# Hyperate4Health Protocols
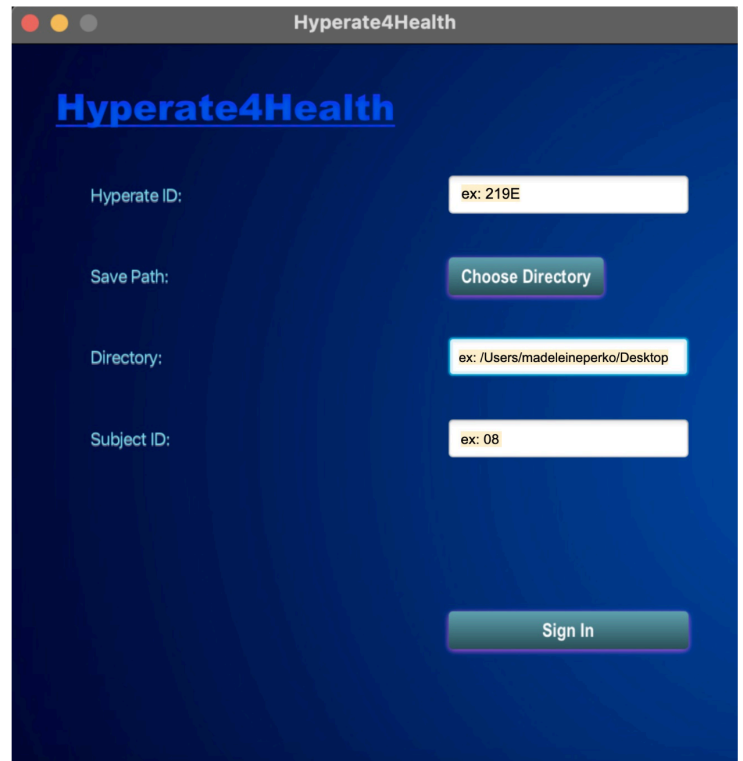
1. Download [HypeRate4Health](#) onto your computer

2. Open App

3. Enter **HypeRate ID**
   ex: 219E  (given by the participant)

4. Enter **Subject ID**
   ex: 08 (for techs08)

5. Enter **path** (i.e. where you want the .csv file to be saved on your computer)
   ex: /Users/madeleineperko/Desktop

6. Click **"Sign In"**

7. To start recording the session, click **"Start"**

8. To stop recording the session, click **"Quit"** → *this will SAVE the session to the path you designated*

9. Close Hyperate4Health application

10. Find the saved file, and rename it **"hr_sub_xx_dxx"**
    ex: hr_sub_08_d01.csv
    (for techs08, intervention 01)
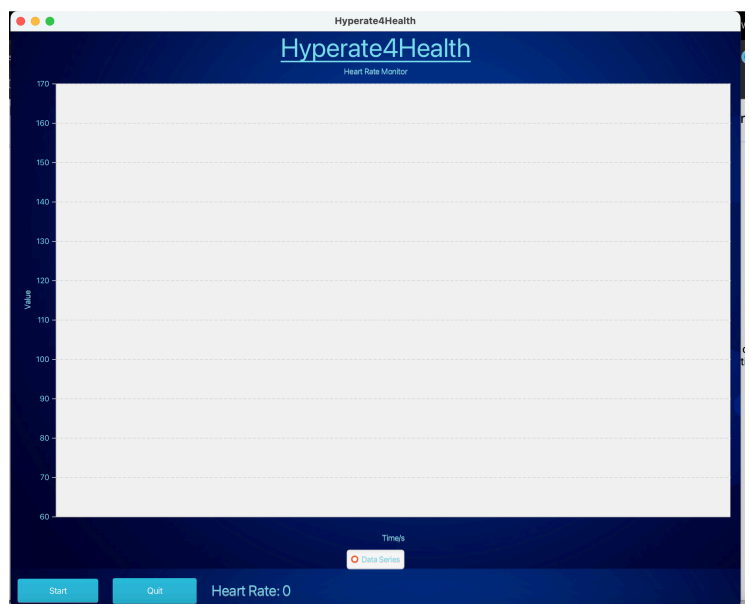
11. **Upload** the file to: CNELabFiles/TECHS/intervention_hr_files/techsXX in OneDrive

   NOTE: Participants do NOT need to share their screen. You can **see their HR live** using the app or on the [website](#) using the participants **Subject ID**
   
   ex: [https://app.hyperate.io/**219E**](https://app.hyperate.io/219E)

# REDCap Protocols

## Start of the Session:

**Date of Intervention (MM/DD/YYYY) =** Date that intervention occurs on.

      **Example:** If the intervention occurred on February 3nd, 2024, enter <u>02/03/2024</u>

**24-Hour Start Time of HR Monitoring (HH:MM) =** Time of day when intervention starts.
      <u>Do NOT enter AM or PM; use 24-hour time.</u>

      **Example:** if the intervention started at 3:30, enter: <u>15:30</u>

| | |
|---|---|
| **Safety** | ☑ Connect to HR monitor<br>☑ Check for objects in the way<br>☑ check for people in the way<br>☑ ask if anyone is in the home<br>☑ confirm emergency contact<br>☑ confirm location is correct<br>☑ Instruct participants that they must announce to the study staff if they are going to leave the screen |
| **Date of Intervention** | 02/03/2024 |
| **24-Hour Start Time of HR Monitoring (HH:MM)** | 15:30 |

## Data Collection
      Record: (1) Heart Rate, (2) BORG, (3) Symptoms, and (4) CIF Symptom Checklist Score for each 5-Minutes Check-In.

## 5 Minute Check-In's = Record Data (^listed above)
- Baseline 0:00
- 5:00, 10:00, 15:00, 20:00, 25:00, 30:00

## Symptoms, CIF Symptom Checklist Score and Symptom Threshold

- **Do NOT leave a symptom blank**. Select a bubble for each symptom listed (i.e if participant does not report a symptom, still denote that symptom with a bubble → "0")

- **CIF Symptom Checklist Score** = the SUM of the symptoms reported at the corresponding 5-minute interval check-in
    - **5-min check-in at 0:00** → this score serves as a **baseline** for the participants symptom status prior to the intervention

    - **Subsequent check-ins** determine whether the intensity of the intervention needs to be scaled back. This determination is made if the participant reaches their symptom threshold (i.e. baseline CIF score + 3 = **symptom threshold**)

    - If a participant reaches their symptom threshold, ALERT the intervention leader so intensity reduction protocol can be initiated

| Baseline Heart Rate | 91 |
| Baseline Heart Rate | 91 |

| % of HR max | | View equation |

| Baseline Blood Pressure | |

**BASELINE BORG**
- ● 6 no exertion
- ○ 7
- ○ 8
- ○ 9
- ○ 10
- ○ 11
- ○ 12
- ○ 13
- ○ 14
- ○ 15
- ○ 16
- ○ 17
- ○ 18
- ○ 19
- ○ 20 Maximal Exertion

reset

**Baseline Symptoms**

| | 0 none | 1 | 2 | 3 | 4 | 5 | 6 Severe |
|---|---|---|---|---|---|---|---|
| Headache | ● | ○ | ○ | ○ | ○ | ○ | ○ |
| | | | | | | | reset |
| Neck pain | ○ | ● | ○ | ○ | ○ | ○ | ○ |
| | | | | | | | reset |
| Dizziness or Vomiting | ○ | ○ | ● | ○ | ○ | ○ | ○ |
| | | | | | | | reset |

| CIF Symptom Checklist Score | 3 |

### Symptom Substitute

If a participant reports a symptom that is *not a listed option*, choose a symptom on the RedCap list that best resembles the reported symptom and that the participant did not report experiencing. Then record the severity of the reported symptom using the bubbles, and click the comment tab to record the intended symptom.

Example:
- **Difficulty Concentrating** is not a listed symptom in the Minute-5 Check-in Symptom List.
- If the participant reports **Difficulty Concentrating** with a severity of 2, then click an option that was reported as severity 0, such as **Feeling in a Fog**. Report severity 2 in the **Feeling in a Fog** row and note the symptom as **Difficulty Concentrating** in the comment section

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Sensitivity to noise** | Ⓗ 💬 | ⦿ | ○ | ○ | ○ | ○ | ○ | ○ |
| | | | | | | | | reset |
| **Feeling slowed down** | Ⓗ 💬 | ⦿ | ○ | ○ | ○ | ○ | ○ | ○ |
| | | | | | | | | reset |
| **Feeling in a fog** | Ⓗ 💬 | ○ | ○ | ⦿ | ○ | ○ | ○ | ○ |
| | View comment log | | | | | | | reset |
| **Don't feel right** | Ⓗ 💬 | ⦿ | ○ | ○ | ○ | ○ | ○ | ○ |
| | | | | | | | | reset |

### 💬 Field Comment Log                                                    ✖

This pop-up displays all the field comments for the record and field specified below. Users with access to data entry forms may leave one or more comments on any field on a data collection instrument, after which the balloon icon will stay lit up to signify that comments exist for that field for this record. All field comments for all records/fields can also be viewed, keyword searched, and filtered on the Field Comment Log page in this project. NOTE: If you wish to prevent all users in this project from editing or deleting field comments below, see the Additional Customizations popup on the Project Setup page.

ID: **techs_20**
Field: **fog_1_int1_d5_d3** ("Feeling in a fog")

| Date/Time | User | Comments |
|---|---|---|
| 05/03/2024 3:19pm | cchen1 | Difficulty Concentrating | |

[ Comment ]  [ Cancel ]

**End of the Session:**

**Cessation Time =** Amount of time (minutes) the intervention ran for.

**Example A:** The intervention ran for an entire 30 minutes (goal of programming)
Cessation Time: 30:00

**Example B:** Intervention was STOPPED due to symptoms increasing *beyond* Symptom Threshold, and despite ***intensity reduction protocol*** (protocol when Symptom Threshold is met; described in table below).

| **Symptom Threshold Protocol** during intervention<br><br>1 & 2 = completed programming<br>- cessation time: 30:00 | 1. If **symptom threshold is reached** (baseline CIF symptom score + 3),<br>    ● participant takes a 1-minute break, then,<br>    ● the intervention leader reduces the exercise intensity => participant HR should not exceed **60%** their HR max<br>- If session continues until the end of programming, cessation time: 30:00<br><br>2. If symptoms increase again,<br>    ● 1-minute break, then,<br>    ● reduce to **40% HR max** (~100-110 bpm)<br>- If session continues until the end of programming, cessation time: 30:00 |
| 3 = intervention stopped early due to increasing symptoms<br>- cessation time: >30:00 | 3. If symptoms still increase, *stop exercise and start the cool down*.<br>- cessation time: minutes the session ran for<br>- Example: if exercises were stopped at minute 20, then cessation time would be at minute 25 (after cool down), cessation time: 25:00 |

**HR Max**: Determined based on VO2 submaximal testing (obtained during the participant's baseline session).

**Example C:** Intervention had to be shortened due to the intervention starting late.

- **Goal of AEROBIC interventions = HR 65-80% of HR max for 20 minutes**
  So, if the intervention *must* be shortened due to time constraints, maximize the exercise component by SHORTENING (not eliminating) warm up and cool down: (Ex: 02:30 minute warm up, 20:00 minute intervention, 02:30 minute cool down).
  Cessation Time: 25:00
  + add a comment about why the intervention was shortened.

**Example D:** Participant leaves early.

- If the participant leaves early,
  Cessation Time: 26:00
  Time to Symptom Threshold: 26:00

**Example E**: Intervention took longer than 30:00 (usually should not occur).

- If **Cessation Time** is 34:00 (participant completes all of the planned programming but the session took longer than 30:00) then **Time to Symptom Threshold** should also be 34:00.
- If the intervention goes over 30:00 because the participant had to leave the screen (get water, answer the door/phone etc) ***PAUSE your stopwatch!***
  - ***In this scenario, if stopwatch is paused, intervention itself will still likely be 30:00 minutes long***

GOAL of interventions = get to all the programming *possible* within 30 minutes
- **BEST:** 20 minutes of aerobic exercise (HR at 65-80% HRmax) with 5 min warm-up and 5 min cool-down
- **2nd best:** 20 minutes of aerobic exercise with shortened warm-up and cool down
- **3rd best:** shortened aerobic exercise with shortened warm-up and cool down

**24-Hour End (HH:MM) =** Time of day when the intervention ends. Do not enter AM or PM.

**Example A:** If the intervention ended at 3:35, then enter 15:35.

**Cessation Symptom Score =** the symptom score that the participant reports at the time when the intervention ends.

NOTE: Cessation Symptom Score is the SAME as 30:00 CIF symptom checklist score if the programming was completed and the session ended at 30 minutes.

**Example A:** If the participant reported 0 symptoms when the intervention ended, note 0.

| CIF Symptom Checklist Score | 0 |
|---|---|
| Cessation Time | 30:00 |
| 24-Hour End Time of HR Monitoring (HH:MM) | 15:35 |
| Cessation Symptom Score | 0 |
| Time to Symptom Threshold | 30:00 |
| Resistance | A |
| Comments/Notes | |
| **Form Status** | |
| Complete? | Complete ⬍ |

**Example B**: If the participant reported 2 symptoms *when the intervention ended*, note 2.

| CIF Symptom Checklist Score | 2 |
|---|---|
| Cessation Time | 30:00 |
| 24-Hour End Time of HR Monitoring (HH:MM) | 15:35 |
| Cessation Symptom Score | 2 |
| Time to Symptom Threshold | 30:00 |
| Resistance | A |
| Comments/Notes | |
| **Form Status** | |

**Example C:** If the participant reports a symptom score sum of 7 at 15:00, but reports a score of 6 when the intervention ends at minute 17, then cessation symptom score: 6

**Example D:** If the intervention ended early, for example at 25:00, record the SAME **CIF Symptom Checklist Score** for the **Cessation Symptom Score**.

| 25 Minute Symptoms | | 0 none | 1 | 2 | 3 | 4 | 5 | 6 Severe |
|---|---|---|---|---|---|---|---|---|
| Headache | | ○ | ○ | ○ | ● | ○ | ○ | ○ |
| | | | | | | | | reset |
| Balance Problems | | ● | ○ | ○ | ○ | ○ | ○ | ○ |
| | | | | | | | | reset |
| Pressure in head | | ● | ○ | ○ | ○ | ○ | ○ | ○ |
| | | | | | | | | reset |
| Sensitivity to light | | ● | ○ | ○ | ○ | ○ | ○ | ○ |
| | | | | | | | | reset |

| | |
|---|---|
| CIF Symptom Checklist Score | 3 |

| | |
|---|---|
| Cessation Time | 25:00 |
| 24-Hour End Time of HR Monitoring (HH:MM) | 15:35 |
| Cessation Symptom Score | 3 |
| Time to Symptom Threshold | 25:00 |
| Resistance | A |
| Comments/Notes | |

| Form Status | |
|---|---|
| Complete? | Complete ⬍ |

**Time to Symptom Threshold =** the intervention time elapsed when the participant reports experiencing symptoms totaling 3 points higher than their baseline symptom score (= Symptom Threshold).

**Example A:** If the participant did NOT reach symptom threshold (baseline score + 3) during the intervention, then record 30:00.
Cessation time = 30:00
Time to symptom threshold = 30:00

**Example B:** If the participant completes all of the planned programming at 30:00, but reported symptom increase BETWEEN 5-minute check-ins such that symptom threshold is met (participant reports symptoms totaling 7 at minute 17:00, and baseline symptoms totaled 4) then:
Cessation time = 30:00
Time to symptom threshold = 17:00

**Example C:** If the participant reports a symptom threshold at the 15:00 minute check-in, and the score continues to increase despite 2 attempts to reduce intensity and must be ended at minute 20:00,

   Cessation time = 20:00

   <u>Time to symptom threshold</u> = 15:00


**Resistance**

  Version of intervention (A/B/C)

  **Example:** If the intervention is listed as Version A in the Scheudling_info.docx, record:

    <u>Resistance</u>: A


**<u>SKIPPED SESSIONS:</u>**

If a participant misses a scheduled session, attempt to reschedule another session WITHIN the week (should complete 3 sessions EVERY week).

If a participant does NOT complete 3 interventions within a week…

  **Example:** If techs_12 was scheduled to complete interventions 27, 28 and 29 within a calendar week, but did not complete 28 and 29 within the week, the next intervention they complete the next week (#30 in the Scheduling_info.docx) should be recorded:
   - In form #28 in RedCap

**RedCap → DO NOT leave blank forms. Complete the NEXT available form.**

**CORRECT:**

| | |
|---|---|
| Intervention Day 27 (survey) | 🟢 |
| Intervention Day 28 (survey) | 🟢 |
| Intervention Day 29 (survey) | 🟢 |
| Intervention Day 30 (survey) | 🟢 |

**WRONG:**

| | |
|---|---|
| Intervention Day 27 (survey) | 🟢 |
| Intervention Day 28 (survey) | 🔴 |
| Intervention Day 29 (survey) | 🔴 |
| Intervention Day 30 (survey) | 🟢 |

**Scheduling_info.docx → Mark interventions not completed within the week as** <mark>missed</mark>

Intervention Tab:

| Participant ID | Intervention 24 | Intervention 25 | Intervention 26 | Intervention 27 | Intervention 28 | Intervention 29 | Intervention 30 | Intervention 31 |
|---|---|---|---|---|---|---|---|---|
| TECHs_12 | Version B | Version C | Version C | Version C | | | Version A | Version A |

SHIFT version

| Participant Name | Intervention 24 | Intervention 25 | Intervention 26 | Intervention 27 | Intervention 28 | Intervention 29 | Intervention 30 | Intervention 31 |
|---|---|---|---|---|---|---|---|---|
| TECHs_12 | 4/5/2024 | 4/8/2024 | 4/10/2024 | 4/12/2024 | | | 4/19/2024 | 4/22/2024 |

**!!! This will result in a mismatch between the intervention# on RedCap (#28) and the Scheudling_info.docx (#30) on OneDrive...**

**THAT IS OK!**

- **For recording intervention ## in HypeRate, use the RedCap number.**