**SESSION 1**

**EXPERIMENTER MANUAL & PROTOCOL**

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**Necessary Items:**

**Study computer: “Bocadillo” and bag**

Set up: Turn on, have charger ready/plugged in, be ready to navigate and set up task when time

Make sure all scanner tasks have display set to 2. See Appendix for additional instruction

Thumb Drive

Eprime key

**Study bag**

Pens

Sharpie (fine point)

Session folder

Informed Consent

Incidental Findings Consent

MRI Safety Screening – prefilled

Session 1 Log

Demographics

Daily Stress Inventory

PANAS

STAI-state

PMTS - VAS

Birth Control History

Multidimensional Scale of Perceived Support

Perceived Social Stress

CES-D

STAI-trait

PANAS – time point 2

STAI-state – time point 2

Pre-Water Pain

Pre-Water Stress

Post-Water Pain

Post-Water Stress

DNI Invoice

PANAS – time point 3

STAI-state – time point 3

WTAR

End of Session 1 Questionnaire

Stopwatch

Pitcher

Thermometer

Cloth Towels

Ziploc for participant’s belongings

**Saliva Collection Tools**

8oz water bottle

Gloves

2 eppendorf tubes, labelled (e.g., 100-1a; 100-2a; etc. – this breaks down to subject #- sample # ”a”; also mark line on side at 1mL)

2 collection straws

4 oral sorbettes

4 oral sorbettes collection tubes (labelled with corresponding premade barcode stickers)

**Biopac-Related Items**

6 MR safe electrodes

Cords

**Scanner-Related Items**

MRI bag (contains emergency items such as backup keyboards, sweaters, blanket, etc.)

**INTRODUCTORY SCRIPT**

Thank you for coming in today! As a reminder, in this study we are looking at the possible effects of hormonal contraception (birth control) on how the body responds to stress and the way stress influences learning and memory. In order for us to look at the effects of estradiol on stress, learning and memory, we will be seeing you once during the weeks where your birth control contains hormones, and once during the week where your birth control contains no hormone.

During today’s session you will be asked to complete a stress task or a non-stressful alternative. Our stress task involves holding your right hand in ice-cold water for up to three minutes. This task is a safe and effective way to increase your stress hormone levels. The non-stressful alternative version of this task will be holding your hand in body-temperature water for up to three minutes. What water temperature you receive will be determined randomly, similar to flipping a coin. You will be asked to do this today and at your next visit. Because the water temperature you get is determined randomly, it is possible for you to get the same water temperature today and at your next visit, or get one temperature today and the other temperature at your next visit. For example, you could get the ice cold water today and at your next visit, the body-temperature water on both days, or one day with ice cold water and one day with body-temperature water.

Today we will also be measuring your heart rate for a short time. We will also do this at your next visit. These heart rate measurements are not for medical or clinical purposes, which means we will not be able to interpret your heart rate measurements. Completing the heart rate measurements will involve placing electrodes on your upper torso. The electrodes are safe and do not hurt.

Another new task you will also be asked to complete today is a brain scan. You will complete a second brain scan at your next visit. For the brain scan, or fMRI, you will lay down in a large tube. While laying down in the tube you will complete a number of tasks while looking at a screen and pressing buttons located on small boxes that will be in your hands. While you are completing these tasks, we will be taking pictures of your brain. These pictures will allow us to see what parts of the brain are involved in the different tasks we will be asking you complete. For some of the tasks you will be asked to just relax but not fall asleep, for others you will hear different sounds and be asked to press a button when you hear particular sounds, and for still others will be asked to remember various numbers and press buttons when certain numbers are presented to you on the screen.

We will also ask you to provide a number of saliva samples for us today. The saliva samples you provide will be analyzed for different hormones, including estradiol and cortisol, a stress hormone. For some of these samples you will be asked to collect your saliva into a small tube using a straw. For the others you will be asked to collect your saliva by inserting a cotton cylinder in your mouth that will absorb saliva.

Before we get started today, I next want to review a few questions with you. Once we review those questions, we are going to review a few forms, all of which we have gone over before.

See “questions to review” on session 1 log – ask questions and record answers on session log

**REVIEW OF MRI SAFETY SCREENING**

Pre-fill top portion of the fMRI screening sheet.

Give to participant to complete again and sign/date.

This is the fMRI safety screening questionnaire. We went through this form over the phone, but we have to fill it out on site as well. We have filled out the information at the top from the last time we spoke. Please answer the questions below.

**REVIEW OF INCIDENTAL FINDINGS CONSENT**

The Neuroimaging Center is not a clinical/diagnostic center. Because of this, the Center has no medical doctors who can comment on MRI scans, and therefore we cannot tell if your scan shows or does not show any abnormality. But, because detecting and investigating such potential abnormalities may be relevant to your health, the Center established a partnership with Children’s Hospital Los Angeles Medical Group, Inc., where a qualified medical doctor will review the structural scans that are part of the research scans obtained during your session today. If they detect any image that suggests an abnormality, they will contact you or a physician of your choice, to inform you or your physician about the findings and suggest further evaluation if needed.

Your identity, along with your physician’s identity, will only be disclosed to the reviewing Physician should they need to contact you. However, should an incidental finding be detected that potentially may make you ineligible for brain studies, your name will be kept on a roster maintained confidentially at the Center.

Give participant the incidental findings consent. Make sure to answer all questions.

Please make sure through this form and let me know if you have any questions. Once you have read through it, please fill out and sign the requested information on the last page. Please let me know if you have questions, otherwise please let me know when you are done.

**DE-METAL PARTICIPANT**

Prepare participant for scanner.

Make sure shoes and all metal and electronics (bras with underwire, jewelry, cell phone, bobby pins, hair ties with metal, barrettes, etc.) have been removed from the participant. All personal items should be placed in a Ziploc bag and stored in a locker or kept with research personnel until scan time, depending on whether participant is opposed to leaving their belonging in the control room when we are not in there.

Take participant into control room to use wand and verify that all ferrous metals have in fact been removed from their person. Any screeching sound from the device indicates that the participant still has metallic/electronic devices on them.

**QUESTIONNAIRES, PART 1**

Make sure participant is done with water. Start stopwatch for 10 minutes.

**Note**: see session log for which questionnaires can be moved to the end and which ones must be completed before moving on to the first saliva samples/cognitive tasks.

We are now going to complete some questionnaires. While you work on filling out the first few questionnaires, I am also going to ask you to work on drinking this small bottle of water.

Make sure to check off each item under “questionnaires to complete” on the session1 log

The first questionnaire is a **demographics**, health history, and daily event questionnaire. Please let me know if you have any questions as you go through it, otherwise, just let me know when you are done.

Thank you! This next questionnaire will be asking questions about **stressful events** that may have occurred in the last 24 hours. Please answer the questions and let me know if you have any questions as you go through it, otherwise let me know when you are done.

While they are completing the daily stress inventory, check through their demographics form and make sure each item has been answered.

Great! This next questionnaire will be looking at your **emotional state**. Please use this scale here (indicate which scale) to rate how much you are feeling each of these words right now. Please let me know if you have any questions as you go through it, otherwise let me know when you are done.

While completing the PANAS, make sure all DSI questions have been answered.

This next questionnaire will be examining **personality and mood traits**. For each statement, please use the scale here to indicate how much you feel each statement right now. Please let me know if you have any questions, otherwise let me know when you are done.

While they are completing the STAI – state (right now), check through their PANAS responses form and make sure each item has been answered.

Thank you. This next one will be asking about symptoms related to **PMS** over the last seven days. For symptom listed on the left, please use the scale on the right to indicate how much you have felt that symptom over the last seven days from Not At All to Very Much. You will do this by drawing a small vertical line on the horizontal scale where you feel you fall between Not At All and Very Much. Please let me know if you have any questions as you go through it, otherwise, just let me know when you are done.

While they are completing the PMTS - VAS rating scale, check through their STAI responses form and make sure each item has been answered.

**Remaining questionnaires can be moved to the following places if running low on time: 1) between 2nd PANAS/STAI and restroom break, or 2) between saliva sample 6 and WTAR.**

Super! We will move on to the rest of the questionnaires. This next questionnaire will be asking you questions about your current and past **birth control** **use**. Please make sure to answer all the questions. Please let me know if you have any questions, otherwise please let me know when you are done.

While they are completing the birth control history questionnaire, check through their PMTS-VAS form and make sure each item has been answered.

Thanks! This next questionnaire will be asking questions about **personal relationships**. For each statement please rate much you agree with what is written using the scale to the right of the statement, from 1 or very strongly disagree to 7 very strongly agree. Please let me know if you have any questions as you go through it, otherwise, just let me know when you are done.

While they are completing the multidimensional scale of perceived support, check through their birth control history questionnaire responses form and make sure each item has been answered.

Great! The next questionnaire is asking questions about your **stress levels** over the last week. For each statement listed on the left, please use the scale on the right to rate how often you have felt that way from 0 or never to 4 or very often. Please let me know if you have any questions as you go through it, otherwise, just let me know when you are done.

While they are completing the perceived stress scale, check through their multidimensional scale of perceived support responses form and make sure each item has been answered.

Great! This questionnaire will be assessing your **mood**. These are all statements of ways you may have felt or behaved over the past week. Please use this scale here to indicate to how often you either felt or behaved each of these statements, from 0 meaning rarely or none of the time to 3 meaning most or all of the time. Please let me know if you have any questions as you go through it, otherwise, just let me know when you are done.

While they are completing the CES-D, check through their perceived stress scale responses form and make sure each item has been answered.

Super! This next questionnaire will be examining additional **personality traits**. For each statement, please use the scale here to indicate how often you feel each statement generally. Please let me know if you have any questions, otherwise let me know when you are done.

While they are completing the STAI – trait (generally), check through their CES-D responses form and make sure each item has been answered.

Great! Thank you! That is our last questionnaire for now. We will have you fill out some additional questionnaires as move through today’s session.

When participant is done with STAI – trait (generally), check each page to make sure each item has been answered.

**SALIVA SAMPLE 1A: PASSIVE DROOL**

Make sure **at least 10 minutes has elapsed** since the subject FINISHED the 8oz water bottle.

Make sure you have document the saliva sample label on the session log

We are now going to collect your first saliva sample for today.

Do a demo for the participant. Show them how to hold the tube and straw and the minimum amount of saliva needed.

We are going to give you a tube and a straw like this. One end of the straw is smooth and other end is grated. You will put the grated end of the straw in the tube. The straw does not fit securely in the tube, so you will want to make sure and either hold the tube and straw in two hands, or between two finger like so, to make sure it doesn’t fall. There also is a line on the side of the tube. Please fill the tube up to the line.

We find it is easiest to collect this sample if you let saliva collect at the front of your mouth for one to two minutes before spitting into the straw. Producing the saliva sample may take some time, for this first sample don’t worry about how much time it takes to produce the sample, just make sure to deposit any saliva in your mouth into the straw. Please do not force saliva into your mouth, meaning don’t force saliva from the back of your mouth or throat. Just let it passively collect in your mouth for 1-2 minutes before spitting into the straw. This should happen naturally if you do not swallow. Also, make sure you have what feels like a good amount of saliva in your mouth before depositing it into the straw. If you have too little, it can get stuck in the straw and will make it more difficult to collect in the tube. If you notice this is happening, just securely hold on to the tube and straw like this, and tamp the tube down on the table. I will make sure to let you know when we need to move on.

Hand participant their fresh tube and straw.

Here are your tube and fresh straw. Remember to let saliva passively collect in your mouth before depositing any into the straw.

**Note clock time at start of saliva sample (when you have handed the tube and straw to the participant.**

Collect 1 ml of passive drool using a tube

Before marking the time completed for saliva sample 1 make sure to tamp the sample tube to make sure no air bubbles are in the tube inflating the volume of saliva collected. If after tamping, you see the level is low hand it back to the participant and ask that they continue producing the sample. If after tamping, the level is at our minimum required go ahead and proceed with the rest of the session.

**Note clock time at end of collection. For end time note time after a complete sample has been obtained.**

**ELECTRODE PLACEMENT & BIOPAC SET UP**

We are now going to set the heart monitoring system.

Note that electrode placement for our study will be inverted compared to photo depiction below – 2 superiorly placed electrodes and 1 inferiorly placed electrode.

Aim to place electrodes on bone. The superior electrodes (2) can be placed above clavicle if necessary. Placement of these electrodes should be in line medially with each breast.

Placement of inferior electrode (1) should be placed in line with participant’s left superior electrode. Also should be placed on bone (rib).

Electrodes should be MR safe electrodes from lab. In event electrodes are forgotten or must be replaced, you may use some provided by DNI.



**BASELINE WORKING MEMORY TASKS**

**Digit Span & Digit Ordering**

Make sure “Bocadillo” is set up

Turned on

Logged in

Open ../PATH

Enter Subject ID and Session

We are now going to have you play two computer games. In these games you will see lists of numbers and be asked to repeat them back, either in the order they were presented or in ascending order. You will be given instruction on which version you will be doing before you begin.

Open file, set up task, read through instructions on screen with participant and make sure they understand. **The order of the tasks will alternate between participants, so reorder the below instructions based on what the program is doing**.

You will now complete two difference tasks. In both tasks, you will see numbers on the screen, and respond to them in various ways. We will give you a brief introduction for each task. If at any point you have any questions about any of the tasks, please let me know.

Advance the screen by pressing clicking the left mouse button.

**For Digit Span - forward**

In this task, you will see a series of numbers in each trial, one number at a time. Please remember them. After you see the last number, you will be asked to enter the numbers you saw, in the order you saw them. For example, if you saw 4 2 3 1 you would ender 4 2 3 1.

If you saw the numbers 5 8 9 7, what would you type in?

If the participant answers correctly, advance the screen by pressing SPACE bar. If not, re-explain the instructions and ask them again using a different set of numbers.

Please do your best to type in all the numbers you saw, in the order in which they appeared. When you are done typing the numbers on a given trial, press ENTER. You do not have to type anything other than the numbers (no commas, spaces, etc.)

Do you have any questions before we begin?

Advance the screen by pressing SPACE bar and allow the participant to begin the task.

That was the last trial. Let’s move on to the next task. OR Great! We are done with the number games for today.

If this was the first task then: Advance the screen by pressing SPACE bar.

If this was the last task then: Exit the task by pressing the SPACE bar.

Note clock time started and clock time ended for entire task on session log.

On the session log, circle which of the tasks they completed first

**For Digit Sequencing – ascending order**

In this task, you will see a series of numbers in each trial, one number at a time. Please remember them. After you see the last number, you will be asked to enter the numbers you saw in ASCENDING order. For example, if you saw 4 2 3 1, you would enter 1 2 3 4.

If you saw the numbers 5 8 9 7, what would you type in?

If the participant answers correctly, advance the screen by pressing SPACE bar. If not, re-explain the instructions and ask them again using a different set of numbers.

Please do your best to type in all the numbers you saw in ascending order. When you are done typing the numbers on a given trial, press ENTER. You do not have to type anything other than the numbers (no commas, spaces, etc.)

Do you have any questions before we begin?

Advance the screen by pressing SPACE bar and allow the participant to begin the task.

That was the last trial. Let’s move on to the next task. OR Great! We are done with the number games for today.

If this was the first task then: Advance the screen by pressing SPACE bar.

If this was the last task then: Exit the task by pressing the SPACE bar.

Note clock time started and clock time ended for entire task on session log.

On the session log, circle which of the tasks they completed first

**ODDBALL PRACTICE**

Okay, we are now going to do a practice version of one of the tasks you will be doing in the scanner. During this task where you hear a series of sounds and you will be asked press a button when you hear a high pitch tone. This practice task will allow you hear the tones and learn the difference between them.

Run ../Desktop/ODDBALL\_PRACTICE/LC\_ODDBALL\_ONLY\_PRACTICE (E-Run 2.0 Script File)

Read instructions aloud to subject and press spacebar to advance screens

Have them go through practices and make sure they don’t have questions and understand the task

**INITIAL N-BACK PRACTICE**

Make sure “Bocadillo” is set up

Turned on

Logged in

Open ../PATH

Enter Subject Number, Session Number

Open file, set up task, read through instructions on screen with participant and make sure they understand.

Make sure to note down clock time this is starting in the session log (section “N-BACK WORKING MEMORY PRACTICE”).

You will now complete training for a task you will be doing later on. In this task, you will press the space bar for certain numbers.

Advance the screen by pressing “9”.

We will now train you on a task you will be doing in the scanner. This task consists of two different parts. In both, you will see a series of numbers, one at a time.

In one part, your job is to press the SPACE bar whenever you see the number 1 on the screen. For example, if you saw “5, 6, 3, 6, 1, 7, 9”, you would press the SPACE bar when the 1 is on the screen. This is called the “zero-back”.

In the other part, your job is to press the SPACE bar when the number on the screen is the same as the one two numbers before it. For example, if you saw “5, 6, 3, 6, 1, 7, 9”, you would press the SPACE bar when the second 6 is on the screen. This is called the “two back”.

*Do you have any questions? Great*, let’s practice both of these tasks.

Advance the screen by pressing “9”.

For zero-back blocks, you will respond when the number on the screen is a 1 by pressing SPACE BAR. You will know that the upcoming block is a zero-back block when you see this symbol. *Note that the 1 is circled to indicate that you will press the space bar when the screen shows a 1.*

For two-back blocks, you will respond when the number on the screen is the same as the one two numbers ago by pressing SPACE BAR. You will know that the upcoming block is a two-back block when you see this symbol. *Note that in this symbol, the second 6 is circled to indicate you would press the space bar at this point because the number two numbers ago was also a six.*

*Do you have any questions?*

Advance the screen by pressing “9”.

First, let’s practice the task in which you will respond to the number 1 on the screen. This is called the “zero-back” task. Once the task begins you will see a series of 15 digits, shown one at a time. Please press the SPACE BAR when the digit on the screen is the number 1. When you see a 1, press the SPACE bar. Do not press the SPACE bar when the number on the screen is not a 1.

*Do you have any questions?*

Advance the screen by pressing “9”.

Please indicate whether this is a zero-back or two-back block by pressing the number 0 for zero-back or the number 2 for two-back. Please only make your selection when you are ready to begin as the task will begin immediately.

The participant will either press the 0 or 2. If they correctly press 0, the “zero-back” task will begin immediately. If they incorrectly press 2, the screen will not advance and explain to them why this was incorrect. Have participant run through the practice “zero-back” task.

You saw these numbers: 3, 4, 6, 1, 9, 5, 8, 3, 2, 6, 7, 1, 2, 5, 4. For which numbers did you press the SPACE bar?

If the participant correctly responds that she pressed the SPACE bar when the screen displayed a 1, you may move on by clicking the left mouse button. If she did not, review the instructions again and repeat the practice block by pressing the “R” key.

Do you have any questions about this task?

Advance the screen by pressing the left mouse button.

Next, let’s practice the task in which you respond when the number on the screen is the same as the one two numbers ago. This is the “two-back” task. Once the task begins you will see a series of 15 digits, shown one at a time. Please press the SPACE bar when the digit on the screen is the same as the one two numbers ago. When the number on the screen is the same as the one two numbers ago, press the SPACE bar.

*Do you have any questions?*

Advance the screen by pressing the left mouse key.

Please indicate whether this is a zero-back or two-back block by pressing the number 0 for zero-back or the number 2 for two-back. Please only make your selection when you are ready to begin as the task will begin immediately.

The participant will either press the 0 or 2. If they correctly press 2, the “two-back” task will begin immediately. If they incorrectly press 0, the screen will not advance and explain to them why this was incorrect. Have the participant run through the practice “two-back” task

You saw these numbers: 9, 3, 5, 4, 6, 8, 4, 8, 6, 3, 8, 7, 7, 6, 4. For which numbers did you press the SPACE bar?

If the participant correctly responds that she pressed the SPACE bar when the screen displayed the second 8, you may move on by pressing the left mouse button. If she did not, review the instructions again and repeat the practice block by pressing the “R” key.

Do you have any questions about this task?

Advance the screen by pressing “9”.

You just completed two blocks of the task, with 1 zero-back block and 1 two-back block. I will now have you complete a full practiceversion of this task. In the full practice version of this task you will complete 10 total blocks, with 5 zero-back blocks and 5 two-back blocks. Do you have any questions before I set up the full version of this task?

Answer any remaining questions

Great! Let’s move on.

**FULL N-BACK TRAINING INSTRUCTIONS:**

Make sure “Bocadillo” is set up

Turned on

Logged in

Open ../PATH

Enter Subject Number, Session Number

Open file, set up task, read through instructions on screen with participant and make sure they understand.

You will now complete the zero-back and the two-back tasks you just learned.

As a reminder: you will complete five blocks of each kind of task. We will begin with the zero-back, then do a two-back, then a zero-back, and so on, for ten blocks total. If you have any questions, please let me know now.

­­Advance screen by pressing “9”.

*As a reminder:*

For zero-back blocks, you will respond when the number on the screen is a 1 by pressing SPACE BAR. You will know that the upcoming block is a zero-back block when you see this symbol. *Note that the 1 is circled to indicate that you will press the space bar when the screen shows a 1.*

For two-back blocks, you will respond when the number on the screen is the same as the one two numbers ago by pressing SPACE BAR. You will know that the upcoming block is a two-back block when you see this symbol. *Note that in this symbol, the second 6 is circled to indicate you would press the space bar at this point because the number two numbers ago was also a six.*

*Do you have any questions?*

Advance the screen by pressing “9”.

Does the cue indicate a zero-back or two-back? Please press 0 for zero-back or 2 for two-back.

The participant will either press 0 or 2. If the participant correctly presses 0, the screen will change. If the participant incorrectly presses 2, explain to them why they are incorrect and then move forward.

Does the cue indicate a zero-back or two-back? Please press 0 for zero-back or 2 for two-back.

The participant will either press 0 or 2. If the participant correctly presses 2, the screen will change. If the participant incorrectly presses 0, explain to them why they are incorrect and then move forward.

Great! We will now continue with the main portion of the task. From now on, the zero-back and two-back cues will be shown to you for 2 seconds before the block begins. You do not need to press any buttons when the cue is on the screen. Only press buttons when the appropriate number is on the screen.

You will complete 5 blocks of the zero-back and 5 blocks of the two-back, for 10 blocks total. You will start with the zero-back block, followed by a two-back block, and so on until you complete the 10th block.

For the zero-back, remember to press the SPACE BAR when the number 1 is on the screen. For the two-back, remember to press the SPACE BAR when the number on the screen is the same as two numbers ago. Do you have any questions?

Advance the screen by pressing “9”.

Please press the SPACE BAR when you are ready to begin. The task will begin as soon as you press the SPACE BAR.

Have the participant run through the full training.

That was the last trial. Do you have any questions before we move on? Great.

Exit the task by pressing the SPACE bar.

Note clock time started and clock time ended for entire task on session log.

**QUESTIONNAIRES, PART 2**

We are now going to have you fill out two questionnaires. You did these two questionnaires earlier today. These particular questionnaires relate to ways you are feeling right now, so we are going to have you complete them again.

This first questionnaire will be looking at your **emotional state**. Please use this scale here (indicate which scale) to rate how much you are feeling each of these words right now. Please let me know if you have any questions as you go through it, otherwise let me know when you are done.

Great! Thank you! This next questionnaire will be examining **personality traits**. For each statement, please use the scale here to indicate how much you feel each statement right now. Please let me know if you have any questions, otherwise let me know when you are done.

While they are completing the STAI – state (right now), check through their PANAS responses form and make sure each item as been answered.

Great! Thank you! Let me just check that no statement was missed and then we will move on to monitoring your heart rate.

Check through STAI – state (right now) and make sure each item has been answered.

Check through uncompleted questionnaires, if time to complete any, please do so. However, make sure to keep on eye time and not let the clock pass 20 minutes to scan time before moving on to restroom break.

**RESTROOM BREAK**

Okay, I am now going to have you use the restroom. This is the last time you will be able to use the restroom until after we are done with the scan.

In hesitant, tell them to go anyway as it will be an hour and half before they will be allowed to use the restroom again.

**HR MONITORING**

On Biopac laptop:

Go to account “physiology”

Password on sticky note – if doesn’t work then someone changed it without changing sticky note, find someone for help

Open template

This will open application: Acknowledge 4.1

Click Start Button

Make sure waveform looks acceptable

Click stop button until ready to begin baseline recording at 2 minutes into saliva sample 2

**SALIVA SAMPLE 2 – FIRST ORAL SWAB SAMPLE**

Make sure you have documented the saliva sample label on the session log

We are now going to collect your third saliva sample for today. This sample will be collected a little differently than how we collected samples earlier today.

This is an oral swab. For this saliva sample, and all saliva samples in the scanner we will collect your saliva with one of these swabs. To collect saliva, you will place this swab between your cheek and gums and close your mouth. Make sure that you do not chew on the swab, or otherwise play with the swab while it is in your mouth. The swab will remain in your mouth for 5 minutes. I know this seems like a long time, but this is approximately how long it will remain in your mouth while you are in the scanner.

Hand participant their fresh oral swab.

**Note clock time at start of saliva sample (when the participant has placed the swab in their mouth).**

KEEP SWAB IN PLACE FOR 5 MINUTES.

Place swab in appropriately labeled storage tube.

**Note clock time at end of collection. For end time note time after a complete sample has been obtained.**

Go get ice from chemistry lab ice machines and fill pitcher with water from bathroom sink.

**CPT**

Give the pre-water stress and pain questionnaires to the participant

Before starting the water task, I would like you to fill out two more quick questionnaires. You will fill these out in a fashion similar to the estradiol symptoms questionnaire you completed earlier today.

For the Pre-Water Pain, say

For this one please indicate the amount of pain you feel right now by drawing a vertical line wherever you feel you fall on this scale.

Indicate what you mean by drawing an imaginary line on the scale

For the Pre-Water Stress, say

For this one please indicate the amount of stress you feel right now by drawing a vertical line wherever you feel you fall on this scale

Indicate what you mean by drawing an imaginary line on the scale.

***DO NOT* reveal the water condition to the subject**

Make sure to have paper towels and hand warmers available. Always give participants paper towels. Provide hand warmers only if participant appears to need them (e.g., complains of pain or persisting numbness). Usually participants recover just fine without hand warmers.

Hand immersion:

Move subject so that RIGHT hand can reach water pitcher

**Note water temp and clock time at start of hand immersion**

We are going to do the water task now. For this task, you will be placing your RIGHT hand into this pitcher of water. Make sure that your whole hand, up to wrist, is completely submerged in the water. The goal of this task is to keep your hand immersed as long as you can for up to 3 minutes. Please only remove your hand if you are feeling severe pain and choose to quit. I will let you know how much time has passed in one minute intervals. Also, if you choose to talk during the task, please know that I will not be able to respond until the task is completed, unless you are expressing severe discomfort. Are you ready to begin?

Set pitcher down, while setting down, say:

Great. Please place your hand in the water whenever you are ready to begin.

**Start stopwatch**

Update the participant in 1 minute intervals (i.e., “1 minute has passed”, “2 minutes have passed”).

When Stopwatch hits 3 minutes, say:

Okay, you can remove your hand.

**Hand them paper towels and move pitcher away from subject.**

**Note clock time and stopwatch time for when hand removed. Let timer run until end of session.**

If subject has concerns about redness or numbness in the hand, inform them that it is normal and they should be back to normal in 5-10 minutes

Give the post-water stress and pain questionnaires to the participant

I now have two quick questionnaires for you to fill out. They are very similar as the ones you completed right before the water task.

For the Post-Water Pain, say

For this one please indicate the PEAK AMOUNT of pain you felt while your hand in was in the water by drawing a vertical line wherever you feel you fall on this scale.

Indicate what you mean by drawing an imaginary line on the scale

For the Post-Water Stress, say

For this one please indicate the PEAK AMOUNT of stress you felt while your hand was in the water by drawing a vertical line wherever you feel you fall on this scale

Indicate what you mean by drawing an imaginary line on the scale.

**BREAK DOWN BIOPAC**

**Continue recording HR data for 3 minutes after CPT completed (since hand removed, e.g., if hand remained in water for full 3 minutes, recovery recording lasts until stopwatch says 6:00 minutes, if only lasted 1:30, then recovery lasts until 4:30 on stopwatch).**

Great. We are done with the heart rate recordings. I am going to go ahead and disconnect the cords.

Disconnect cords from electrodes. You do not need to remove the electrodes prior to going into the scanner; they are MR safe.

Save the data file and transfer to the flash drive. Close program and computer.

**PLACE PARTICIPANT IN SCANNER**

Briefly:

Inside MRI Room

Take ear plugs to participant, check they are in correctly

Put new examination paper on the scanner bed

Connect appropriate coil bottom (if applicable)

Put appropriate cushions in the coil

Place napkin on cushions

Grab blanket to prepare for participant

As soon as done with above tasks, take the participant to the scanning room. Give the fMRI screening form and information sheet to the MRI technician.

Check if participant needs glasses and prepare if needed. Get ear buds from wall cabinet near end of bench behind control center desk. Prepare them for participant.

Okay. We are now going to get you ready for the scanner. While in the scanner, you will complete multiple tasks. One of the tasks will be the n-back game you played earlier today on the computer. For another task, you will hear a series of sounds and be asked to press a button when a particular sound is played. For the other tasks, we will be asking you to just sit quietly and relax. During those tasks, please make sure to keep your eyes open and do not fall asleep.

You will be able to hear us in between tasks through a speaker system, during that time we will also be able to hear you. However, during the tasks, the scanner will be very loud and we will not be able to hear each other. We will check on you in between task and also come in the room to provide you with you an oral swab for additional saliva samples during those breaks.

Bring participant into scanner. There should be fresh paper on the bed, and the appropriate coil (32 channel) should be in place.  Help the participant on to the bed and hand them the V14 headphones with new caps, then have them lie back on the bed and put their head in the coil.

Pull the emergency squeeze ball and lay the ball on the participant’s chest, tell them:

This is the emergency squeeze ball. If at any point in the experiment, you feel extremely uncomfortable and you are unable to notify us, squeeze this ball and we will stop the scan to come in and take you out.

Hand them the response button box (IN LEFT HAND) and explain the buttons:

You will use this button box for two tasks while in the scanner. For both tasks you will use only this first button here, which is button #1 (ON LEFT). The first task you will be doing will the n-back task you practiced on the computer earlier. For the second task, you will hear series of the same short sounds you heard earlier and will be asked to press button #1 when you hear the high pitched tone. We will test the sounds before the task begins so you know which tone to press the button for.

Put the foam pieces around their head to make sure everything is tight. Remind them not to cross their legs or arms throughout the experiment. Place the coil in place. Lift the bed up. Tell the participant to close their eyes and keep their eyes closed. Use laser to align the T shape in the appropriate place over the brows and have the center line down the middle. Once aligned, send the bed into the scanner.

**SALIVA SAMPLE 3: ~ 15 MINUTES POST-STRESS SAMPLE**

**Make sure you have documented the saliva sample label on the session log**

**Note clock time and stopwatch time at start of saliva sample before taking swab into the scanner.**

We are now going to collect your third saliva sample for today. This sample will be collected the same way we collected your last sample. Except this time you will be lying down in the scanner.

Please open your RIGHT hand so I can give you your new swab.

Hand participant their fresh oral swab.

Here is your fresh oral swab. Remember, for this sample, you want to place this swab between your cheek and gums and close your mouth. Make sure that you do not chew on the swab, or otherwise play with the swab while it is in your mouth. Make sure to keep the swab in your mouth until we come back in to collect it when this first set of scans is done, or about 5 minutes.

**Exit scanner and close scanner door.**

**SET UP FOR SCAN**

Fill safety screening form, incidental findings, DNI invoice with participant

Assign Scan number

Fill out DNI Log (including sequence info)

Register subject on DNI scanning computer

Last name: MM number

DOB: 1/1/Participant's year of birth

Gender: M/F

Weight (in pounds, refer to safety screening), and height (if it is available)

Study (found inside PI folder)

Bring safety screening, incidental findings, DNI invoice, and copy of study consent to the MRI tech for initials/signature

Make copies of metal screener, incidental findings, and DNI invoice. Give originals to the MRI tech along with a copy of study consent

Connect study laptop to projector, USB/button box connection and sound (if applicable)

**Audio:**

Change bottom box to V14

Turn on all 3 audio systems

Turn volume to 9 o’clock position for bottom system

+20 for top 2 systems

**Eye tracker:**

Click on Eyetrackinet

Upload to com 1

Open Eye Camera

File – new data file – scanner ID for participant – save

Make sure eye is visible and click “auto discrimination”

Press 9 on oddball task – press record on eye tracker – then press continue on scanner computer

**Other:**

Make sure projector is on

**SCAN INSTRUCTION SCOUT AND T2**

Make sure you are in User/[PI]/[Researcher]/32 channel

Open the protocol list

On lower right side of scanner computer see list of icons

Third from bottom is “Program Card”

Click on Program Card

List of scanning protocols will appear

Drag Scout over to box on the left

While Scout is running you can preload all other scans by dragging all other protocols into the box on the left IN THE ORDER THEY WILL BE RUN

**Behavioral tasks – press final 9 then press continue on the scanning computer for 5**

**COLLECT SWAB FOR SALIVA SAMPLE 3**

Put on gloves and grab a swab storage tube.

**Note clock time and stopwatch time as just before entering scanner.**

Enter scanner.

Okay, you can remove the swab now and hand to me with your RIGHT hand.

Place swab in appropriately labeled storage tube.

**Exit scanner and close door.**

**SCAN INSTRUCTION – WM TASK (EPI)**

Make sure “Bocadillo” is set up

Turned on

Logged in

Open ../PATH

Enter Subject Number, Session Number

Make sure you are in User/[PI]/[Researcher]/32 channel

Make sure the n back protocol is in the list of to-be-completed scans in the lower left screen

If not:

On lower right side of scanner computer see list of icons

Third from bottom is “Program Card”

Click on Program Card

List of scanning protocols will appear

Drag n back over to box on the left

Once in box on the left click on the protocol and drag down to duplicate for second n back block

Participant will see screens and proceed as necessary, we must make sure to pay attention to when to advance screens on our end.

When participant presses correct buttons in correct order on button box (i.e., screen shows 1, 2 in blue text), press ENTER to move forward.

Participant will now see one of the following instruction screens depending on whether they are doing the 0-back or 2-back. Read instructions to them as they view screen in scanner.

*As a reminder: You will complete five blocks of each kind of task followed by another short rest and another five blocks of each kind of task. We will begin with the zero-back, then do a two-back, then a zero-back, and so on, for ten blocks total. Do you have any questions?*

***OR***

*As a reminder: You will complete five blocks of each kind of task followed by another short rest and another five blocks of each kind of task. We will begin with the two-back, then do a zero-back, then a two-back, and so on, for ten blocks total. Do you have any questions?*

Advance screen by pressing the SPACE bar.

Participant will then see the following instructions:

*For zero-back blocks, you will respond when the number on the screen is 1 by pressing button 1 on the button box. You will know that the upcoming block is a zero-back block when you see this symbol.*

*For two-back blocks, you will respond when the number on the screen is the same as the one two numbers ago by pressing button 1 on the button box. You will know that the upcoming block is a two-back block when you see this symbol.*

Please press button 1 on the button box when you are ready to move to the next slide.

Then say:

Great. Do you have any questions before we start the scan?

The scanner is going to be loud, so we won’t be able to hear you once the scan starts, but we will check on you during the short break after block number 10 of this scan. Remember that the scanner is taking pictures of your brain so please make sure to stay as still as possible during the scan.

When ready to advance to the trigger screen, press “9”.

Then press “Continue” on the scanning computer

Then wait for the scanner to advance with a “5”.

**NOTE STARTED: STOPWATCH TIME AND CLOCK TIME ON SESSION LOG**

**When first block is completed:**

How are you doing, NAME? We are going to to one more round of that game before your next scan, okay? This time we are going to start with the 0-back OR 2-back (SAY WHICH EVER IS APPROPRIATE). Otherwise the task will be same, you will alternate between 0-back and 2-back for a total of 10 blocks. You will see the same instruction screens as before, so please move through them quickly unless you need to read them again for reference.

Participant will see screens and proceed as necessary, we must make sure to pay attention to when to advance screens on our end.

When participant presses correct buttons in correct order on button box (i.e., screen shows 1, 2, 3 in blue text), press ENTER to move forward.

Participant will now see one of the following instruction screens depending on whether they are doing the 0-back or 2-back.

*As a reminder: You will complete five blocks of each kind of task followed by another a short rest and another five blocks of each kind of task. We will begin with the zero-back, then do a two-back, then a zero-back, and so on, for ten blocks total. Do you have any questions?*

***OR***

*As a reminder: You will complete five blocks of each kind of task followed by another a short rest and another five blocks of each kind of task. We will begin with the two-back, then do a zero-back, then a two-back, and so on, for ten blocks total. Do you have any questions?*

Advance screen by pressing the SPACE bar.

Participant will then see the following instructions:

*For zero-back blocks, you will respond when the number on the screen is 1 by pressing button 1 on the button box. You will know that the upcoming block is a zero-back block when you see this symbol.*

*For two-back blocks, you will respond when the number on the screen is the same as the one two numbers ago by pressing button 1 on the button box. You will know that the upcoming block is a two-back block when you see this symbol.*

Please press button 1 on the button box when you are ready to move to the next slide.

Then say:

Great. Do you have any questions before we start the scan?

Remember that the scanner is going to be loud, so we won’t be able to hear you once the scan starts, but we will check on you once this task is over. Remember that the scanner is taking pictures of your brain so please make sure to stay as still as possible during the scan.

When ready to advance to the trigger screen, press “9”.

Then press “Continue” on the scanning computer

Then wait for the scanner to advance with a “5”.

**NOTE ENDED: STOPWATCH TIME AND CLOCK TIME ON SESSION LOG WHEN 2ND BLOCK COMPLETED.**

**SALIVA SAMPLE 4**

Make sure you have documented the saliva sample label on the session log

How are you doing NAME? We are going to come into the scanner to start another saliva sample.

**Note clock time and stopwatch time at start of saliva sample before taking swab into the scanner.**

Okay, NAME. Please open your RIGHT hand so I can give you your new swab.

Hand participant their fresh oral swab.

Here is your fresh oral swab. Remember, for this sample, you want to place this swab between your cheek and gums and close your mouth. Make sure that you do not chew on the swab, or otherwise play with the swab while it is in your mouth. Make sure to keep the swab in your mouth until we come back in to collect it when this first set of scans is done, or about 7 minutes.

**Exit scanner and close scanner door.**

**SCAN INSTRUCTIONS – RESTING STATE (ASL)**

Make sure “Bocadillo” is set up

Turned on

Logged in

Open ../PATH

Play slideshow from beginning

How are you doing, NAME? We are going to start the next scan. This scan will take approximately 6 minutes. For this scan, you do not need to do anything. Just relax and stay as still as possible, but please make sure you stay awake for the duration of the scan. Please make sure you keep your eyes open the entire time and try to focus on the cross that will appear in the middle of the screen.

Make sure you are in User/[PI]/[Researcher]/32 channel

Make sure the resting state protocol is in the list of to-be-completed scans in the lower left screen

If not:

On lower right side of scanner computer see list of icons

Third from bottom is “Program Card”

Click on Program Card

List of scanning protocols will appear

Drag resting state over to box on the left

When ready to advance to the trigger screen, press “space bar” to advance to black screen with white cross.

Then press “Continue” on the scanning computer

Then wait for the scanner to advance with a “5”.

**COLLECT SWAB FOR SALIVA SAMPLE 4**

Put on gloves and grab a swab storage tube.

**Note clock time and stopwatch time as just before entering scanner.**

Enter scanner.

Okay, you can remove the swab now and hand to me with your RIGHT hand.

Place swab in appropriately labeled storage tube.

**Exit scanner and close door.**

**SETTING UP EYE TRACKER**

INSERT INSTRUCTIONS FOR SETTING UP EYE TRACKER BEHIND BORE

ON EYE TRACKER COMPUTER:

Make sure eye is visible and click “auto discrimination”

Next, press “record” (green arrow, like a play button) on the eye tracking comput

**BLACK/WHITE TASK**

Make sure “Bocadillo” is set up

Turned on

Logged in

Open ../PATH

Enter Subject Number, Session Number

Make sure eye tracker is recording

Advance screen to task by pressing SPACE

**MPRAGE**

How are you doing, NAME? We are going to start the next scan. This scan will take approximately 5 minutes. For this scan, you do not need to do anything. Just relax and stay as still as possible, but please make sure you stay awake for the duration of the scan. Please make sure you keep eyes open the entire time and try to focus on the cross that will appear in the middle of the screen.

Make sure you are in User/[PI]/[Researcher]/32 channel

Make sure the MPRAGE protocol is in the list of to-be-completed scans in the lower left screen

If not:

On lower right side of scanner computer see list of icons

Third from bottom is “Program Card”

Click on Program Card

List of scanning protocols will appear

Drag MPRAGE over to box on the left

The same black screen with white cross from the resting state scan will be up, so there is no need to advance to trigger screen.

Press “Continue” on the scanning computer when you and participant are ready to begin.

Then wait for the scanner to advance with a “5”.

**SALIVA SAMPLE 5**

Make sure you have documented the saliva sample label on the session log

How are you doing NAME? We are going to come into the scanner for another saliva sample.

**Note clock time and stopwatch time at start of saliva sample before taking into the scanner.**

Okay, NAME. Please open your RIGHT hand so I can give you your new swab.

Hand participant their fresh oral swab.

Here is your fresh oral swab. Remember, for this sample, you want to place this swab between your cheek and gums and close your mouth. Make sure that you do not chew on the swab, or otherwise play with the swab while it is in your mouth. Make sure to keep the swab in your mouth until we come back in to collect it when this first set of scans is done, or about 7 minutes.

**Exit scanner and close scanner door.**

**SCAN INSTRUCTION – ODDBALL (EPI)**

Okay, we will now be moving on to the oddball task. This is one the where you will hear different tones.

I am going to play the tones for you now and make sure you can hear them. Run the test tones

Run Tones Task:

../Desktop/Oddball\_Example.

During this task, you will see a gray screen with a fixation cross. You will hear a series of different tones and sounds. Your job is to listen carefully to the different sounds. When you hear the high-pitched tone, push the leftmost button box using your left middle finger. Only push this button for the high-pitched tone. Keep your eyes focused on the screen during this task, but it is okay for you to blink. We will be doing two blocks of this task. Do you have any questions? Before we begin, here is a quick example of the tone types:

This is the high frequency tone” **- play “Oddball”**

This is the low frequency tone” **- play “Standard”**

This is the natural sound” **- play “Natural”**

Alternate between the oddball and standard a few times to make sure they can discriminate the two.

When they have the hang of it, run:

Make sure “Bocadillo” is set up

Turned on

Logged in

Open../PATH

Make sure you are in User/[PI]/[Researcher]/32 channel

Make sure the oddball protocol is in the list of to-be-completed scans in the lower left screen

If not:

On lower right side of scanner computer see list of icons

Third from bottom is “Program Card”

Click on Program Card

List of scanning protocols will appear

Drag oddball over to box on the left

When ready to advance to the trigger screen, press “9”.

Next, press “record” (green arrow, like a play button) on the eye tracking computer.

Then press “Continue” on the scanning computer.

Then wait for the scanner to advance with a “5”.

**COLLECT SWAB FOR SALIVA SAMPLE 5 AND REMOVE PARTICIPANT FROM SCANNER**

Put on gloves and grab a swab storage tube.

**Note clock time and stopwatch time as just before entering scanner.**

Enter scanner.

Okay, you can remove the swab now and hand to me with your RIGHT hand.

Place swab in appropriately labeled storage tube. Quickly set in storage box.

Eject bed form bore. Take squeeze ball and button box from participant. Remove blanket, if using. Remove mirror and head coil. Help participant get up and walk them out of the scanner.

**Exit scanner and close door.**

**WRAP UP CONTROL ROOM**

Close patient on MRI computer

Forms are with MRI tech

Make sure participant has belongings

Close out study laptop, make sure you have all cords and adapters

Set MRI room back to normal (i.e., button boxes, squeeze ball, foam, head coils, GSR equipment)

Throw away ear plugs, napkins, and exam paper from participant

Put on new exam paper, and organize all used items (e.g. coils, earphones, response buttons, mirror and blanket) back into a tidy status

Change back to regular head matrix coil if you are using different coil

Turn off audio system and check whether it is changed back into “Siemens” set-up

Check whether the set-up of response interface box is back to default mode

**Postscan File Transfer**

If not already open, ask MRI tech for access to the transfer server

Highlight scans you wish to send

On top toolbar, click send (arrow pointing up in a circle)

All uncompressed TS, explicit, little order first

All images

Click send

**Remaining items:**

Check whether the set-up of response box is back to “laptop” connection mode

Turn off the power button of eye tracker and close the windows of eye tracker software on the PC

Turn off projector (if last scan of the day)

If you have changed any other set-ups or devices, be sure to change back to default mode

Everyone leaves the room and close the door

**QUESTIONNAIRES, PART 3**

We are now going to have you fill out two questionnaires. You did both questionnaires earlier today. These particular questionnaires relate to ways you are feeling right now, so we are going to have you complete them again.

This first questionnaire will be looking at your **emotional state**. Please use this scale here (indicate which scale) to rate how much you are feeling each of these words right now. Please let me know if you have any questions as you go through it, otherwise let me know when you are done.

Great! Thank you! This next questionnaire will be examining **personality traits**. For each statement, please use the scale here to indicate how much you feel each statement right now. Please let me know if you have any questions, otherwise let me know when you are done.

While they are completing the STAI – state (right now), check through their PANAS responses form and make sure each item has been answered.

Check through STAI – state (right now) and make sure each item has been answered.

**SALIVA SAMPLE 2A (6TH OVERALL)**

Make sure you have documented the saliva sample label on the session log

We are now going to collect your final saliva sample for today! This sample will be collected in the same way your very first sample for today was collected.

Here is a fresh tube and straw. Remember that the straw does not fit securely in the tube, so you will want to make sure and either hold the tube and straw and in two hands, or between two finger like so, to make sure it doesn’t fall. There also is a line on the side of the tube. Please fill the tube up to the line.

Hand participant their fresh tube and straw.

**Note clock time at start of saliva sample (when you have handed the tube and straw to the participant).**

Collect 1 ml of passive drool using a tube

Before marking the time completed for saliva sample 1 make sure to tamp the sample tube to make sure no air bubbles are in the tube inflating the volume of saliva collected. If after tamping, you see the level is low hand it back to the participant and ask that they continue producing the sample. If after tamping, the level is at our minimum required go ahead and proceed with the rest of the session.

**Note clock time at end of collection. For end time note time after a complete sample has been obtained.**

**WRAPPING UP WITH PARTICIPANT**

Thank you so much for coming in today. We hope you enjoyed yourself! I want to go over some final items with you to make sure we are all set up for your final visit with us.

Before we confirm your next and final appointment with us, we would like you to complete two more questionnaires.

IF STILL HAVE REMAINING QUESTIONNAIRES FROM THE BEGINNING OF THE SESSION, DO THEM HERE BEFORE WTAR.

For the first one, I want you to **read the list of words on the computer screen** out loud to me. If you are not sure how to pronounce any of the words, please just do your best. You may get started when you are ready.

Okay, great. This last questionnaire is going to ask you questions about the tasks you completed today.

Give participant the end of session 1 questionnaire.

Please make sure to answer all of the questions. Please let me know if you have questions as you go through it, otherwise just let me know when you are done.

Great! Thank you! I am just going to take a second to check that everything is completed.

Look over questionnaire. Make sure all questions are answered. If not answered, check with participant and have them answer. If they refuse, make note for that question that they declined answer.

Super! We have you in the calendar for your next visit at XX o’clock on DATE. We are going to ask you to follow the same rules before your appointment as you followed for today’s appointment. These rules include no alcohol, caffeine, or exercise for 24 hours before your appointment, no sleep for 3 hours before your appointment, and no food or drink except water for 1 hour before your appointment. Do you have any questions?

Thank you again for coming in today and we are looking forward to seeing you in X weeks!

**AFTER SESSION TO-DO’S:**

Things to do at scanner:

* Return head coil to storage location
* Return mirror to storage location
* Turn off projector
* Return audio equipment to default settings
* Get data transferred to our server (or inform Rico it needs to be if he is not there)

Things to do with data:

* Put saliva samples in the freezer
* Transfer eprime data to flash drive
* Verify all paper data has subject ID, date, and session on each page – whether stapled together or not
* Verify all session notes have been included in the notes section of the session log
* Enter all questionnaire/paper data ASAP

Things to do in Google Drive/Email:

* Add all saliva information to the saliva data log
* Add session completion date to the session information log
* Send any relevant emails to participant

Things to prepare for session 2:

* Make Session 2 folder and put in study bag
* Prep materials for session (e.g., saliva collection materials, paperwork, etc.)

Things that can be done later (within one week):

* Organize behavioral data into appropriate files – see appendix for instructions
* Complete entering all questionnaire/paper data if not completed day of session

**APPENDIX**

**Instructions for setting e-prime display to 2 for scanner tasks:**

Make sure to have e-prime programming key

Open E-Studio version of the task

Navigate: Edit/Experiment

Click on Devices tab

Double click on Display (on the word in the “Name” column, but not the checkbox)

See “Display Index” (second item in new pop-up window)

Make sure corresponding box says “2” – if yes, then

Press “Cancel” (window will close)

Press “Cancel” on remaining screen (window will close)

Close

New window will ask if you want to save changes

Press no

Program will close

If it says “1”, change to “2”

Press “OK” (window will close)

Press “OK” on remaining screen (window will close)

Navigate: File/Save

Navigate: E-Run/Run

**Instructions for transferring DIGIT SPAN e-prime files to excel files:**

Open DSasks\_XX\_X.edat2

Select following columns using the sort column function – organize columns as listed here:

|  |
| --- |
| ExperimentName |
| Subject |
| Session |
| SessionDate |
| SessionTime |
| CogTaskProc |
| Procedure[Block] |
| Trial |
| correctanswer |
| GetDigResponse.ACC |
| GetDigResponse.CRESP |
| GetDigResponse.RESP |
| GetDigResponse.RT |
| GetDigResponse.RTTime |

Export file:

Press the disk icon with the arrow pointing up and to the right

In dialog box, select Excel as the file type

Select OK

Save in ExcelFiles\_ParticipantData

Save as: XXX\_SX\_DigitSpanTasks

Upload file into Google Drive:

Navigate to DIGIT\_DATA

Upload new file to ExcelFiles Folder

**Instructions for transferring INITIAL TRAINING N-BACK e-prime files to excel files:**

Open nback\_initial\_training\_XX\_X.edat2

Select following columns using the sort column function – organize columns as listed here:

|  |
| --- |
| ExperimentName |
| Subject |
| Session |
| SessionDate |
| SessionTime |
| Procedure[Block] |
| Running[Block] |
| Trial |
| presented |
| correctanswer |
| Running[Trial] |
| zerobackDigPresent1.ACC |
| zerobackDigPresent1.CRESP |
| zerobackDigPresent1.RESP |
| zerobackDigPresent1.RT |
| zerobackDigPresent1.RTTime |
| zerobackDigPresent1.OnsetTime |
| zerobackDigPresent1.OnsetToOnsetTime |
| ISI2.ACC |
| ISI2.CRESP |
| ISI2.RESP |
| ISI2.RT |
| ISI2.RTTime |
| ISI2.OnsetTime |
| ISI2.OnsetToOnsetTime |
| zerobackDigPresent2.ACC |
| zerobackDigPresent2.CRESP |
| zerobackDigPresent2.RESP |
| zerobackDigPresent2.RT |
| zerobackDigPresent2.RTTime |
| zerobackDigPresent2.OnsetTime |
| zerobackDigPresent2.OnsetToOnsetTime |
| ISI3.ACC |
| ISI3.CRESP |
| ISI3.RESP |
| ISI3.RT |
| ISI3.RTTime |
| ISI3.OnsetTime |
| ISI3.OnsetToOnsetTime |

Export file:

Press the disk icon with the arrow pointing up and to the right

In dialog box, select Excel as the file type

Select OK

Save in ExcelFiles\_ParticipantData

Save as: XXX\_SX\_NbackInitialTraining

Upload file into Google Drive:

Navigate to NACK\_DATA/ExcelFiles

Create new Subject Folder names XXX

Upload new file to newly created Subject Folder

**Instructions for transferring FULL TRAINING N-BACK e-prime files to excel files:**

Open nback\_FULL\_TRAINING\_XX\_X.edat2

Select following columns using the sort column function – organize columns as listed here:

|  |
| --- |
| ExperimentName |
| Subject |
| Session |
| SessionDate |
| SessionTime |
| nBackBlockList.Sample |
| Procedure[Trial] |
| SubTrial |
| Digit |
| digitOneBack |
| digitTwoBack |
| Presented |
| ITI.OnsetDelay |
| ITI.OnsetTime |
| ITIduration |
| zeroback |
| zerobackDigits |
| zerobackDigPresent.ACC |
| zerobackDigPresent.CRESP |
| zerobackDigPresent.RESP |
| zerobackDigPresent.RT |
| zerobackDigPresent.RTTime |
| zerobackDigPresent.OnsetTime |
| zerobackDigPresent.OnsetToOnsetTime |
| twoback |
| twobackDigits |
| twobackDigPresent.ACC |
| twobackDigPresent.CRESP |
| twobackDigPresent.RESP |
| twobackDigPresent.RT |
| twobackDigPresent.RTTime |
| twobackDigPresent.OnsetTime |
| twobackDigPresent.OnsetToOnsetTime |
| ISI.ACC |
| ISI.CRESP |
| ISI.RESP |
| ISI.RT |
| ISI.RTTime |
| ISI.OnsetTime |
| ISI.OnsetToOnsetTime |
| Response |
| ResponseRT |

Export file:

Press the disk icon with the arrow pointing up and to the right

In dialog box, select Excel as the file type

Select OK

Save in ExcelFiles\_ParticipantData

Save as: XXX\_SX\_NbackFullTraining

Upload file into Google Drive:

Navigate to NACK\_DATA/ExcelFiles/Subject Folder

Upload new file to Subject Folder

**Instructions for transferring SCANNER N-BACK e-prime files to excel files:**

*These instructions apply to both the 0Back\_first and 2Back\_first files – the difference will be the end of the file names. Whichever file was completed first in the scanner will end with RD1 and whichever file was completed second in the scanner will end with RD2.*

Open scanner n-back tasks:

nback\_0back\_First\_SCANNER\_XX\_X.edat2

or

nback\_2back\_First\_SCANNER\_XX\_X.edat2

Select following columns using the sort column function – organize columns as listed here:

|  |
| --- |
| ExperimentName |
| Subject |
| Session |
| SessionDate |
| SessionTime |
| ResponseBoxTest.RTTime |
| StartTimestamp |
| WaitforNine.OnsetTime |
| WaitforNine.RTTime |
| WaitforScanner.RTTime |
| ITI.OnsetDelay |
| ITI.OnsetTime |
| ITIduration |
| nBackBlockList.Sample |
| Procedure[Trial] |
| SubTrial |
| Presented |
| Digit |
| digitOneBack |
| digitTwoBack |
| zeroback |
| zerobackDigits |
| zerobackDigPresent.ACC |
| zerobackDigPresent.CRESP |
| zerobackDigPresent.RESP |
| zerobackDigPresent.RT |
| zerobackDigPresent.RTTime |
| zerobackDigPresent.OnsetDelay |
| zerobackDigPresent.OnsetTime |
| zerobackDigPresent.OnsetToOnsetTime |
| twoback |
| twobackDigits |
| twobackDigPresent.ACC |
| twobackDigPresent.CRESP |
| twobackDigPresent.RESP |
| twobackDigPresent.RT |
| twobackDigPresent.RTTime |
| twobackDigPresent.OnsetDelay |
| twobackDigPresent.OnsetTime |
| twobackDigPresent.OnsetToOnsetTime |
| ISI.ACC |
| ISI.CRESP |
| ISI.RESP |
| ISI.RT |
| ISI.RTTime |
| ISI.OnsetDelay |
| ISI.OnsetTime |
| ISI.OnsetToOnsetTime |
| Response |
| ResponseRT |

Export file:

Press the disk icon with the arrow pointing up and to the right

In dialog box, select Excel as the file type

Select OK

Save in ExcelFiles\_ParticipantData

Save as:

XXX\_SX\_NbackScannerRD1

Or

XXX\_SX\_NbackScannerRD2

*Depending on which file was completed first and second during the scan*

Upload file into Google Drive:

Navigate to NACK\_DATA/ExcelFiles/Subject Folder

Upload new files to Subject Folder