I understand the Participant Information Sheet.  |  |  |
| I have been given sufficient time to consider whether or not to participate in this study. |  |  |
| I have had the opportunity to use a legal representative, whanau/ family support or a friend to help me ask questions and understand the study. |  |  |
| I am satisfied with the answers I have been given regarding the study and I have a copy of this consent form and information sheet. |  |  |
| I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without any disadvantage. |  |  |
| I understand that my GP will be informed about whether or not I am eligible and participating in the study. Please provide contact details at the end of this form. |  |  |
| I understand that my GP will be informed of any significant outcomes that may arise.  |  |  |
| I agree to an approved auditor appointed by the New Zealand Health and Disability Ethic Committees, or any relevant regulatory authority or their approved representative reviewing my relevant medical records for the sole purpose of checking the accuracy of the information recorded for the study. |  |  |
| I understand that my participation in this study is confidential and that no material, which could identify me personally, will be used in any reports on this study. |  |  |
| I know who to contact if I have any questions about the study, if I experience any side effects related to the study intervention, if I have any upcoming medical procedures or have been prescribed new medication, if anything occurs which I think would be a reason to withdraw from the study or if I experience an increase in symptoms. |  |  |
| I understand my responsibilities as a study participant, the provisions which will be made for the reimbursement of expenses involved in this study and the compensation provisions in case of injury during the study. |  |  |
| I understand that the intervention will be stopped if it should appear harmful to me.  |  |  |
| It is possible that information from my medical history may be important in analysing the data from this study. I consent to the research team accessing my medical file through my GP as part of the research process.  | Yes 🞏 | No 🞏 |
| If I decide to withdraw from the study, I agree that the information collected about me up to the point when I withdraw may continue to be processed. | Yes 🞏 | No 🞏 |
| If I decide to withdraw from the study, I agree to being contacted one year after I started the study to collect follow up information.  | Yes 🞏 | No 🞏 |
| I consent to my name being placed in a separate database so that I can be contacted in the future should there be other studies which I might like to participate in, with the understanding that I can choose whether to participate in such studies or not.  |  Yes 🞏 | No 🞏 |
| I consent to providing two blood samples if eligible**NOTE: You can continue with the micronutrient intervention without having to give a blood sample** |  Yes 🞏 | No 🞏 |
| If I consent to give blood, I request for my blood sample to be disposed of with a karakia. |  Yes 🞏 | No 🞏 |

|  |  |
| --- | --- |
| **GP contact details:** |  |
| Name: |  |
| Phone:  |  |
| Surgery address (if known): |  |

**Declaration by participant:**

I hereby consent to take part in the micronutrient for anxiety and depressive symptoms study.

|  |  |
| --- | --- |
| Yes 🞏 | No 🞏 |

|  |
| --- |
| Participant’s name: |
| Participant’s signature:Date: |  |
| Email address for results:  |

**This will be completed by the principal investigator after completion of your phone screening interview.**

**Declaration by member of research team:**

I have given a verbal explanation of the research project to the participant, and have answered the participant’s questions about it.

|  |  |
| --- | --- |
| Yes 🞏 | No 🞏 |

I believe that the participant understands the study and has given informed consent to participate.

|  |  |
| --- | --- |
| Yes 🞏 | No 🞏 |

|  |
| --- |
| Researcher’s name: |
| Date: |  |

**Ingredients: Daily Essential Nutrients**

|  |  |  |
| --- | --- | --- |
| **Ingredients:** | **1 capsule** | **12 capsules** |
| Vitamin A (as retinyl palmitate) | 480 IU | 5,760 IU |
| Vitamin C (as ascorbic acid) | 50 mg | 600 mg |
| Vitamin D (as cholecalciferol) | 250 IU | 3,000 IU |
| Vitamin E (as d-alpha tocopheryl succinate) | 30 IU | 360 IU |
| Vitamin K (75% as phylloquinone; 25% as menaquinone-7) | 10 mcg | 120 mcg |
| Thiamin (as thiamin mononitrate) | 4 mg |  60 mg |
| Riboflavin | 1.5 mg | 18 mg |
| Niacin (as niacinamide) | 7.5 mg | 90 mg |
| Vitamin B6 (as pyridoxine hydrochloride) | 5.8 mg | 69.9 mg |
| Folate (as L-methylfolate calcium) | 66.8 mcg | 801 mcg |
| Vitamin B12 (as methylcobalamin) | 75 mcg | 900 mcg |
| Biotin | 90 mcg | 1080 mcg |
| Pantothenic acid (as d-calcium pantothenate) | 2.5 mg | 30 mg |
| Calcium (as chelate) | 110 mg | 1,320 mg |
| Iron (as chelate) | 1.15 mg | 13.8 mg |
| Phosphorus (as chelate) | 70 mg | 840 mg |
| Iodine (as chelate) | 17 mcg | 204 mcg |
| Magnesium (as chelate) | 50 mg | 600 mg |
| Zinc (as chelate) | 4 mg | 48 mg |
| Selenium (as chelate) | 17 mcg | 204 mcg |
| Copper (as chelate) | 0.6 mg | 7.2 mg |
| Manganese (as chelate) | 0.8 mg | 9.6 mg |
| Chromium (as chelate) | 52 mcg | 624 mcg |
| Molybdenum (as chelate) | 12 mcg | 144 mcg |
| Potassium (as chelate) | 20 mg | 240 mg |
| **Proprietary blend ingredients:**  |
| Choline bitartrate |
| Alpha-lipoic acid |
| Shilajit |
| Inositol |
| Acetylcarnitine (as acetyl-L-carnitine hydrochloride) |
| Grape seed extract |
| Ginkgo biloba leaf extract |
| Methionine (as L-methionine hydrochloride) |
| Cysteine (as N-acetyl-L-cysteine) |
| Germanium sesquioxide (as chelate) |
| Boron (as chelate) |
| Vanadium (as chelate) |
| Lithium orotate (as chelate) |
| Nickel (as chelate) |
| **Other ingredients:** |
| Cellulose |
| Glycine |
| Citric acid |
| Magnesium stearate |
| Silicon dioxide |

**Ingredients: Placebo**

|  |  |  |
| --- | --- | --- |
| **Ingredients:** | **1 capsule** | **12 capsules**  |
| Fiber Acacia Gum  | 300 mg | 3,600 mg |
| Maltodextrin  | 395.90 mg | 4,750.8 mg |
| Cocoa Powder  | 4 mg | 48 mg |
| Riboflavin Powder | 0.10 mg | 1.2 mg |