



OMNi Brain Health is a project working to improve the lives of people living with Alzheimer's Disease.

Are you interested in helping to advance scientific research in this area?

Do you want to find out more about your cardiovascular health?

Would you like to know more about your oral microbiome?

This research may interest you...

PARTICIPANT INFORMATION SHEET

What the purpose of the project?

This research project is named 'Oral Microbiome & Nitrates for Brain Health' (or OMNi for short). The aim of OMNi is to find out if there is a link between Alzheimer's Disease and two biological measures. The first of these measures is Nitric Oxide which is a molecule in our bodies that helps to keep our cardiovascular system healthy. The other measure is the oral microbiome which is the community of microorganisms – mostly bacteria, found living in the mouth.

Nitric Oxide has been shown to be helpful with cardiovascular health as well as brain health. So, we want to see whether there are any links between Alzheimer's Disease and levels of Nitric Oxide in the body. The oral microbiome is also interesting to us because there are specific bacteria that can help turn dietary nitrate (from things like leafy vegetables or beetroot) into Nitric Oxide. We want to find out if people living with Alzheimer's Disease have a different oral microbiome than those without. If we can find a link between these measures and Alzheimer's Disease, then the next stage will be figuring out how we can use this information to help people.

Who can take part?

We are looking for participants both with Alzheimer's and without and you will need to meet the inclusion criteria below. However, unfortunately if any of the things in the 'Exclusion criteria' are true for you then you won't be able to participate.

Inclusion criteria:

- Aged 65 years and over
- Participants and their carers must be able to speak, read, and understand English to participate in this study.

Exclusion criteria:

- Advanced Alzheimer's Disease
- Have used antibiotics in the last month
- Use of mouthwash in the last month
- Use of medication affecting nitrate metabolism (for example Isosorbide Mononitrate, Sildenafil or Glyceryl Trinitrate).

Do I have to take part?

No, you do not have to take part. If you do decide to take part, then you are free to withdraw at any time without having to give a reason, and there will be no adverse consequences to you. Participation is voluntary so no judgement will be made should you decide you do not wish to take part before or during the study. If you decide you do not wish your data to be used, you have the right to withdraw the data at any point up to two weeks after participation. If at any time you want to withdraw or withdraw the data, you should email Scott (Scott.Findlay@uws.ac.uk).

What does taking part in this project involve?

Once you have given permission and consent to take part in the project, we will ask you to complete a 3-day food diary and some questionnaires (such as contact details, one to measure the severity of your Alzheimer's Disease, physical activity levels, oral health and wellbeing).

We'll also arrange for you to come down to the laboratory at our Lanarkshire Campus for some testing. You'll be asked to attend fasted (having not eaten in the 12-hours before) and be met by one of the researchers and shown to the labs. We will go through the questionnaires you completed at home and finish any of them off.

Before we do any measurements, we'll talk you through what will happen. We will start by taking a swab of your mouth to collect saliva and we will draw some blood. We'll use an ultrasound wand to measure your 'Flow Mediated Dilation' (you can watch a video of it here <https://youtu.be/YQjGROIPDY4>). As well as taking blood pressure (watch the video here <https://youtu.be/vLJzwWHfg-U>) and height and weight. We will ask you to complete a '6-minute walking test' which has you walk as far as you can in 6-minutes. We expect that your visit to the laboratory will last approximately 3.5 hours.

We'll also ask if you can access your dental records so that we can use this information to help look at the health of your teeth and mouth. If there are administration costs, we can cover these. If you have not been to the dentist in the last year, we would ask that you attend and receive a check. We will also cover the cost of this.

What are the benefits of taking part?

There will be no direct benefit to you from taking part, but we hope that this research will inform ways to treat and support Alzheimer's disease in the future. You will also be able to find out about your oral microbiome as well as your cardiovascular health. We can fund reasonable costs of travel to the lab so don't let lack of transport stop you.

Are there any disadvantages?

You may feel some discomfort during the flow mediated dilation test as well as when having blood drawn, there may also be some slight bruising on your arm after. Discussions around the diagnosis and history of Alzheimer's disease may be a sensitive topic for some people. But you are free at any point to ask the researcher to stop any test or procedure or take a break but if at any point it becomes too much you are free to withdraw with no adverse consequences. Other than that, there are no known disadvantages. All measures have been risk assessed and best practices will be ensured to minimise any discomfort.

Will my data be kept securely and confidentially?

All information collected about you in the project will only be used for research purposes and will be stored anonymously using unique codes, so that you cannot be identified. Only members of the research team will have access to your personal information which will be stored securely in a locked file cabinet and/or a password protected files.

What will happen to the results of the research project?

The results of this study will form part of a doctoral thesis and be used to inform future projects. We will present the research findings at public seminars, such as the Alzheimer's Scotland Centre for Policy and Practice open meeting as well as in academic papers and conferences. The findings may also be shared and discussed informally, such as in newsletters or podcasts.

Who is funding and organising the project?

The project has been partially funded by the University of the West of Scotland through the 2023 Vice Chancellors Studentship as well as Carnegie Research Incentive Grant. Scott Findlay will be your main contact throughout the project and can be contacted on Scott.Findlay@uws.ac.uk. If you would like to speak to the principal investigator of the project you can contact Dr Rachel Kimble via email (Rachel.Kimble@UWS.ac.uk).

Who has reviewed this study?

This study has received ethical approval from the School of Health and Life Sciences Academic Integrity and Ethics Committee.

If you are unhappy or would like to gain impartial advice about any aspect of the study then you may address this with the Co-Chair of the Sport and Physical Activity Research Institute, Professor Nicholas Sculthorpe (Nicholas.sculthorpe@uws.ac.uk).

How do I find out more or get in touch?

If you would like to find out more or sign up, you can do so by emailing Scott at the contact details below.

Email: Scott.Findlay@uws.ac.uk

If you need additional help – we suggest the following:

NHS inform: <https://www.nhsinform.scot/healthy-living/mental-wellbeing/>

Alzheimer's Scotland Helpline:

<https://www.alzscot.org/living-with-dementia/getting-support/24-hour-freephone-dementia-helpline>

If you feel unwell contact the NHS by dialling 111 (free). Or if you need a listening ear for your problems, call or text (free) The Samaritans on 116 123. They are available 24 hours a day, 365 days a year.

Thank you for considering taking part in this project and taking time to read this information sheet.