EMG Experimental Protocol

1

Have ready-made data collection sheet for the participants to know who has done what and what data we have backed up: make the sheet and initial our names for who did what. Include space for writing the subject’s responses. One page per subject. Show the draft to Dr Chong.

TURNING SYSTEM ON AND SET UP

1

Turn switch on bottom right of the NeuroCom.

a. Turn computer on>Continue- let it calibrate- OK>OK
b. Clinical Module>OK>OK
   i. New pt file
   ii. Last name – cereb EMG study, first name and ID - Initials of first and last name, e.g., RC. Add C for cerebellar subject, e.g., RC-C. If subsequent subject has same initials, add second letter of last name, e.g. RCh, or RCh-C.
   iii. height – in centimeters
   iv. DOB – enter 1/1/year (do not enter subject's date and month)
   v. Operator
   vi. diagnosis
   vii. Continue
   viii. Dynamic Conditions>Assessment>Postural Evoke Response>Continue

c. Place walker inside the NeuroCom

Note: Can enter subjects’ info ahead of time.

INSTRUCTIONS TO SUBJECT

1

Subject sits in chair and listens:

1. You will stand in the system. There will be two parts in the test. One part will be standing with your fingers touching the walker, the other part is the same but without the walker.
2. When you feel the floor move, keep your balance without moving your feet.
3. Hold your head straight ahead at all times.
4. You will be strapped into a harness. We will help you positioned your feet on the platform.
5. Once you are positioned please try not to move your feet.
6. We will not be talking during testing, but be assured that one of us is standing right behind you. If you have to scratch or sneeze please do so.
7. Do not lock your knees.
8. This is your last chance to go use the bathroom before we get started.
9. **Put on the harness**

Applying electrodes on subject

1. A = gastroc, B = ant tib, C = forearm flexor, D = forearm extensor
2. Verify electrode placements on monitor, then click Continue
3. Default>Custom>4>Translate>Backward>Size = Large>Current Label Set = Standard
4. Make sure Audio Feedback and Auto Test Sequencing are unchecked
5. Save Settings
6. **Now let's stand up and get on the system.**
7. **Strap harness onto frame (slack).** Do this before positioning their feet. Tuck the remaining straps away so it doesn't brush them.
8. **Please allow us to move your feet. You are allowed to gently touch the side wall if you need to.** Mark their shoes with tape so in case they move we can easily reposition them
   a. Tape around heel and side of the foot
   b. When done with the subject, throw it away, or use it for the next subject and when we're done
9. **Bend your arm like this with your fingers above the walker.** The UE that has electrodes. Demonstrate – elbow flexed with fingers above walker without touching. **Keep it like this the entire time. Don't touch the walker during the test. Keep your head facing forward and don't look down during the test.**

**TESTING**

Make sure subject is still before you start the test. We will always start with the No-Touch condition

1. Click Start
2. Repeat 6 times for a total of 7 trials.
3. In between trials, wait a few seconds for subject to stabilize before triggering the next trial. Check that subject is not touching the walker.
4. After the 7th trial, click Default>Stimulus = Rotate, Direction = Toes-up, Size = 8 degree, Speed = Fast>Save Settings
5. Check that the subject is standing still, then click Start
6. Repeat 6 times for a total of 7 trials. Check that subject is not touching the walker.
7. After the 7th trial, unstrap the subject and sit them in the chair for 3 minutes
8. **We will rest for a few minutes, then repeat what we did earlier but with your fingers lightly touching the walker handle. Don't squeeze the walker, just light touch.** Demonstrate on subject's arm.

**TOUCH CONDITION**
9. **Set the computer up for the touch condition:** Assessment Menu>Yes>Postural Evoked Response>Continue>Continue>Default>Custom>4>Translate> Backward>Size = Large>Current Label Set = Standard

10. Make sure Audio Feedback and Auto Test Sequencing are **unchecked**

11. Save Settings

12. Check electrodes

13. **Now let’s get back on the system.**

14. **Strap harness onto frame**

15. Position the feet

16. **Touch the walker with your fingers. When you feel the floor move, keep your balance like before and remember not to squeeze the walker, just light touch.** And keep your head facing forward and don’t look down during the test.

17. Make sure subject is still before you start the test

18. Click Start

19. Repeat 6 times for a total of 7 trials.

20. In between trials, wait a few seconds for subject to stabilize before triggering the next trial. Remind subject not to squeeze the walker.

21. After the 7th trial, click Default>Stimulus = Rotate, Direction = Toes-up, Size = 8 degree, Speed = Fast>Save Settings

22. Check that the subject is standing still, then click Start

23. Repeat 6 times for a total of 7 trials. Remind subject not to squeeze the walker.

24. After the 7th trial, unstrap the subject and sit them in the chair.
This is the informed consent, we’re interested in better understanding how people
This study is voluntary and you do not have to participate if you don’t want to, if you don’t participate it won’t affect your grade in any class.
Every page needs to be initialed at the bottom right.
There is a risk of falling so we will have you strapped into a safety harness but Dr. Chong’s lab has a 100% no fall rate.
If you get hurt and have to get medical attention, GRU will not pay.
You may not directly benefit from the study, this is for our research study.
We may take sample photographs of some people to explain to people the procedure of our experiment but if we use your picture your face will be blocked out.
The personal information and data we gather from you will be for our use only and will be kept in locked office or cabinet.
Let them know they can discuss the research study with any of us or Dr. Chong before, during, or after the study.
Print and sign, email, date and TIME
Ask subjects to indicate their height and DOB on the top right of first page.
Collect ICD back, make sure every page (except last page) is initialed.
SUBJECT EXPERIMENT SHEET

a. Each subject has their own sheet
b. Include the following info: ID, date and time of test, space for notes or remarks:
   (history of ankle sprain, heavy lunch, sleepy), person responsible for the following: spotter, computer operator, and housekeeping

TURNING OFF THE SYSTEM

a. Do not shut off system like you do with your own computer
b. Instead, press Exit to Desktop - then double click Turn Off System>Yes
   i. DO NOT TURN IT OFF ANY OTHER WAY!!!!!!!!!
   ii. Wait until computer shuts down, then turn off switch at bottom right
   iii. Surround shivers – this is normal.
   iv. Clean up the lab -- remove tapes on system, chairs back in place.
   v. Leave lab lights On.

Check lab door and make sure it is locked