APPENDIX A: Research Diagnostic Criteria (RDC) for Insomnia Questionnaires

A1. Pittsburgh Sleep Quality Index (PSQI)

A2. Insomnia Severity Index (ISI)
A1. Pittsburgh Sleep Quality Index (PSQI)

Name: _____________________________________ Date: _________________

Instructions
The following relate to your usual sleep habits. Your answers should indicate the most accurate reply for the majority of days and nights in the past 1 month. Please answer all questions.

1. During the past month, when have you usually gone to bed?

   Usual bed time _______________

2. During the past month, how long (in minutes) has it usually taken you to fall asleep each night?

   Number of minutes _______________

3. During the past month, when have you usually gotten up in the morning?

   Usual getting up time _______________

4. During the past month, how many hours of actual sleep did you get at night?
   (this may be different from the number of hours you spend in bed)

   Hours of sleep per night _______________

For each of the following questions, tick the one best response. Please answer all questions.

5. During the past month, how often have you had trouble sleeping because you:
   a. Cannot get to sleep within 30 minutes
      Not during the past month [ ] Less than once a week [ ] Once or twice a week [ ] 3 or more times [ ]
   
   b. Wake up in the middle of the night or early morning
      Not during the past month [ ] Less than once a week [ ] Once or twice a week [ ] 3 or more times [ ]
   
   c. Have to get up to use the bathroom
      Not during the past month [ ] Less than once a week [ ] Once or twice a week [ ] 3 or more times [ ]
   
   d. Cannot breathe comfortably
      Not during the past month [ ] Less than once a week [ ] Once or twice a week [ ] 3 or more times [ ]
   
   e. Cough or snore loudly
      Not during the past month [ ] Less than once a week [ ] Once or twice a week [ ] 3 or more times [ ]
f. Feel too cold  
Not during the past month  
Less than once a week  
Once or twice a week  
3 or more times a week

g. Feel too hot  
Not during the past month  
Less than once a week  
Once or twice a week  
3 or more times a week

h. Had bad dreams  
Not during the past month  
Less than once a week  
Once or twice a week  
3 or more times a week

i. Have pain  
Not during the past month  
Less than once a week  
Once or twice a week  
3 or more times a week

j. Other reason (please describe):
_____________________________________________________________________________
_____________________________________________________________________________

How often during the past month have you had trouble sleeping because of this?

Not during the past month  
Less than once a week  
Once or twice a week  
3 or more times a week

6. During the past month, how would you rate sleep quality overall?  
Very good  
Fairly good  
Fairly bad  
Very bad

7. During the past month, how often have you taken medicine (prescribed or over the counter) to help you sleep?

Not during the past month  
Less than once a week  
Once or twice a week  
3 or more times a week

8. During the past month, how often have you had trouble staying awake while driving, eating meals or engaging in social activities?

Not during the past month  
Less than once a week  
Once or twice a week  
3 or more times a week

9. During the past month, how much of a problem has it been for you to keep up enthusiasm to get things done?  
No problem at all  
Only a very slight problem  
Somewhat of a problem  
A very big problem

**Scoring:**  
Component 1  
Component 2  
Component 3  
Component 4  
Component 5  
Component 6  
Component 7  
**Total PSQI**
A2. Insomnia Severity Index (ISI)

Name: __________________________________ Date: __________________

Please rate the current (i.e., last two weeks) **SEVERITY** of your insomnia problems(s)

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Very</th>
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</thead>
<tbody>
<tr>
<td>Difficulty falling asleep</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty staying asleep</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Problem waking too early</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

How **SATISFIED/dissatisfied** are you with your current sleep pattern?

<table>
<thead>
<tr>
<th></th>
<th>Very Satisfied</th>
<th>Very Dissatisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

To what extend do you consider your sleep problem to **INTERFERE** with your daily functioning (e.g. daytime fatigue, ability to function at work/daily chores, concentrations, memory, mood, etc.)

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Somewhat</th>
<th>Much</th>
<th>Very much</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Interfering</td>
<td>Interfering</td>
<td>Interfering</td>
<td>Interfering</td>
<td></td>
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</tbody>
</table>

How **NOTICEABLE** to others do you think your sleeping problem is in terms of impairing the quality of your life?

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Somewhat</th>
<th>Much</th>
<th>Very much</th>
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<tbody>
<tr>
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<td>Interfering</td>
<td>Interfering</td>
<td>Interfering</td>
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</tr>
</tbody>
</table>

How **WORRIED/distressed** are you about your current sleep problem?

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Somewhat</th>
<th>Much</th>
<th>Very much</th>
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**APPENDIX B:** Individual data for Chapter 4

**Table B1.** Abbreviated study coding sheet

**Figure B1.** Funnel plots for PSG sleep variables of the FNE in healthy sleepers

**Figure B2.** Forest plots of PSG sleep variables of the FNE in healthy sleepers
Table B1. Abbreviated study coding sheet. Items include First Author, Study size (n), Average Age, Sleep Setting, Recording Montage, Sleep Period, and Scoring Method with SOL definition

<table>
<thead>
<tr>
<th>Paper Author</th>
<th>Publication Year</th>
<th>Study Size (n)</th>
<th>Average Age (y)</th>
<th>Sleep Setting</th>
<th>Recording Montage</th>
<th>Sleep Period</th>
<th>Scoring Method, SOL definition</th>
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<tbody>
<tr>
<td>Agnew, 1966</td>
<td></td>
<td>43</td>
<td>21.1</td>
<td>lab</td>
<td>neuro</td>
<td>ad libitum</td>
<td>D&amp;K 1st epoch NREM1</td>
</tr>
<tr>
<td>Mendels, 1966</td>
<td></td>
<td>15</td>
<td>45.6</td>
<td>lab</td>
<td>neuro</td>
<td>fixed</td>
<td>D&amp;K 1st epoch any stage</td>
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<td>Clausen, 1974</td>
<td></td>
<td>9</td>
<td>23.7</td>
<td>lab, hotel like</td>
<td>full PSG</td>
<td>ad libitum</td>
<td>R&amp;K did not report SOL</td>
</tr>
<tr>
<td>Coble, 1974</td>
<td></td>
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<td>20.9</td>
<td>lab</td>
<td>neuro</td>
<td>ad libitum</td>
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<td>Johns, 1978</td>
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<td>19</td>
<td>unknown</td>
<td>lab</td>
<td>full PSG</td>
<td>ad libitum</td>
<td>unknown, 1st epoch NREM2, or spindle</td>
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<tr>
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<td>(young)</td>
<td>15</td>
<td>23.9</td>
<td>lab</td>
<td>neuro</td>
<td>ad libitum</td>
<td>Agnew, 1st epoch NREM1</td>
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<tr>
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<td>(older)</td>
<td>40</td>
<td>53.9</td>
<td>lab</td>
<td>neuro</td>
<td>ad libitum</td>
<td>Agnew, 1st epoch NREM1</td>
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<td>neuro</td>
<td>ad libitum</td>
<td>auto, 1st epoch NREM2</td>
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<td>neuro</td>
<td>unknown</td>
<td>R&amp;K NREM2 uninterrupted 10 min</td>
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<td>neuro</td>
<td>ad libitum</td>
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<td>lab, hospital</td>
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<td>fixed</td>
<td>R&amp;K 1st epoch NREM2</td>
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<tr>
<td>Subject</td>
<td>Age</td>
<td>Duration</td>
<td>Setting</td>
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<td>Chronology</td>
<td>Stage Details</td>
<td>Reference</td>
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<tr>
<td>Woodward, 1996</td>
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<td>44</td>
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<td>fixed</td>
<td>1st epoch any stage</td>
<td>unknown, NREM1 followed by NREM2</td>
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<td>1st epoch NREM2</td>
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<td>40.5</td>
<td>lab, hospital</td>
<td>neuro</td>
<td>fixed</td>
<td>1st epoch any stage, not &gt;1 min wake after</td>
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<td>25.8</td>
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<td>neuro</td>
<td>fixed</td>
<td>1st epoch NREM2</td>
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<td>26.7</td>
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<td>full PSG</td>
<td>ad libitum</td>
<td>1st epoch NREM2</td>
<td>R&amp;K</td>
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<tr>
<td>Reiman, 2002</td>
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<td>39.2</td>
<td>lab</td>
<td>switched</td>
<td>fixed</td>
<td>1st epoch NREM2</td>
<td>R&amp;K</td>
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<tr>
<td>Lorenzo, 2002</td>
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<td>25</td>
<td>lab, hotel like</td>
<td>full PSG</td>
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<td>1st epoch NREM2</td>
<td>R&amp;K</td>
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<td>Curcio, 2003</td>
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<td>23</td>
<td>lab</td>
<td>neuro</td>
<td>ad libitum</td>
<td>1st epoch NREM1</td>
<td>R&amp;K</td>
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<tr>
<td>Heitkemper, 2005</td>
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<td>22.7</td>
<td>lab</td>
<td>switched</td>
<td>ad libitum</td>
<td>1st epoch NREM2</td>
<td>R&amp;K</td>
</tr>
<tr>
<td>Tamaki, 2005</td>
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<td>32</td>
<td>lab</td>
<td>neuro</td>
<td>ad libitum</td>
<td>1st epoch NREM2</td>
<td>R&amp;K</td>
</tr>
<tr>
<td>Feige, 2007</td>
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<td>43.7</td>
<td>lab</td>
<td>switched</td>
<td>unknown</td>
<td>1st epoch NREM2-4, or REM</td>
<td>R&amp;K</td>
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<tr>
<td>Bolla, 2008</td>
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<td>21.7</td>
<td>lab</td>
<td>full PSG</td>
<td>ad libitum</td>
<td>1st epoch any stage</td>
<td>R&amp;K</td>
</tr>
</tbody>
</table>

D&K, Dement & Kleitman 1957; R&K, Rechtschaffen & Kales 1968; neuro: studies using only EEG, EOG, and EMG channels; full PSG: included the utility of respiratory and/or limb movement measures on both nights; switched: consisted of a full PSG on the first night, followed by neuro channels on subsequent nights; ad libitum: habitual sleep timings; fixed: fixed timings
Figure B1. Funnel plots for PSG sleep variables of the FNE in healthy sleepers. Funnel plots (1/SE) using the study mean difference (circles) and overall weighted mean difference (vertical line).
Figure B1 continued. Funnel plots for PSG sleep variables of the FNE in healthy sleepers. Funnel plots (1/SE) using the study mean difference (circles) and overall weighted mean difference (vertical line).
Figure B2. Forest plots of PSG sleep variables of the FNE in healthy sleepers. These forest plots (sorted by publication date) representing individual study mean differences (points), their respective 95% CI (horizontal lines), and the overall weighted mean difference (diamond apex, line) and 95% CI (diamond endpoints).
APPENDIX C: Ethics forms

C1. Ethics form for Chapter 5
APPENDIX C: Ethics forms

C2. Ethics form for Chapter 6
APPENDIX D: Participant information sheets

D1. Participant information sheet for Chapter 5

D2. Participant information sheet for Chapter 6
D1. Participant information sheet for Chapter 5

Testing of foods for their glycemic index and other metabolic variables

Student Research

PARTICIPANT INFORMATION SHEET

We are seeking healthy individuals (males) aged between 18 and 35 years with no known food allergies, to participate in a study measuring the effects of foods, food ingredients and beverages on blood glucose levels and other metabolic responses.

This research is being undertaken by students Keir Smith and Chris Herrera under the supervision of Professor Jennie Brand-Miller and/or Associate Professor Gareth Denyer.

Your blood glucose and biochemical responses will be used to calculate the glycemic index (GI) of the foods and other parameters relevant to health and disease prevention (insulin responses, sleepiness).

For your own safety, it's important that you do not participate if you have any type of food allergy/intolerance (eg to wheat, cow's milk, lactose, eggs, peanuts).

If you decide to participate, you will be required to visit the Human Nutrition Unit's metabolic kitchen room (room 406) on the top floor of the Old Teachers' College [or the Metabolic House at 112 Darlington Rd Darlington] on 6 separate mornings over the next 6 weeks.

ON THE DAY BEFORE EACH TEST SESSION, YOU ARE REQUIRED TO:

- Avoid alcohol
- Avoid over or under-eating
- Avoid over-exercising (ie more physical activity than is usual)
- Ensure you eat an evening meal. It should be a low-fat meal based on carbohydrate-rich foods, such as potatoes, rice, bread, pasta, noodles, couscous, or corn.
- Avoid legumes (lentils, chickpeas, baked beans, etc) for the evening meal
- FAST for at least 8 hours (overnight) before attending your test session. For example, if
your test session is scheduled to begin at 7 am Tuesday morning, you will need to cease eating after 11 pm midnight on Monday night. During this time you are permitted to drink only water.

- NOT eat breakfast on the morning of the test and report to the test rooms in a fasting condition.
- Reschedule your appointment if you don't feel well or need to take new medication.

DURING EACH TEST SESSION…

- You will be required to consume a fixed portion of the test food with a glass of water or the reference food (glucose dissolved in water) within 15 minutes.
- A blood sample about 20 drops will be taken from a finger tip using a small automatic lancet device 5 minutes before you start eating and then at 0, 15, 30, 45, 60, 90 and 120 minutes after eating commenced (8 finger-prick blood samples per session).
- An additional snack (cereal bar/dessert) will be eaten after 120 minutes
- A 5ml blood sample will also be taken at 0, 120, 180 and 240 minutes from a vein in the forearm during the 3 test food sessions.
- You are required to remain seated in the test room and to refrain from any further eating
- You may study, read or chat with the other study participants
- You will need to allow a little more than 2 hours for the 3 reference food sessions, and a little more than 4 hours for the 3 test food sessions.

ARE THERE ANY ADVERSE EFFECTS OR RISKS?

Although your fingers will be pricked with very small lancets, you may experience minor discomfort during blood taking procedures, particularly during your first test session, and your fingertips may feel slightly tender for the rest of the day. With any blood collection procedure there is slight pain in needle insertion and a small risk of bruising. However, many people do not feel any discomfort at all, and the investigators try to make the procedures as quick and as painless as possible.

Blood is a source of infectious disease and during any blood sampling procedure there is a risk of cross infection between study participants and investigators. However, in this study, the risk is minimal because the investigator taking the blood samples will wear clean disposable plastic gloves when taking blood samples and will maintain the blood sampling area in a hygienic condition. Blood samples will be taken from warmed hands and fingertips will be sterilised before and after each blood sample is taken. A new sterile lancet and needle will be used for each blood sample and the lancets and needles cannot be re-used.

All personal information and results arising from the study will be used for research purposes only and will remain strictly confidential. You will not be personally identified in any publications or presentations arising from this research study.
You are free to withdraw from the study at any time without any repercussions.

On some occasions, television filming may take place but you have the option of not participating at those times.

VOLUNTEER PAYMENT

You will receive $30 for each reference test session (2 hour session), and $40 for each test food session (4 hour sessions) to compensate you for your time and travel costs. The payment will be made in full at the completion of the study ie all 6 test sessions within 6 weeks.

While participating in this study, it is important that you maintain your usual diet and lifestyle and do not attempt to gain or lose weight. Please do not schedule any of your test sessions the day after a party or late night social event.

CONTACT INFORMATION

If you would like further information or need to change a test session, please contact Keir Smith on: Ph: 0415136472 or 9351 6276 (test room), email: jsmi8324@usyd.edu.au or Chris Herrera on: Ph: 0433167187; email: cher8126@usyd.edu.au

ANY PERSON WITH CONCERNS OR COMPLAINTS ABOUT THE CONDUCT OF A RESEARCH STUDY AT SYDNEY UNIVERSITY CAN CONTACT

THE HUMAN RESEARCH ETHICS COMMITTEE

PH: 9351 4811 FAX: 9351 6706 EMAIL: Human.Ethics@reschols.usyd.edu.au
Research Title: Efficacy of a high glycemic index meal on sleep onset

PARTICIPANT INFORMATION STATEMENT

You are invited to take part in a research study into:

*The Efficacy of a high glycemic index meal on sleep onset.*

The object is to

1. Test the effectiveness of the high GI meal and
2. Investigate the mechanistic role of GI in facilitating sleep onset via analysis of blood metabolites and hormones.

The study is being conducted by Mr. Christopher Herrera which will form the basis for the degree of Doctor of Philosophy [Exercise and Sport Science] at the University of Sydney under the supervision of Dr. Chin Moi Chow (Senior Lecturer, Discipline of Exercise and Sport Science, and Dr. Helen O’Connor (Lecturer, Discipline of Exercise and Sport Science).

**Background to the study**

**What is the Glycemic Index (GI)?**

The Glycemic Index ranks carbohydrate meals according to their effect on blood glucose levels. Carbohydrates with a high GI enter the blood stream more rapidly than those with a low GI. The carbohydrate content of a meal has previously been reported to alter sleep. We are interested to determine if the GI of the carbohydrate influences sleep patterns.

**What is involved in the study?**

**Recruitment**

For you to be included in this study, you must satisfy certain inclusion and exclusion criteria through an interview. A preliminary interview will be conducted to assess whether you meet these criteria. You will be asked to fill in a sleep log to record your sleep routine over a week period before the study and before each sleepover. A medical history questionnaire will be completed to assess your current health and medication status prior to the commencement of your first sleepover. The Pittsburg Sleep Quality Index questionnaire (PSQI) will be used to evaluate your sleeping habits. You will also complete the Insomnia Severity Index (ISI) questionnaire. The questionnaires will take around 20 minutes to complete (Sleep log: 3-5 minutes, Medical history questionnaire: 5 minutes; the PSQI questionnaire: ~5-10 minutes; ISI: 30seconds).
Sleepovers in the Delta sleep Lab

If you agree to participate in this study, you will be asked to sleepover at the Delta Sleep Research Unit, Cumberland campus of the University of Sydney at Lidcombe, on 5 occasions over a 2-week period. To monitor your sleep, skin sensors are attached to your scalp, forehead, chest and leg. Two comfortable effort bands will also be wrapped around your torso (one under your arm, the other below your navel) to detect your breathing movements.

Prior to sleep you will be given standardized test meals which contain rice and chicken with a known GI. The meals will be consumed three (3) hours prior to the onset of your usual bedtime. You will not know which meal was high or low in GI until the study has been completed. You will have a comfortable warm bed to sleep in. On arising a light breakfast will also be provided. One of the researchers (PhD candidate) will remain in the lab overnight to collect the measurements required.

On completion of the five study nights, you will be reimbursed with a $60 grocery card.

Will I need to change my usual meal or diet pattern in any way?
You will be required to follow a standard meal plan for two-weeks prior to each sleepover. This will be a typical eating pattern consisting of cereal or toast for breakfast, sandwiches and fruit for lunch and snacks of fruit, yoghurt or cereal bars. You will also be asked to abstain from alcohol for 24 hours prior to each sleepover and refrain from consumption of tea, coffee or other caffeine containing beverages six hours before bedtime. If you are a smoker you will be asked to refrain from smoking upon your arrival for the duration of the night. You will be asked to refrain from vigorous exercise at least 48 hours before your study commences.

What other tests or measures will be taken?
To measure certain chemicals in your blood, we will collect blood from you. The samples will be drawn from a cannula (small plastic tube) which will be inserted using sterile procedures by Mr. Chris Herrera, whom is qualified to perform venepuncture. A total of 37mL of blood will be taken before bedtime over a 3h period on each study night.

With any blood collection procedure there is slight pain in needle insertion and a small risk of bruising. You can still enjoy a restful night sleep as blood will be collected after your evening meal and before bedtime.

What benefits will there be for participation?
Successful completion of this study will provide you with information on how well you sleep at night. Your blood test measures will also be available and explained by the researchers. We hope that the results of this study may in the long-term benefit persons with insomnia.

Will my results be confidential?
All aspects of the study, including results, will be strictly confidential and only the researchers will have access to the data. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

What happens if I wish to discontinue the study?
Participation in this study is entirely voluntary: you are not obliged to participate and - if you do participate - you can withdraw at any time. Whatever your decision, it will not affect your relationship with The University of Sydney staff.

When you have read this information, the PhD candidate will discuss it with you further and answer any questions you may have. If you would like to know more at any stage, please feel free to contact Dr. Chin Moi Chow (9351 9332) or Dr. Helen O’Connor (9351 9625). This information sheet is for you to keep.

Any person with concerns or complaints about the conduct of a research study can contact the Senior Ethics Officer, Ethics Administration, University of Sydney on (02) 9351 4811 (Telephone); (02) 9351 6706 (Facsimile) or gbriody@usyd.edu.au (Email).
APPENDIX E: Participant consent forms

E1. Participant consent form Chapter 5

E2. Participant consent form for Chapter 6
PARTICIPANT CONSENT FORM

I ______________________, voluntarily consent to take part in this study to determine the glycemic (blood glucose) and other metabolic responses to 6 test meals, ingredients or beverages.

I confirm that the investigator has explained to me the nature, purpose, procedures and possible risks of the study referenced above. I confirm that I have read and understood the subject information sheet and have freely agreed to follow all of the study's requirements. I realise that this study will involve me physically and mentally in the manner described in the information sheet. I recognise that this research intends to develop a better understanding of the biochemical effects of certain foods, and that I may not personally benefit from the results.

I confirm that the personal details I have given the investigators are true and that I do not suffer from any food allergies or food intolerances and that I find the test foods suitable for consumption. I understand that the foods will be prepared and served in a hygienic manner. I am personally responsible for consuming all foods and drinks in a safe manner and agree to consume all of the test foods at my own risk.

I understand that my personal details and study results will be used for research purposes only and will only be seen by the study investigators. Any publications or presentations associated with this research will not identify me personally. I understand that I am free to withdraw from the study at any time. I understand that I will be paid $30 per reference test session (2 hour session), and $40 per test food session (4 hour session). I will only receive this payment after fully completing the study.

Signature of Subject ________________________ Signature of Witness ________________________ Signature of Investigator ________________________

Date: ______________
PARTICIPANT CONSENT FORM

Efficacy of a high glycemic index meal on sleep onset

I, ...............................................................................................................................................
[name]

have read and understood the information for participants on the above named research study and have discussed it with the researcher/s.

I am aware of the procedures involved in the study, including any inconvenience, risk, discomfort or side effect, and of their implications.

I freely choose to participate in this study and understand that I can withdraw without compromise at any time.

I understand I will be provided an incentive to the amount of 60$AUD only at the completion of the project.

I also understand that the research study is strictly confidential.

I hereby agree to participate in this research study.

Name of Participant:........................................................................................................Date…………………………

Signature of Participant:..............................................................................................................................

Name of Witness: ............................................................................................................................Date…………………

Signature of Witness: ..........................................................................................................................
APPENDIX F: Questionnaires for Chapter 5

Test Session Questionnaire & VAS

Name:

Date:

Time:

What time did you go to bed last night:…………………………………………………………

What time did you fall asleep:……………………………………………………………………

What time did you wake up this morning?........................................................................

1. Rate your level of SATIETY after eating this meal

(place ‘X’ on the line corresponding to how you feel)

-----------------------------------------------------------------------

Still hungry       Completely full

2. Rate your level of PALATABILITY for this meal

-----------------------------------------------------------------------

Poor taste       Good taste

3. Rate your level of SLEEPINESS this morning

-----------------------------------------------------------------------

Alert       Sleepy
APPENDIX G: Questionnaires for Chapter 6

G1. Medical history questionnaire

G2. Pre-sleep questionnaire

G3. Post-sleep questionnaire
I. DEMOGRAPHICS

Today’s Date __________ Code Number __________

(Official use only)

Full Name __________________________________ Occupation ____________________________

DOB _______ Age ______ Height _______ Weight _______ Sex _____ Marital Status __

Address _______________________________________________________________________

Suburb __________________________ State _____________ Postcode ____________

Phone # (Work) ________________ (Home) _________________ (Mobile) ______________

II. MEDICAL HISTORY

Last physical exam (year)? __________

How would you rate your current general health?

ο very poor  ο poor  ο average  ο good  ο very good

Do you have any food allergies? (ο Yes  ο No) If Yes, please describe:

________________________________________________________________________________

Are you currently under any restrictive diet regime? (ο Yes  ο No) If Yes, please describe:

________________________________________________________________________________

Do you currently engage in any vigorous exercise? (ο Yes  ο No) If Yes, please describe:

________________________________________________________________________________

Check if you now have or in the past had the following? (ο Now  ο Past)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Now</th>
<th>Past</th>
<th>Condition</th>
<th>Now</th>
<th>Past</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td></td>
<td></td>
<td>Anemia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td></td>
<td></td>
<td>Peptic Ulcers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stroke</td>
<td></td>
<td></td>
<td>Acid Reflux (Heartburn)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart Disease or CHF</td>
<td></td>
<td></td>
<td>Kidney Disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart Attack</td>
<td></td>
<td></td>
<td>Thyroid Disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angina</td>
<td></td>
<td></td>
<td>Arthritis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emphysema or COPD</td>
<td></td>
<td></td>
<td>Back Pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asthma</td>
<td></td>
<td></td>
<td>Head Trauma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuberculosis</td>
<td></td>
<td></td>
<td>Severe Headaches</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Lung Disease</td>
<td></td>
<td></td>
<td>Epilepsy (Seizures)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasal Allergies</td>
<td></td>
<td></td>
<td>Passing out Spells (Fainting)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runny or Blocked Nose</td>
<td></td>
<td></td>
<td>Depression</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This text is a medical history questionnaire from Delta Sleep Research Unit, Discipline of Exercise and Sport Science, at The University of Sydney, Faculty of Health Sciences, Delta Sleep Research Unit, Discipline of Exercise and Sport Science, East Street (P.O. Box 170), Lidcombe, NSW, Australia 2141. The questionnaire asks for demographic information, medical history, and past or current health conditions.
Hormonal Problem  o Now  o Past  Anxiety Disorder  o Now  o Past
Urological Problem  o Now  o Past  Problems with Alcohol  o Now  o Past
Prostate Disease  o Now  o Past  Problems with Drugs  o Now  o Past

SLEEP SCHEDULE  (Please provide the following information)
Are you a shift worker?  (o Yes  o No) If yes, what kind of shift do you typically work? (please describe)
________________________________________________________________________________
________________________________________________________________________________

What time do you go to bed on WEEKDAYS?_______ AM or PM  WEEKENDS?_______ AM or PM
What time do you get up on WEEKDAYS?_______ AM or PM  WEEKENDS?_______ AM or PM
Do you awaken refreshed during the week?  (o Yes  o No)  On the weekend?  (o Yes  o No)
Do you nap?  (o Yes  o No)  If Yes, how long? _____ minutes  If yes ___ times per week

Do you awaken refreshed from naps?  (o Never  o Rarely  o Frequently  o Always )

Name all medicines (prescribed or otherwise) taken during on a regular or frequent basis:

|------|------|-------------|---------|---------------|------------|--------------|-------------------|

Please list hospitalisations. Please give reasons for each hospitalization and the dates (as best as you can remember).

<table>
<thead>
<tr>
<th>REASON FOR HOSPITALIZATION</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

List the amounts of the following beverages you consume. If not used every day, list in the far right column the average per week

<table>
<thead>
<tr>
<th>Daily</th>
<th>After 6 pm</th>
<th>At Bedtime</th>
<th>Weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffee (Cups) - instant</td>
<td>brewed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>--------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Decaffinated coffee (cups)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tea (glasses or cups) - strong</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbonated Drinks (cans/bottles)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beer, wine, alcohol (cans/drinks)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk drinks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chocolate</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**List the approximate times you consume the following meals**

<table>
<thead>
<tr>
<th>Meal</th>
<th>Weekdays</th>
<th>Weekends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morning Tea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lunch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Afternoon Tea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dinner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supper</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*NA = not applicable

**G2. Pre-sleep questionnaire**

*(Please keep this page and complete the following items at the designated time)*

Subject ID number __________ Circle One: Familiarization Test Meal 1 Test Meal 2

What time did you finish eating your last meal? ___________pm

Please complete the following items at intervals of 1, 2, and 3 hours post meal time (record time below)

**Dinner time:** ___________pm
Rate your level of STATIETY after eating this meal
(Place ‘X’ on the line corresponding to how you feel)

-------------------------------------------------------------------------
Still hungry                     Completely full
-------------------------------------------------------------------------

Rate your level of PALATABILITY for this meal

-------------------------------------------------------------------------
Poor taste                       Good taste
-------------------------------------------------------------------------

Rate your current level of SLEEPINESS

-------------------------------------------------------------------------
Completely Awake                  Very Sleepy
-------------------------------------------------------------------------

<table>
<thead>
<tr>
<th>DURING THE DAY TODAY DID YOU</th>
<th>CHECK ONE</th>
<th>IF YES, PLEASE EXPLAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take any NAPS?</td>
<td>_No _Yes</td>
<td>What time? AM/PM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How long? ______minutes</td>
</tr>
<tr>
<td>Drink Any COFFEE, TEA, or COLA?</td>
<td>_No _Yes</td>
<td>What? ________________</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How much? _____________</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What time? ____________</td>
</tr>
<tr>
<td>Drink any ALCOHOL?</td>
<td>_No _Yes</td>
<td>What? ________________</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How much? _____________</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What time? ____________</td>
</tr>
<tr>
<td>Take any MEDICATION(S)?</td>
<td>_No _Yes</td>
<td>What? ________________</td>
</tr>
<tr>
<td>(other than daily medications you have already listed) Include over the counter drugs.</td>
<td></td>
<td>What time? ____________</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How much? _____________</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What for? ______________</td>
</tr>
<tr>
<td>Do anything PHYSICALLY STRENUOUS?</td>
<td>_No _Yes</td>
<td>What? ________________</td>
</tr>
<tr>
<td>Have anything UNUSUAL HAPPEN?</td>
<td>_No _Yes</td>
<td>What? ________________</td>
</tr>
<tr>
<td></td>
<td></td>
<td>What time? ________AM/PM</td>
</tr>
</tbody>
</table>

Subject ID number ____________ Circle One: Familiarization               Test Meal 1  Test Meal 2

One hour post-meal: ________________pm

Rate your level of STATIETY after eating this meal
(Place ‘X’ on the line corresponding to how you feel)

-------------------------------------------------------------------------
Still hungry                     Completely full
-------------------------------------------------------------------------
Rate your current level of SLEEPINESS

________________________________________________________________________

Completely Awake       Very Sleepy

Two hour post-meal: ________________ pm

Rate your level of STATIETY after eating this meal
(Place ‘X’ on the line corresponding to how you feel)

________________________________________________________________________

Still hungry       Completely full

Rate your current level of SLEEPINESS

________________________________________________________________________

Completely Awake       Very Sleepy

Three hour post-meal: ________________ pm

Rate your level of STATIETY after eating this meal
(Place ‘X’ on the line corresponding to how you feel)

________________________________________________________________________

Still hungry       Completely full

Rate your current level of SLEEPINESS

________________________________________________________________________

Completely Awake       Very Sleepy

G3. Post-sleep questionnaire

Subject ID ________________ Circle One: Familiarization   Test Meal 1   Test Meal 2

1. How long did it take you to fall asleep last night? ________ (Minutes)
2. Did you wake up during the night last night? _____ No _____ Yes
   If yes, how many times did you wake up? _______ Times
   If yes, what woke you up? _____________________________________________________________________
If yes, how long altogether were you awake during the night? 
_______________ Minutes

3. How many hours of sleep did you get last night? _____ Hours

4. How well did you sleep last night compared to at home? (Please check one)
   _____ Much worse _____ Worse _____ About the same _____ Better _____ Much better

Please use the following scale to answer questions 5 through 8.

1=Not at all  2=Somewhat  3=Average  4=Very  5=Extremely

5. How REFRESHING was your sleep last night? ______

6. How RESTLESS was your sleep last night? ______

7. How DIFFICULT was it to fall asleep last night? ______

8. How RESTED do you feel this morning? ______

9. Please describe how sleepy you feel right now ________________________________

10. Please describe how alert you feel right now ________________________________

Please place a mark on the scale at the point which best describes your sleepiness now.

------------------------------------------------------------------------
Completely Awake       Very Sleepy

Overall Comments: ________________________________

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________