ROYAL ADELAIDE HOSPITAL

INFORMATION SHEET

PROTOCOL NAME: Effects of the artificial sweetener, sucralose, on blood pressure, heart rate and superior mesenteric artery blood flow compared to intraduodenal glucose infusion in healthy older subjects.

YOUR PARTICIPATION IS VOLUNTARY

You are invited to take part in a study conducted by Professor Karen Jones, Dr Julie Stevens, Ms Kristen Macaskill, Dr Hung Pham, Mrs Rachael Tippett, Dr Stijn Soenen, Professor Trygve Hausken, Professor Renuka Visvanathan, Professor Chris Rayner and Professor Michael Horowitz. This is a research project and you do not have to be involved. If you do not wish to participate, your medical care will not be affected in any way. Also you may withdraw from the project at any time after you have commenced.

WHAT IS THE PURPOSE OF THE TRIAL?

Postprandial hypotension is commonly known as a fall in blood pressure, greater than 20mmHg, for a period longer than 30 minutes, following a meal. Postprandial hypotension may lead to fainting and is common in older people and patients with diabetes mellitus. The cause of this fall in blood pressure is poorly understood. Studies have shown that carbohydrates (especially sugar) may cause the fall of blood pressure after a meal. In this study, we are interested in looking at the effects of different sugars, sucralose and glucose, infused directly into your intestine, on changes in blood pressure, blood glucose concentrations, abdominal blood flow and hormone release. There is evidence to suggest that the drop in blood pressure is influenced by the amount and type of sugars that enter the small intestine. This has implications for the treatment of postprandial hypotension.

WHAT WILL YOU HAVE TO DO?

This study involves one screening visit and three test days. At an initial screening visit, prior to entering the study, you will be asked to fill out a consent form for the study and we will ask you about your medical history. Specifically, we will attempt to exclude any stomach disorders, as well as epilepsy, diabetes, heart disease and previous/present allergies. You will also need to inform us of any medication that you are currently taking and how much alcohol you consume. You will also have a

blood sample (10ml) collected for the assessment of liver and kidney function and the normal components of blood.

The study involves three tests, separated by at least 5 days, performed in the Discipline of Medicine, Royal Adelaide Hospital, each of which will take approximately four hours, beginning at about 8.30 am on each day. For each test, you will be required to fast (14 hours for solids and 12 hours for liquids) from the evening before each study.

On the test days, you will be seated initially, while a silicone-rubber tube (approximately 4mm diameter) will be introduced into the stomach via an anaesthetised nostril. You will be asked to lie down, while the tube is allowed to pass into the small bowel (through natural bowel contractions) and its location is monitored using a reference (small, thin plastic tube) that is placed under the skin in your forearm. Two catheters will be inserted into veins in your arm (which may be associated with some minor, temporary, discomfort) for measurement of blood glucose concentrations and hormones. A blood pressure cuff will also be placed around an arm for measurement of heart rate and lying blood pressure. When the tube is correctly positioned, sucralose, glucose or saline will be infused into your small bowel and continue for 60 minutes (0 – 60 minutes). This will be followed by a saline infusion for 60 minutes (60 – 120 minutes). On all three study days, the blood flow in your abdomen will also be measured over a period of 120 minutes using an ultrasound probe, placed on the surface of your skin. This should not cause you any discomfort.

Feelings of hunger and fullness will be evaluated using questionnaires throughout the test days.

At the end of the study, the tube and the catheters will be removed. Your blood pressure and blood sugar level will then continue to be monitored until they return to the level they were when you initially arrived in the department.

At the end of each study day, you will be offered a light lunch. After the meal we will take the last blood sample.

Smoking will be prohibited for 12 hours prior to, and on each study day.

The amount of blood taken during the three tests and blood screen will be approximately 325 mL in total. For comparison, the amount taken in an Australian Red Cross blood donation is between 350ml to 470ml. You should refrain from blood donation for the period of 10 - 12 weeks both prior to and following the trial in line with the Australian Red Cross guidelines.

WHAT PROBLEMS MIGHT OCCUR DURING OR AFTER THE TRIAL?

Placement of the catheter in veins in your arms may be associated with some minor, and temporary discomfort; bruising, and in rare and extreme cases, infection may also occur due to the insertion of the needle. Placement of the silicone-rubber tube into the stomach via a nostril may also be associated with some minor, and temporary discomfort; in some cases placement of the tube has been associated with slight nasal bleeding, nausea and vomiting. Incorrect placement of the tube into the trachea would cause you to gag and the tube will be withdrawn immediately and repositioned. In previous studies, infusion of nutrients into the small bowel has been well tolerated. In the event that you experience any side effect/s during the study, we will discontinue the infusion immediately. You will be monitored until you are not experiencing the side effect any longer and then a taxi will be organised to take you home.

RESEARCH RELATED INJURY

As stated, there is a possibility that insertion of the catheters may result in slight bruising and in rare and extreme cases, infection. You should contact us if the bruising or infection persists or concerns you. In the unlikely event that you are injured as a result of participation in this study, care will be provided through the public hospital system. You will have the right to seek compensation for study-related injury through the legal system and this study is indemnified by SA Health.

IS THERE ANYTHING TO GAIN FROM PARTICIPATING?

This study is designed to provide information about blood glucose concentrations, changes in blood pressure and abdominal blood flow in people at risk of postprandial hypotension and will not benefit you. We estimate you will spend approximately four hours in the hospital on each study day. Payment for your participation is by way of honorarium at the rate of $18 per hour.

CONFIDENTIALITY AND DATA SECURITY

Your participation in this study is strictly confidential and will not be disclosed to other medical or research staff unless you agree. Any information that is published will be done in a way to protect your identity. Data generated from this study will not be used for any other purpose other than for this study. Blood samples will be stored temporarily until the samples can be assayed and any left over material discarded using appropriate methods for biological waste. Hard copies of medical history, blood pressure, heart rate and other cardiovascular parameters, superior mesenteric artery blood flow, appetite scores and blood test results will be stored. All numerical data will be stored on CD/USB. All data will identifiable and will be stored in a secure location for a period of 15 years. Data will only be accessed by members of the research team. In addition to the processes described above, data may

otherwise be discoverable through processes of law or for assessing compliance with research procedures. You have a right to access the information collected and stored by researchers about you. You also have a right to request that any information with which you disagree be corrected. You have a right to ask that any stored specimens be destroyed but should be aware that data which has already been derived from those specimens may not be able to be destroyed.

NAMES AND CONTACT NUMBERS OF INVESTIGATORS

Should you have any questions or concerns before or after the study, please contact either: *Professor Karen Jones (ph: 8222 5394) or Mrs Rachael Tippett (ph: 8222 5039).*

INDEPENDENT CONTACT

The study will be conducted according to the NHMRC National Statement of Ethical Conduct in Human Research. The study has been approved by the Human Research Ethics Committee of the Royal Adelaide Hospital. If you would like to speak to someone not involved in the study about your rights as a participant, or about the conduct of the study, you may also like to contact the Chairman, Research Ethics Committee, Royal Adelaide Hospital on **8222 4139**.

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CONSENT FORM

PROTOCOL NAME: Effects of the artificial sweetener, sucralose, on blood pressure, heart rate and superior mesenteric artery blood flow compared to intraduodenal glucose infusion in healthy older subjects.

INVESTIGATORS: Professor Karen Jones, Dr Julie Stevens, Ms Kristen Macaskill, Dr Hung Pham, Mrs Rachael Tippett, Dr Stijn Soenen, Professor Trygve Hausken, Professor Renuka Visvanathan, Professor Chris Rayner and Professor Michael Horowitz.

1. The nature, purpose and risk of the research project has been explained to me. I understand them and agree to take part.
2. I understand that I will not benefit from taking part in the trial.
3. I understand that, while information gained during the study may be published, I will not be identified and my personal results will remain confidential.
4. I understand that I can withdraw from the study at any stage and that this will not affect my medical care, now or in the future.
5. I understand the statement concerning payment to me for taking part in this study, which is contained in the Information Sheet.
6. I have not donated blood in the last 12 weeks.
7. I have had the opportunity to discuss taking part in this investigation with a family member or friend.
8. I have adhered strictly to the dietary instructions given to me and my consent is given voluntarily.
9. I also have not been smoking for at least 12 hours prior to the study.

Name of Subject: _____

Signed: _____

Dated: _____

I certify that I have explained the study to the patient/volunteer and consider that he/she understands what is involved.

Signed: _____ Date: _____