Instructions: "The Effects of Bilateral Stimulation on Amplitude Discrimination Abilities"

The purpose of this study is to assess the effects of lateral inhibition during bilateral stimulation, in which digits on opposite hands receive vibrotactile stimuli at the same time. The goal of the experiments is to determine the difference limen for amplitude discrimination at varying time intervals of bilateral stimulation. This is similar to what we did for class, but instead of using the index and middle fingers on one hand (the contralateral condition), you will use the index fingers on both hands, one index finger on each tip of the brain gauge. Another element of data that will be collected is your response time, i.e. the time it takes for you to respond in determining which amplitude is stronger.

Thank you! We appreciate your help. Please reach out to Dan @ danleon@live.unc.edu for questions.

PLEASE COMPLETE THE FOLLOWING FORM BEFORE BEGINNING TESTING

https://forms.gle/3vTGhNPz9vG8PSvm9

Logging into our Brain Gauge account:

- 1. Click the orange "Pro" button in the upper right-hand corner of the screen.
- 2. Select "Logout" at the bottom right-hand corner of the screen.
- 3. Click on the "already have an account?" option.
- 4. Login to our account with the following information:
 - a. email: fall2020-group15@cmetrics.co
 - b. password: fall2020

Testing:

The battery includes a series of amplitude discrimination tests.

(Fig. 1) In the contralateral condition, the **index and middle fingers** of the dominant hand are used with the Brain Gauge.



(Fig. 2) In the bilateral condition, the **index fingers** on opposite hands are used with the Brain Gauge.



Be seated upright when you complete these tests. Keep the Brain Gauge placed on a level surface.

- 1. All testing should only take about 5 minutes. <u>If done wrong, it will take 20 minutes.</u>
 - a. Subjects (01-15): Deselect all but **Test #1** of the battery
 - b. Subjects (16-30): Deselect all but **Test #2** of the battery
 - c. Subjects (31-45): Deselect all but **Test #3** of the battery
 - d. Subjects (46-61): Deselect all but **Test #4** of the battery
- 2. Even Number Subject IDs (ending in 0, 2, 4, 6, 8):
 - a. Complete your battery of tests in the contralateral condition (Fig. 1).
 - b. Repeat your battery of tests in the bilateral condition (Fig. 2).

Odd Number Subject IDs (ending in 1, 3, 5, 7, 9):

- a. Complete your battery of tests in the bilateral condition (Fig. 2).
- b. Repeat your battery of tests in the contralateral condition (Fig. 1).

Example: Subject 24 will deselect all but test #2 of the battery. First they will complete it in the contralateral condition. Next, they will redo test #2 in the bilateral condition.