Plain Language Statement

School of Agriculture, Food and Ecosystem Sciences (SAFES)
Faculty of Science

Project Number: **32213**
Project Title: Evaluating the accuracy of the EatInSight App in determining carbohydrate amounts when compared to visual estimations by nutritionists and adults with type 1 diabetes

Project Supervisors: Dr Robyn Larsen & Dr Chiara Murgia

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Introduction

Thank you for your interest in taking part in this research project. The next few pages will give you with further information about the project, so that you can decide if you would like to take part.

Please take the time to read this document carefully. You may ask questions about anything you don't understand or want to know more about.

Your decision to take part is voluntary. If you don't wish to take part, you don't have to. If you begin participating, you can also stop at any time.

What is this research about?

Estimating the carbohydrate content of meals (so called 'carb counting') can be difficult for adults with type 1 diabetes. If carb counting is not correct, this can misinform insulin dosing and cause blood sugars to become too high or too low. Diet apps can help with this, but most still need manual entry and portion size guesses, which often have errors. Automating the process of carbohydrate counting could make things easier and more accurate for patients.

The EatInSight diet app, built by researchers at the University of Melbourne, uses mobile phone technologies to automatically identify foods and estimate their quantity. Early tests show that it can correctly identify common foods 84% of the time. But, before testing whether the EatInSight app can improve blood sugar levels, we'd like to compare its accuracy to visual estimations of patients and nutrition experts, as well as against traditional assessment methods such as written food records or diaries.

What will I be asked to do?

Should you agree to take part you will complete two-stages of the proposed research.

Part 1) Online Food Model Quiz (anticipated time: 30 mins).
You will get an email with a link to an online food model quiz. This quiz will ask you to look at photos of common Australian meals and estimate the amount of food shown (carbohydrate or serving size). You will also be asked how often you eat these foods ('Never', 'Sometimes', 'Often'). Each photo will include a size guide (ie. credit card). We will also ask for some basic information about you, such as your age, sex, education level, how long you've had diabetes (if applicable), your type of insulin treatment (if applicable) and your level of dietary assessment training (if applicable).

Part 2) Weighed/Measured Food Record (duration: 3 days). Part 2 includes those with type 1 diabetes only
After the online food model quiz, those with type 1 diabetes will record their usual diet for 3 days by writing down and taking photos of everything you eat and drink. To complete this task, you will also need to take two photographs of each meal: one from the side (45° angle preferred) and one from directly above. Meals should be presented without overlapping of food items (eg. avoiding sauces on top of rice/pasta etc). A selection of up to three meal images will be used for analysis by the EatInSight app. The written records for the selected meals will also be analysed by researchers using nutrition analysis software (Xyris Foodworks software, Version 10).

After completing the food model assessment and weighed/measured food record, you will be sent a brief online survey about your experience using carbohydrate counting/dietary assessment tools (anticipated time: 10-15 minutes).

What are the possible benefits?

This research aims to benefit the community by giving EatInSight diet app users greater dietary flexibility and make it easier for them to take care of their diabetes. We hope the app will enable patients to better match insulin dosing with food intake, potentially leading to improved blood sugar levels. While we cannot guarantee or promise any benefits from taking part in this research, we hope the study's findings may guide future research on use of the app to help improve blood sugar levels.

What are the possible risks?

As this study does not intend to change behaviour or one's medical care, we do not foresee any problems or issues related to participation.

Do I have to take part?

No. Your decision to take part is voluntary. If you do not wish to take part, you do not have to. If you decide to take part and later change your mind, you are able to withdraw at any time.

Will I hear about the results of this project?

At the end of the study, you will be get a report of your results of the online food model quiz and the 3-day food record. If you would like, you can also get a report of the main findings of the study and copies of any publications.

What will happen to information about me?

By signing the consent form, you are giving permission for the research team to collect and use your information for this study. Any information that can identify you will be kept private and will only be used for this research. Your data will only be shared with your permission, or if the law requires it.

Study data will be collected in a re-identifiable (coded) format using REDCap, a secure online data system hosted on servers at the University of Melbourne. Only study investigators will be able to use the electronic data. Any identifiable information (name and contact details) will be stored in a file only accessible by the project's supervisors and delegated members of the research team. Only re-identifiable (coded) information will appear in electronic forms, databases used for analysis or appear in any data reports.

Your data will only be used for this research study. The study findings are likely to be published and/or presented in a variety of forums, such as in scientific journals and conference presentations. In any publication and/or presentation, only group data will be presented, so that you cannot by identified, except with your permission. Data from this research will be destroyed 5 years after publication.

In accordance with relevant Australian and Victorian privacy and other relevant laws, you have the right to ask for your information that was collected and stored by the research team. Please email a study team member named at the end of this document if you would like to be able to get your information.

Is there any potential conflict of interest?

This research is sponsored by the University of Melbourne and is for research purposes only. While there are no financial interests related to this work, we acknowledge that this work may lead to the creation of a commercial product. If this happens, we will act in accordance with the Australian Code for Responsible Conduct of Research and university policies. We will also fully describe any conflicts when publishing results in scientific journals or conference presentations.

Where can I get further information?

If you would like more information about the project, you can get in touch with:

Project supervisors: Dr Robyn Larsen/Dr Chiara Murgia
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Student researchers: Ms Angela Chen/ Mr Naufal Nurdin
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Who can I contact if I have any concerns about the project?

This project has human research ethics approval from The University of Melbourne (HREC ID#32213). If you have any concerns or complaints about the conduct of this research project, which you do not wish to discuss with the research team, you should contact the Research Integrity Administrator, Office of Research Ethics and Integrity, University of Melbourne, VIC 3010. Tel: +61 3 8344 1376 or Email: research-integrity@unimelb.edu.au. All complaints will be treated confidentially. In any correspondence, please provide the name of the research team and/or the name or ethics ID number of the research project.

Consent Form

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BAppSci (Hons) Ms Anqi Chen	**Email:** acch2@student.unimelb.edu.au

Name of Participant: ______________________________

1. I consent to participate in this project, the details of which have been explained to me, and I have been provided with a written plain language statement to keep.
2. I understand that the purpose of this research is to compare the accuracy of the EatInSight dietary app against visual estimations of adults with type 1 diabetes and nutrition experts, as well as against traditional diet assessment methods such as food diaries.
3. I understand that my participation in this project is for research purposes only.
4. I acknowledge that the possible effects of participating in this research project have been explained to my satisfaction.
5. In this project I will complete an online food image quiz that requires me to estimate food quantities. I will also be required to keep (if participant with diabetes) a 3-day food record, which includes a written and photographic record of all food and drink consumed.
6. I understand that my participation is voluntary and that I am free to withdraw from this project anytime without explanation or prejudice and to withdraw any unprocessed data that I have provided.
7. I understand that the data from this research will be stored at the University of Melbourne and will be destroyed 5 years after publication.

8. I have been informed that the confidentiality of the information I provide will be safeguarded subject to any legal requirements; my data will be password protected and accessible only by the named researchers.

9. I understand that given the small number of participants involved in the study, it may not be possible to guarantee my anonymity.

10. I understand that after I sign and return this consent form, it will be retained by the researcher.

11. By checking this box, I agree to have my name, email and phone number securely stored so that the research team can contact me about future research closely related to this project.

    ☐ I wish to be informed about future research into diabetes (optional)

Participant Signature: ______________________________ **Date:** ____________________