NexusBMI at home protocol:

**Day 1:**

**Introduction (10-15 min)**

* Consent forms
* Explain goal of trial and answer any questions

**Setup**

* Setup camcorder
* Daily status assessment
* Food / exercise / medication information

**Optimizing bandwidth (30 min)**

* Setup camcorder
* Using contact suggestions from Nicki, record Movement Data with Time Domain streaming on (422 Hz, M1 channel)
* Plot spectrogram of M1 data
* Narrow in on relevant Beta band (desynch correlated with move onset)
  + Try higher beta if feasible
* Decide power channel CF and BW settings of M1 and STN channels
  + Make sure stim BW is narrow enough not to be saturated by stim
* Repeat movement task (2 min) and ensure power channels shows sufficient modulation
* If not, adjust gains (of STN channel especially)

**Pre-BMI (5-10 min)**

* Once set, take baseline recording with time domain on (2 min)
* Take movement recoding (if anything has changed from the last move recording, 2 min)
* Fit decoder

**BMI (~1 hour)**

* Do BMI with finger tapping
  + Adjust BMI assist / LPF as needed

**Conclude**

* Daily assessment
* Remove camcorder
* Upload data to box.net
* Setup logistics for next few days
* Ask if good place to store equipment

**Days 2 – 10:**

**Setup**

* Setup camcorder
* Mood/motivation assessment
* Food / exercise / medication information

**Pre-BMI (5-10 min)**

* Once set, take baseline recording with time domain on (2 min)
* Take movement recording with time domain on
* Fit new decoder

**BMI (~45 min)**

* Do BMI with finger tapping
  + Adjust BMI assist / LPF as needed

**Conclude**

* Mood / motivation assessment
* Remove camcorder
* Upload data to box.net
* Setup logistics for next few days

**Daily Assessment Worksheet: Date: \_\_\_/\_\_\_/2017**

**Time: \_\_\_ AM / PM**

**Sad: \_\_\_\_ / 100**

Not at all A little Medium Quite Extremely

0 10 20 30 40 50 60 70 80 90 100

**Happy: \_\_\_\_ / 100**

Not at all A little Medium Quite Extremely

0 10 20 30 40 50 60 70 80 90 100

**Anxious: \_\_\_ / 100**

Not at all A little Medium Quite Extremely

0 10 20 30 40 50 60 70 80 90 100

**Motivated: \_\_\_ / 100**

Not at all A little Medium Quite Extremely

0 10 20 30 40 50 60 70 80 90 100

Any comments about mood or motivation (optional):

**Diet, Exercise, Medication Worksheet: Date: \_\_\_/\_\_\_/2017**

**Time: \_\_\_ AM / PM**

**Diet Log:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Meal** | **Time** | **Description** | **Notes** |
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**Exercise Log:**

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| --- | --- | --- | --- |
| **Activity** | **Time** | **Duration** | **Notes** |
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**Medication Log:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Medication** | **Dose** | **Time** | **Notes** |
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|  |  |  |  |

**Recording Sheet: Date: \_\_\_/\_\_\_/2017, Time: \_\_\_ AM / PM**

**Recording Setup:**

Channel 1: TD, Gain \_\_\_\_, Fs \_\_\_\_

Channel 2: Pxx, Gain \_\_\_\_, Center Freq. \_\_\_\_ Hz , BW +/- \_\_\_\_\_ Hz

Channel 3: TD, Gain \_\_\_\_, Fs \_\_\_\_

Channel 4: Pxx, Gain \_\_\_\_, Center Freq. \_\_\_\_ Hz , BW +/- \_\_\_\_\_ Hz

**Stim Setup:**

Case -- E0 – E1 – E2 – E3 , \_\_\_ V, \_\_\_\_ Amps, \_\_\_\_ PW, \_\_\_\_ Hz

Case -- E8 – E9 – E10 – E11 , \_\_\_ V, \_\_\_\_ Amps, \_\_\_\_ PW, \_\_\_\_ Hz

**Task Setup:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **BLOCK** | **Task Name** | **Pxx or T.D** | **Decoder Name** | **Length (mins)** | **Comments** |
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