

Need For Sleep Study 4: 28 November – 12 December 2017

Frequently Asked Questions

1. I am interested in the study. How do I sign up?

First, you can indicate your interest by emailing us at needforsleepstudy@gmail.com

All interested students, together with their parents, will be invited to a briefing session conducted by the Principal Investigator, Professor Michael Chee, or a Co-Investigator. After the briefing session, if you are still interested in participating in this study, you and your parents will be given a participant information sheet and will be required to sign a consent form.

Following this, a series of screening procedures will be carried out to determine eligibility. These include a questionnaire set as well as 1 week of actigraphy at home to assess habitual sleep-wake timings.

2. What is the cost of the study? Will I be reimbursed for my time?

No sign up fee is required. Rather, you will be compensated for your commitment to this study.

If you complete the entire study, the total amount reimbursed will be \$1000.

The reimbursement will proceed as follows:

Stage 1a: Screening questionnaires - \$5

Stage 1b: Screening actigraphy at home (1-week) and interview - \$30

Stage 2a: Actigraphy at home the week before the experiment

Stage 2b: 15-day experiment - \$34 per day

Stage 3: Bonus for completion - \$455

3. How many participants are you looking for? What kind of participants are you looking for?

Currently, we hope to invite 200 participants to go through the screening stage (i.e. stage 1). A total of 60 students who meet the selection criteria will proceed to stage 2 – the 15-day experiment and 1-week actigraphy.

To avoid bias during the screening procedures, we are unable to disclose the selection criteria at this time. The only information we can disclose for now is the target age range, which is from 15 to 19.

4. What will the accommodation be like?

All participants will be housed in air-conditioned rooms at the Nanyang Girls' Boarding School. Boys and girls will reside in different blocks, and rooms will be twin shared. Room assignment will be decided by the research staff.

5. Will food be provided during the study? Can I bring snacks?

Food will be provided everyday during the study. You will not need to pay for your meals. We will be catering food from the dormitory itself, and a typical meal set consists of a starter, main course, and dessert. The menu will vary from day to day. Each person will receive only 1 meal set per meal.

A sample menu is listed below:

Breakfast	Main: fried Hong Kong Noodle and fried egg white and whole meal bread, served with daily spreads
Lunch	Main: clay pot rice with seasonal vegetables
Dinner	Main: grilled salmon fish or pork chop with seasonal vegetables and white rice

Due to the nature of this study, all food and drink that may influence sleep are strictly prohibited. These include caffeinated drinks (all kinds of tea and coffee, even decaf!), sodas, energy drinks, spicy foods, chocolate or cocoa based food and drink items.

You are not allowed to bring snacks with you. This is because certain snacks may contain ingredients that affect sleep and it is difficult for us to screen all your snacks. However, the research team will provide snacks to those who are feeling peckish.

6. I have food restrictions I must adhere to due to religious reasons or allergies. Will this be a problem?

During the screening procedure, you will be required to report all food restrictions. We will try to accommodate your needs to the best of our ability.

7. Will I get to see my parents at all during the 15-day study?

You will not be able to leave the boarding school during the 15-day study, unless participation is terminated due to unforeseen circumstances. However, there will be ample time everyday for you to call home and text your parents.

8. What happens if I fall sick during the study?

If you feel unwell at any point during the 15-day study, please inform the research staff. Our medical doctor will assess your condition. If you are deemed unfit to continue the study, you will be sent home and reimbursed accordingly (on a pro rata basis).

9. What experimental procedures will I have to undergo during the 15-day study?

The experimental procedures encompass cognitive testing and physiological testing.

For cognitive testing, you will need to perform some cognitive tasks 3-6 times each day. These tasks will assess various aspects of cognition, such as memory and attention, and creativity.

You will also undergo oral glucose tolerance tests (OGTTs) on selected mornings (four mornings). This involves two finger pricks two hours apart from each other and consumption of a glucose drink. The finger pricks will cause minimal discomfort, although some individuals may rarely experience skin irritation, bleeding or infection at the pinprick site. Some individuals may occasionally have difficulty tolerating the glucose drink. The staff will monitor all OGTT procedures. All these procedures will be carried out by trained personnel.

Your sleep quality will be assessed using polysomnography on selected nights. To do so, research staff will be applying electrodes on your scalp, behind your ears, under your chin, and near your eyes. The set-up will take approximately 45-minutes and will enable us to determine how much time you spend in different stages of sleep (light sleep, deep sleep, dream sleep etc). This procedure is non-invasive and should not cause you any discomfort. However, a very small percentage of individuals may have an allergic response to the medical tape we use. If so, we will use another kind of medical tape. This procedure is the gold standard of measuring sleep and has been used worldwide. You do not need to worry about not being able to fall asleep with the electrodes.

Throughout the day, and when you sleep, you will be wearing an actiwatch. Based on changes in light and movement as tracked by the actiwatch, we will be able to obtain a fairly accurate assessment of how much you sleep and how long you are awake for.

In addition, there will be a brain scan before the study. We will give you an appointment date and time to come by our lab at Duke-NUS Medical School (next to Singapore General Hospital). This 30-minute scan will enable us to look at your brain structure as well as get a sense of how different regions in your brain communicate with one another. Your brain images will be shown to you after the scan. You may request for a copy of the scans to take home with you.

10. Other than doing cognitive tests, what will I get to do? Will I have free time to do my own stuff?

Apart from cognitive tests, daytime activities include talks by guest speakers, games, project work. We will plan various forms of 'edutainment' throughout the 15-day period with the aim of enriching your knowledge in a fun and meaningful way.

Free time may arise during meals, post-washing up, or when you are waiting for your group to assemble. At these times, you will be required to stay in the dedicated common areas so that our staff can ensure your safety. You are free to use your phones or other electronic devices. However, at bedtime, all electronic devices will

have to be turned in to the staff for safekeeping. We will return all devices in the morning.

11. How will I benefit from this study?

If you are interested in scientific research, this is an excellent opportunity for you to have a first-hand experience of how research is conducted. Firstly, you will get to learn more about the various techniques used to measure sleep and glucose metabolism. Secondly, through the use of various techniques to objectively measure your sleep, you will be able to accurately monitor how much and how well you have been sleeping. After the study, we will give all participants a sleep report based on their own actigraphy data. Thirdly, as mentioned previously, you may request a copy of your brain scan. Finally, the talks will enable you to learn more about different scientific areas. As you will be in constant contact with professional researchers, you will have the chance to ask them about their research fields and careers in science. This will be very useful if you plan to pursue science in the future.

12. What if I cannot sleep?

When it is lights off time, you should try to fall asleep. However, it is normal to experience difficulty when sleeping in a new environment. It may take some time to get used to the new room, but this should ease after a few days.

If this problem persists, it is important that you do not wake your roommate up by turning on the lights or talking. The next day, you can seek advice from the research staff.

13. I understand that this study compares 2 conditions – nap and no nap. Am I allowed to choose which group I am assigned to?

To preserve experimental integrity, participants will be randomly assigned to each group. Hence, you will not be allowed to choose which group you are allocated to.

If you have any additional questions, please feel free to send your enquiries to needforsleepstudy@gmail.com.