

Together, we can explore options that may help improve Long COVID symptoms








About This Study	page 1
Why Your Participation Matters	page 1
What to Expect During the Study	pages 2–3
Setting Yourself Up for Success	page 3
About the Study Intervention Assignment	page 4
About the Study Interventions	page 5
About the RECOVER Research Biorepository	pages 6–7

Welcome to RECOVER-NEURO

About This Study

RECOVER-NEURO is looking at how different interventions can help people who have cognitive dysfunction symptoms related to Long COVID. Symptoms can include brain fog, trouble thinking clearly, memory changes, fatigue, headache, slowed attention, anxiety, depression, and difficulty with problem-solving.

In this study, researchers are comparing 3 types of interventions to learn if they may help improve cognitive dysfunction symptoms. These include:

 <p>BrainHQ An online brain training program</p>	 <p>PASC-CoRE (Post-Acute Sequelae of SARS-CoV-2 Infection - Cognitive Recovery) An online goal management training program</p>	 <p>Transcranial Direct Current Stimulation (tDCS) A safe, well-tolerated and noninvasive form of brain stimulation</p>
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BrainHQ and tDCS have been used before to improve cognitive function in people with brain injuries.





Why Your Participation Matters

More than 500 million people around the world have had COVID, and it's possible that millions of them could have long-term symptoms. We need more information to support the safe use of potential treatments for people with Long COVID.

With your help, we can better understand why and how Long COVID affects people in different ways and explore possible treatments. This research may help you, your loved ones, and other people with Long COVID.



What to Expect During the Study

Length of Study Intervention 10 weeks 	Total Length of Study About 5 to 6 months, including a follow-up visit 3 months after the study intervention ends 	Number of Study Visits 3 to 4 clinic visits and 1 virtual visit 	Follow-up Answer follow-up questions about your health and well-being 
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What will I do at each visit?

After screening, you will be scheduled to come to the study clinic for the first of several in-person visits. Each visit may last a different amount of time, depending on the study activities you will be asked to complete.

Time estimates are listed below for each in-person visit. Please let the study team know if you have any concerns with the length of the visit and if there is anything that could make your visit more comfortable.

- **Baseline (Week 1) (about 4 to 5 hours):** Enroll in the study and complete surveys, lab tests, and brain function tests at the clinic. Your study equipment will be mailed to you.
- **Middle of Intervention (Between Weeks 5 and 6) (about 1 to 2 hours):** Complete surveys at home.
- **End of Intervention (Week 10) (about 4 to 5 hours):** Complete surveys, lab tests, and brain function tests at the clinic. Mail back the study equipment.
- **End of Study (3 months after End of Intervention) (about 4 to 5 hours):** Complete surveys, lab tests, and brain function tests at the clinic.



When will I receive my study equipment?

You will be mailed a study kit box with all of the equipment you'll need for this study. The study team will loan you the equipment and train you on how to use it during your study intervention period.

Before starting your study intervention, a BrainHQ team member will review your study equipment with you in a video call. You will need to mail back the study equipment at the end of the 10-week period using a pre-paid shipping label and box that will be provided to you.



Please do not open the study kit box or use the study equipment until your first call with a BrainHQ team member.

What to Expect During the Study



When will the study team contact me?

You will be contacted often throughout the 10-week study intervention period. You can expect to receive a phone call, video call, or email from a BrainHQ team member every weekday (Monday through Friday) during the 10 weeks.

- If you are in tDCS, a BrainHQ team member will help you with tDCS when they call.
- If you are in PASC-CoRE, a BrainHQ team member will help you contact the PASC-CoRE team.



How will the BrainHQ team member support me during virtual sessions?

At the beginning of each session, the BrainHQ team will connect with you through a live video call using the provided iPad and Zoom.

- For your first 3 sessions, a BrainHQ member will attend each 30-minute session with you and help make sure you are able to access the BrainHQ training site. They will provide instructions and be available to answer any questions.
- For the rest of your BrainHQ sessions, a BrainHQ member will check in with you at the beginning of the session to answer any questions. You can then complete your session on your own for that day.

Setting Yourself Up for Success



- **Think about timing.** When can you consistently complete the activities? When would you feel most engaged?
- **Think about location.** Choose somewhere quiet and comfortable to complete your study activities.
- **Be consistent.** Try to complete the activities at the same time each day.
- **Plan ahead.** During the 10-week study intervention period, please work the study activities into your schedule so that you can complete them on time.
- **Allow for flexibility.** Consider scheduling the sessions early in the day, in case you need to reschedule for later in the day.

About Your Study Intervention Assignment

This study has 4 active study intervention groups and 1 active comparator group for a total of 5 study groups. All participants will be asked to complete their assigned study intervention for 10 weeks. You will receive more information about your assigned study intervention when you are mailed your study equipment.

You will have an equal chance of being assigned to one of these groups:

Group	Type	Interventions Included
BrainHQ	Active study intervention	50 BrainHQ sessions only
BrainHQ active comparator	Active comparator	50 BrainHQ active comparator sessions only
BrainHQ + PASC-CoRE	Active study intervention	50 BrainHQ sessions and 12 PASC-CoRE sessions (9 group, 3 individual)
BrainHQ + tDCS-active	Active study intervention	50 BrainHQ sessions while using transcranial direct current stimulation (active)
BrainHQ + tDCS-comparator	Active study intervention	50 BrainHQ sessions while using transcranial direct current stimulation (comparator)

- **'Active study intervention'** means all or part of the study intervention could affect a participant's brain activity.
- **'Active comparator'** means the study intervention is not expected to affect brain activity.

You, your study doctor, and the study team will not know whether you are assigned to the active comparator group or an active study intervention group. Similarly, you, your study doctor, and the study team will not know if you are receiving tDCS-active or tDCS-comparator electrical current with the BrainHQ sessions, but they can quickly find out if there is ever a need to know for your safety or well-being.

About the Study Interventions



BrainHQ

BrainHQ is an online brain training program that targets memory, attention, and the time it takes to understand and respond to information. BrainHQ activities may include puzzles and games for brain training. In the active study intervention, the activities will adapt to each participant and will get a little easier or harder depending on the participant's progress.

The Active Comparator is a set of cognitive activities that are similar to the BrainHQ activities but do not adapt to a participant's progress. These activities are not the same as usual care.



BrainHQ + PASC-CoRE (PASC-Cognitive Recovery)

In addition to completing **BrainHQ** sessions, some participants will also complete **PASC-CoRE**. This is an online goal management training program for people with Post-Acute Sequelae of SARS-CoV-2 infection (PASC), including Long COVID. Participants will work with trained study staff to:

- Plan and manage personal goals
- Learn mindfulness-based ways to work through distractions
- Learn skills to focus on goal-oriented tasks
- Develop strategies to manage mental tiredness



BrainHQ + transcranial Direct Current Stimulation (tDCS)

While completing **BrainHQ** sessions, some participants will also use **tDCS**, a safe and well-tolerated form of noninvasive brain stimulation currently under investigation for use in managing a variety of symptoms or as part of a rehabilitation program. Participants in the **BrainHQ + tDCS-active** group will wear a headset that directs a mild electrical current to specific parts of the brain. It is thought to have the most benefit when repeated daily or nearly daily over a period of time.

Participants in the **BrainHQ + tDCS-comparator** group will wear the tDCS headset that will briefly deliver a mild electrical current at the beginning of the BrainHQ session to mimic the active tDCS. However, no additional current will be delivered from the device during the session. Participants will not be able to tell whether electrical current is being delivered, and the tDCS-comparator is not expected to affect brain activity. This group is considered an active study intervention because because the BrainHQ part of the intervention is active, which could affect a participant's brain activity, while the tDCS part of the intervention is a comparator, which is not expected to affect a participants' brain activity.

About the RECOVER Research Biorepository

The RECOVER Research Biorepository is designed to collect and store biospecimens for future research related to the RECOVER Initiative. Biospecimens may include samples of blood and stool (poop). These samples will be stored securely until they are used up.

Participating in this study means you agree to share your data and biospecimens with the RECOVER Research Biorepository. **If you choose to participate in this study, your data and samples may also be shared with other researchers for future research, such as developing new tests and treatments for Long COVID or other health problems.** You can change your mind later, but researchers might still use your data and biospecimens if they have already been shared and we are not able to link your samples back to you because they have already been de-identified.



Why is a biorepository needed?

Biospecimens from a blood sample can provide valuable information to researchers. This information is called "biomarkers." For example, a person's blood sugar level is one of the biomarkers for diabetes. Biomarkers can be measured and may provide important information about Long COVID. They may also predict how a patient will respond to a treatment.



How could a biorepository help with Long COVID research?

Sharing your data and biospecimens with the RECOVER Research Biorepository may:

- Increase the possibility of developing new interventions and possible treatments related to Long COVID
- Improve our understanding of how antiviral drugs and other interventions may work to reduce Long COVID symptoms
- Enhance our understanding of how and why Long COVID affects people differently
- Help researchers make important discoveries and uncover possible therapies that could help your family and others in the future

How will my privacy be protected?



Your data and samples will be de-identified, which means they will not include any information that can personally identify you, and researchers cannot easily link your identifying information to the data and samples.

Will I get any results back from future research use of my data and biospecimens?



No. You should not expect to receive results from any future research that may use your data and biospecimens.

About the RECOVER Research Biorepository

What will the samples be used for?



RECOVER research

The samples will be used for research on COVID and the long-term effects of the virus that causes COVID-19. They may also be used for research on other health problems.



Genetic testing (optional)

The use of your samples for genetic testing is optional, and you can let the study team know your decision in the Informed Consent Form. If you give your permission, researchers may study your genes to look for links to Long COVID. Genetic tests can determine if a person or groups of people are more likely to have certain genetic diseases or conditions. Choosing to say no to genetic testing will not limit your ability to participate in other parts of this study, including using the study interventions.

Blood Samples



When will I have blood drawn for the biorepository?

The study team will take about 5 tablespoons (80 ml) of blood from your arm during specified study visits.



Will I get any results back from future research use of my data and biospecimens?

No. You should not expect to receive results from any future research that may use your data and biospecimens.

Stool Samples



How will I provide stool samples?

After the Baseline and End of Intervention visits, you will be asked to provide a stool (poop) sample using an at-home kit. The at-home kit will include a confidential pre-paid box for you to mail your sample directly to the RECOVER Research Biorepository where it will be stored securely.



Why are stool samples important to this research?

People who have had COVID can have changes in their microbiome (microorganisms like fungi, bacteria, and viruses that live in the intestines) in their stool after their infection. Collecting stool samples helps researchers understand changes in the microbiome caused by the COVID-19 infection.

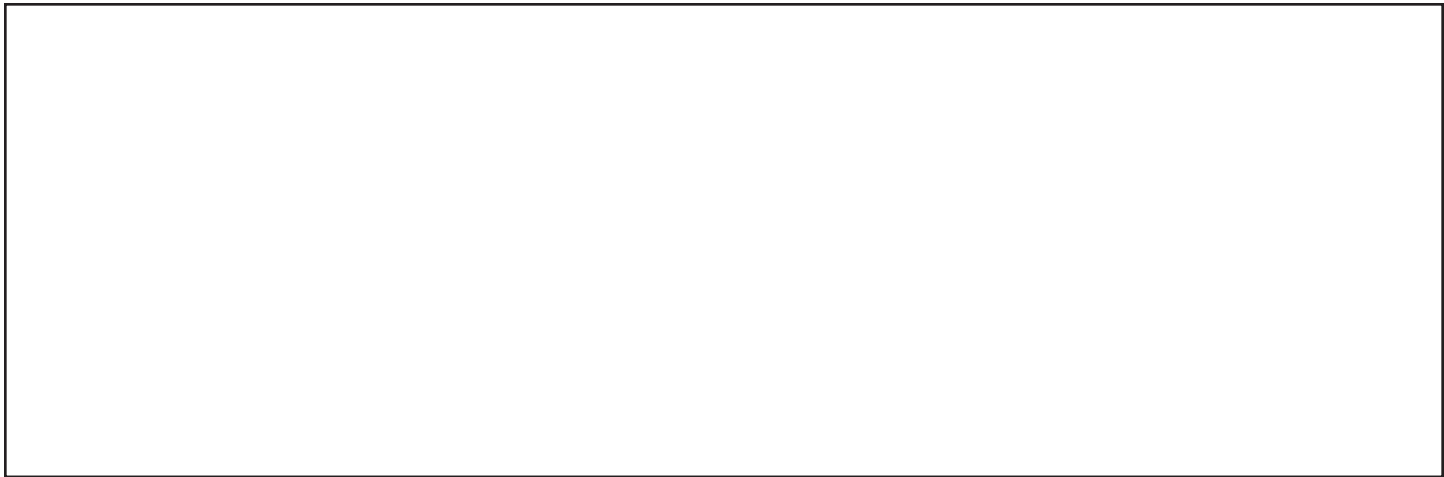


If You Become Ill or Injured

Get the medical care that you need right away. Visit your doctor, go to urgent care, or go to the emergency room if needed.

Contact Your Study Team if You:

- Receive urgent or emergency medical care
- Experience new or worsening symptoms, including post-exertional malaise
- Start taking any new medicines
- Change your phone number, email, or home address
- Have questions about the study



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For more information and study updates,
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