

## STRESS AND HEALTH PARTICIPANT MANUAL

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## ACTIGRAPHY WATCH

Please wear ActiGraph **AT ALL TIMES** for **15 days EXCEPT FOR:**

1. Showering, swimming or other water activities
  - a. You can temporarily remove it, but remember to wear the Actigraph after you're done with the water activity
2. If you **CANNOT** wear the ActiGraph due to **work/academic requirements**, please notify researchers to **RESCHEDULE**.

**Please note that your personalised health report will only be as accurate and comprehensive as the extent to which you complete the daily measures thoroughly.**

### 15-DAY DAILY ONLINE SURVEY VIA METRIC WIRE

Reason: to record your affect, daily hassles, sleep and coping strategies at different time points of the day to capture those momentary stressors.

Survey	Time frame for completion	Duration
Morning sleep	6am – 6pm	< 2-mins
Morning survey	6am -11am	< 2-mins
Afternoon survey	12pm-3pm	< 2-mins
Evening survey	4pm-7pm	< 2-mins
Pre-sleep survey	830pm-430am	< 4-mins
Total time		~ 10 mins

1. Metric Wire app will prompt you with notification reminders to complete these **5 short surveys each day**
2. The questions stay the same each day, so you may find it takes less time to complete after your first day.
3. **If you were unable to complete a survey within the available time window, continue completing the other surveys.**

## SALIVA COLLECTION

Reason: to measure cortisol, a biological indicator of stress

You will be asked to provide 2 saliva samples each day:

- 1) in the morning **when you first wake up** (before brushing your teeth, drinking water, or eating)
- 2) before bed time (at least an hour after major meals)

### Before Sample Collection:

60 minutes before:

1. Please **DO NOT** consume any **major meal; alcohol; caffeine; nicotine (smoking) and medication** (prescription/over-the-counter)
2. Please **DO NOT** consume **fruits and fruit juices**
3. Please **DO NOT** brush your teeth

15 minutes before:

4. Please **DO NOT** chew gum 15 minutes before saliva collection
5. Please **DO NOT** carry out any vigorous physical activity 30 minutes before saliva collection
6. Please **DO NOT** have any dental work performed on you within 24 hours prior to saliva collection
7. Please **DO NOT** have any blood in your mouth before saliva collection
8. Please **DO** rinse your mouth to clear off any food residue **but wait at least 15 minutes after rinsing before saliva collection**

**DO NOT** drink any water in these 15 minutes before saliva collection

### During Sample Collection:

1. Please place the oral swab in your mouth and chew for **1-2 minutes** before removing and placing back into the storage tube
2. Please **DO NOT** throw away any components of the collection kit



If you unintentionally violated any of the above instructions, please **collect your saliva sample** anyway but **log the violations** in your pre-sleep Metricwire survey when prompted.

### After Sample Collection:

1. Please immediately put the sample into the ziplock bag provided, and then store in your freezer
2. If freezing is not possible, refrigerate immediately at 4°C and maintain at this temperature for < 2 hours before freezing at -20°C (temperature of a regular household freezer) or below.

### **Do not collect saliva sample if:**

1. You woke up outside of  $\pm 2$  hours of habitual wake time
2. You slept outside of  $\pm 4$  hours of habitual sleep time

3. You suddenly fell sick and require medication, in which case please **contact the researcher to reschedule** the study.

## APPLYING Z-MACHINE

### Overview

#### Step 1



At least 30 minutes before bed, clean skin and apply sensor pads.

#### Step 2



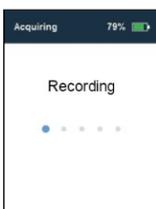
When ready for bed, snap the patient cable wires onto the sensor pads.

#### Step 3



When in bed, insert the patient cable into the Zmachine.

#### Step 4



The Zmachine will automatically record your sleep patterns.

#### Step 5



When leaving bed, unplug the patient cable from the Zmachine.

#### Step 6



When finished, remove sensor pads & clean skin.

#### Step 7

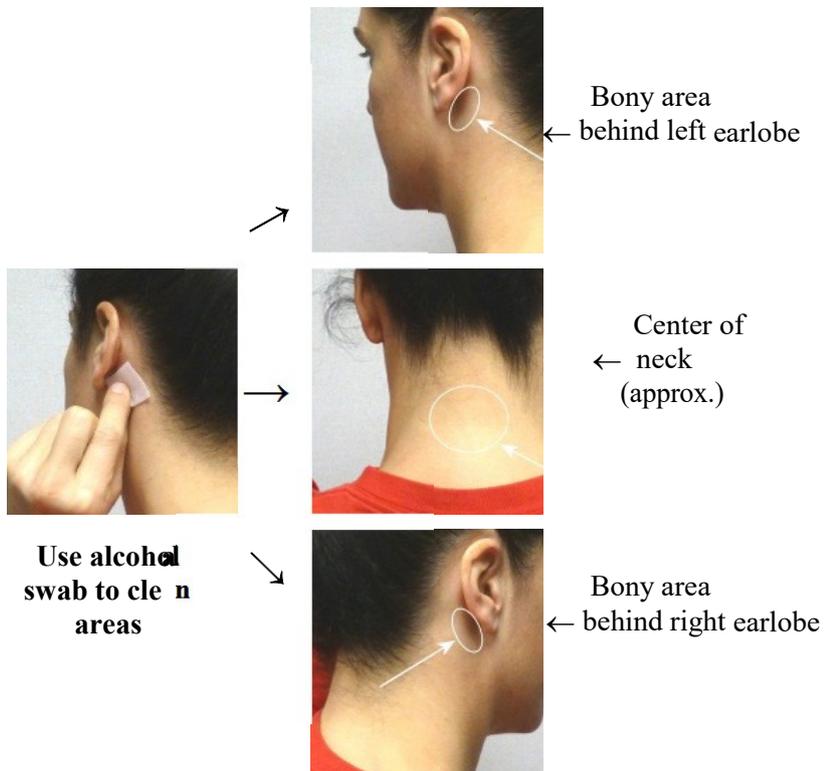


Charge system.

## STEP 1

At least 30 minutes before going to bed, apply the sensor pads as shown:

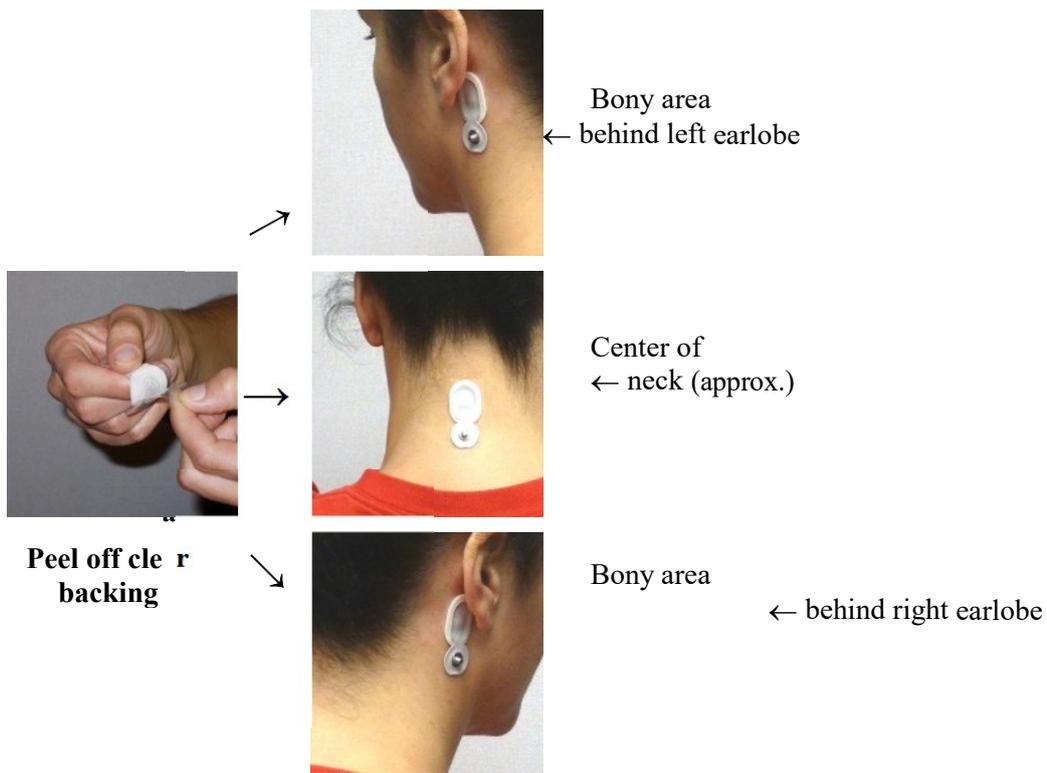
- Using an alcohol swab, clean the three circled areas on your skin. One swab is enough for all three areas.



### Clean each of the circled areas

**Note:** Let skin air dry for about 30 seconds, or pat dry with a tissue, before applying the sensor pads.

2. Apply the sensor pads as shown:



### Place sensor pads

**Hint:** A mirror can be helpful in positioning the sensor pads behind your ears. The location of the neck sensor pad needs only be approximate.

**Hint:** Do not fold your earlobe out of the way when applying the ear sensor pads as this could place the sensor in the fold of your ear which may be uncomfortable.

3. Rub the outer edge of each sensor pad with your finger tip to secure the adhesive. Never press the center portion of the sensor pad.



**YES**



**NO!**

***Note:** If you are not satisfied with the placement of a sensor pad, simply remove, discard, and repeat the steps above using a fresh sensor pad. Never re-use a sensor pad.*

## STEP 2

1. When ready for bed, snap the individual patient cable wires to the sensor pads as shown.

**BLACK wire to the NECK sensor pad  
WHITE wires to the EAR sensor pads**



**CORRECT**

**Note:** The BLACK wire should ONLY be attached to NECK sensor.

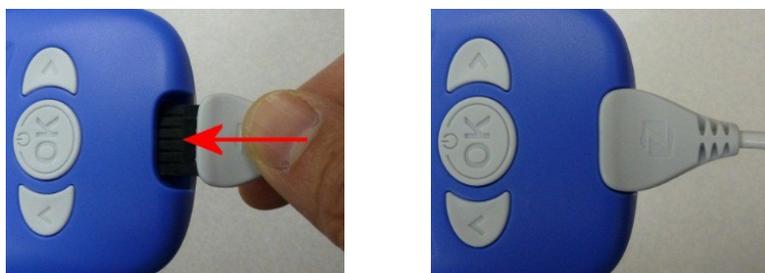
**Note:** Either white wire can connect to either ear sensor.

**Hint:** You can arrange the wires to fall in front or behind you, whichever is more comfortable.

## STEP 3

When you are in bed and ready to attempt sleep (not reading or doing any other activity):

1. Plug the free end of the patient cable into the Zmachine. The Zmachine will turn on automatically.



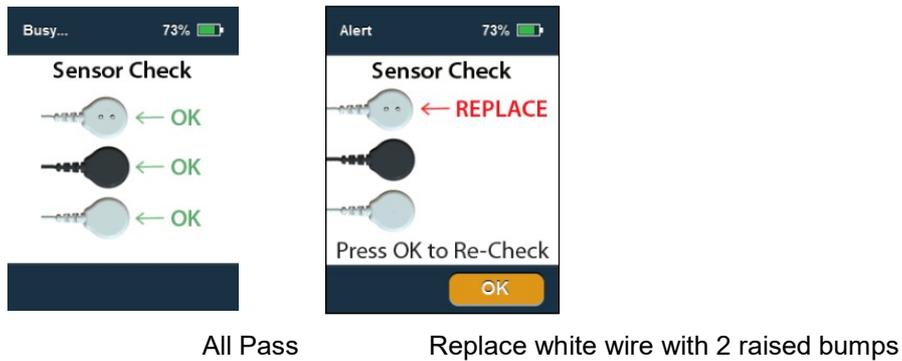
Connecting the Patient cable to the Zmachine

**Hint:** The Zmachine display will automatically dim and then turn off while running. Pressing any button will wake the display for a few seconds. The system continues to run while the display is off.

**Note:** For best results, only connect the patient cable to the Zmachine when you are in bed and ready to try to sleep.

- The Zmachine will automatically check the connection between the sensor pads and your skin.

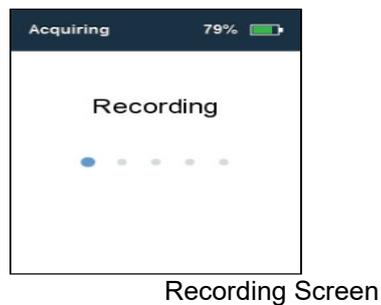
*Note: One of the white sensor wires has two raised bumps on the snap connector which can be felt with your finger tip, and the other is smooth. These bumps are used to distinguish the wires during the sensor check.*



- If a sensor needs to be replaced, and at least 30 minutes has passed since sensor pad application (Step 1), simply remove, discard, and repeat the steps above using a fresh sensor pad. Never re-use a sensor pad.

## STEP 4

When the Zmachine is collecting your sleep information, it will display the *Recording* screen.



## STEP 5

When leaving bed for any reason or when you are no longer trying to sleep:

- Unplug the patient cable from the Zmachine while lifting slightly on the connector.



## Disconnecting the Patient cable from the Zmachine

**Note:** *The Zmachine will automatically stop monitoring and finish processing (this may take several seconds). The system display will automatically dim and then turn off. The Zmachine will shut down completely within two minutes.*

**Hint:** *If planning to return to bed, lay the Zmachine on your pillow as a reminder to re-connect when you return to bed. If you are done sleeping, then proceed to the next steps.*

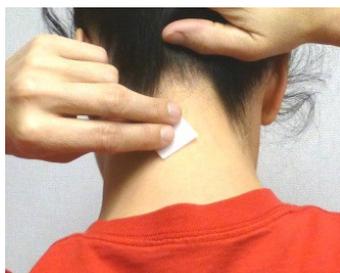
## STEP 6

When you are finished trying to sleep and the patient cable has been disconnected from the Zmachine:

1. Unsnap the patient cable wires from the sensor pads.
2. Discard all used sensor pads (they will not be re-used).
3. Remove any gel and/or adhesive remaining on your skin from the sensor pads using soap and water or an alcohol swab.



Unsnap patient cable wires



Remove sensor pads & clean skin

## STEP 7

The Zmachine has enough battery power to run for one full night and should be charged during the day in preparation for the next night of use.

1. Plug the free end of the charger cable into the Zmachine.
2. Plug the charger into a 120VAC wall outlet. The Zmachine will start and stop charging automatically and can safely remain connected to the charger until ready for use.



## **Z-MACHINE FAQ**

### **Can I get out of bed for a drink, to use the bathroom, etc. when connected to the Zmachine?**

Yes, simply unplug your patient cable from the Zmachine and lay the Zmachine on your pillow. The patient cable can stay connected to your sensor pads when you are out of bed. When you return to bed, simply re- connect to the Zmachine to continue.

### **Can I lie on the patient cable?**

Yes, lying on the patient cable and wires is absolutely fine and will not influence the recording.

### **I feel that my skin is a little irritated when I first remove the sensor pads in the morning. Is this normal?**

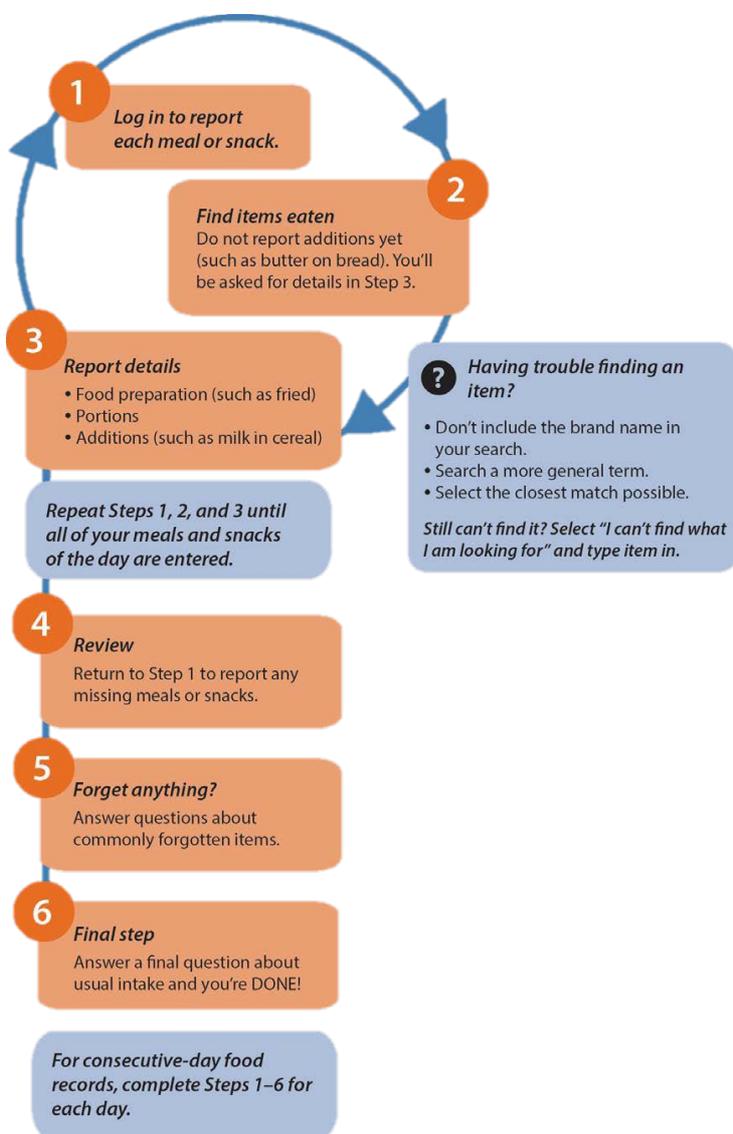
Yes, the sensor pads you are using can cause minor skin irritation or drying for some people. This is normal with daily use and should disappear within about a half hour following removal of the sensor pads. If your skin is dry, you may use a dab of hand lotion or face lotion over the affected areas in the morning. If you have any concerns, discontinue use and contact your healthcare provider for further instructions.

### **Do I need to charge the Zmachine every morning?**

Yes, the Zmachine needs to be re-charged every morning in preparation for the next night of use. To ensure a full charge, the Zmachine can remain connected to the charger all day until ready for use.

## FOOD RECORD

### OVERVIEW

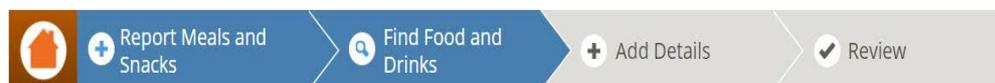


### Detailed steps in completing ASA24



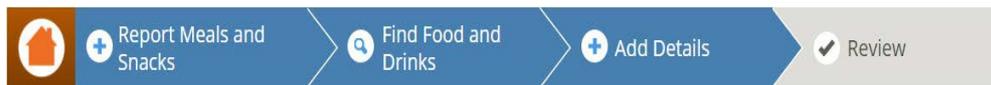
**Step 1:** Report a meal or snack and provide information about it (such as time and location).

- If you only had a drink, choose **Just a drink**.
- If you only had a dietary supplement, choose **Just a supplement**.



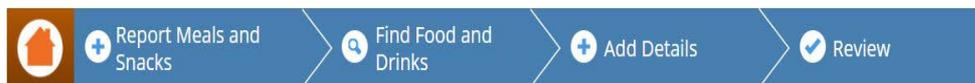
**Step 2:** Search for and select foods, drinks, and dietary supplements you had during the meal

or snack.



**Step 3:** Answer detailed questions about the foods and drinks you had, including how they were prepared, the amount you ate or drank, and anything added (such as butter on potatoes, milk to cereal). For dietary supplements, you will be asked about dosage.

**Repeat Steps 1–3** throughout the day until all your meals and snacks for the day are entered. Check the time gaps between your reported meals and snacks to be sure you did not forget any other meals or snacks. If you did, follow **Step 1** to add the forgotten meal or snack and then **Steps 2 and 3** to add the items you ate or drank.



**Step 4:** After you've reported the last meal for the day you are reporting, review the day to be sure everything is included and that the detailed questions were answered correctly. You can make changes as necessary.

**Step 5:** Answer questions about items that tend to be forgotten (such as water or dietary supplements).

**Step 6:** Answer one final question about whether what you ate and drank for that day was less than, more than, or about usual for you.

**Note:** you can log in to make changes to any day of your food record by selecting **Change Day** on the top right of the page. You can report or make changes up until midnight of the day following your last reporting day. After that, you will not be allowed to log in.

## Food Record FAQ

### How many days do I need to record my food intake?

7 continuous days, starting on the 2nd day of the study (Tuesday) and ending on Monday (11:59pm). You will record what you ate on two weekend days and five weekdays. The researchers will send you a reminder text message the day before you need to start.

### When do I have to record my food intake?

You need to record what you are eating at the time you are eating it. Please do not wait until the end of the day because you may forget the details. This is really important so we can get accurate information.

We understand it is sometimes difficult to report your meals when eating out at a restaurant. You can complete the food record at a more convenient time, although we do strongly encourage you to report your meals as close to the time it is eaten as possible as it can be difficult to remember everything you ate in the past, and it is easy to make mistakes or leave things out. You can also take a photo or note down about your food.

**Do I have to record my snacks?**

Yes, please report all snacks, including lollies, sweets, confectionery, biscuits, chips, etc

**Do I need to eat anything special while I am keeping a record of my food intake?**

No, we want you to eat like you normally would. This helps us get accurate information about what happens usually, and also gives you better quality information in your personalised health report

**How specific should I be when searching for foods, drinks, and dietary supplements?**

If you are too specific when searching for a food, you may not be able to find it. If you cannot find what you are looking for, try a less detailed search term. For example, if you want to report “barbequed chicken sandwich,” try searching for “chicken sandwich.” Many brand names are not included in ASA24. If you can’t find the specific item (such as Domino’s Pizza) use a more general description (such as pizza) and select the closest match.

**What do I do when I eat out?**

You can report immediately or take a picture of your meal and complete it after. We understand it is not always possible to report immediately. We understand it is sometimes difficult to report your meals when eating out at a restaurant. You can complete the food record at a more convenient time, although we do strongly encourage you to report your meals as close to the time it is eaten as possible as it can be difficult to remember everything you ate in the past, and it is easy to make mistakes or leave things out. You can also take a photo or note down about your food.

**How do I enter foods with multiple ingredients?**

When reporting a food that contains multiple items, such as a sandwich, salad, or ice cream sundae, search for “turkey (or ham, roast beef, etc.) sandwich,” “green salad,” or “ice cream sundae.” Later, you will be asked about the items that made up that food. You do not need to report each ingredient separately. For example, if you report a turkey sandwich, you will be asked in **Step 3** to report the turkey, along with other items in your sandwich (such as cheese, lettuce).

**What if I made an item myself? Can I report the ingredients in the recipe?**

ASA24 does not have a way for you to add recipes. Please select the food or drink item that best matches what you had.

What if I want to search for a specific brand name (such as Lay’s Potato Chips)?

You can try to search for a food, drink, or dietary supplement using the brand name. If you do not get the desired results, search using a more general description (such as potato chips vs. Lay’s Potato Chips) and select the closest match. Some foods from restaurants are identified by the restaurant name, but others are not. Try searching using the name of the restaurant. If you do not find what you are looking for, search or use the filter categories to find the food you ate or drank using a general description, like hamburger, soda, taco, or milkshake..

**What if I cannot find an item or even a close match?**

If none of the choices shown in the Results box are close to the item you had, select **I can't find what I'm looking for** at the bottom of the Results box to report your item.

**How can I add foods, drinks, or dietary supplements to a food record if I forgot to add something when I originally entered items on my food record or had to close the food record before I could finish entering all of my items?**

It is best to report your foods, drinks, and supplements as close as possible to the time that you consumed them so that you do not have to try to remember them later.

If you are supposed to complete a food record for several days in a row, and the food record for any of the previous days seems like it may be incomplete, when you log back in to the ASA24 system, you will receive a message at the beginning asking if you want to complete the previous day or continue to the current day. If more than one day appears to have incomplete food records, you will see a list of dates to select from so you can go back to that food record to add more items that you may have forgotten or not had time to enter.

You can also log in on the day following your last reporting day to make changes to your food records. You will automatically see the last day of your food record, but if you want to view a different day, there is a **Change Day** button in the upper right corner of the computer screen that you can use to view a food record from an earlier day (see screen shot below).

**Before In-person task:**

Please ensure that on the day of your scheduled in-person task to do the following:

Please ensure that on the day of your scheduled in-person task to do the following:

1. Arrive on time. We are running sessions one after the other so it is very important that you arrive on time, otherwise you may affect another participant's session. If you are delayed, we will have to reschedule your in-person task.
2. In the **12 hours before** your task, **DO NOT:**
  - a. Consume any caffeinated drinks (e.g., energy drinks, coffee, tea)
  - b. Consume any alcohol or alcohol-containing food
  - c. Consume any medication
  - d. Smoke (consume any nicotine)
3. In the **1 hour before** your task, **DO NOT:**
  - a. Consume any major meal
4. In the **15 minutes before** your task, **DO NOT:**
  - a. Brush your teeth
  - b. Exercise

