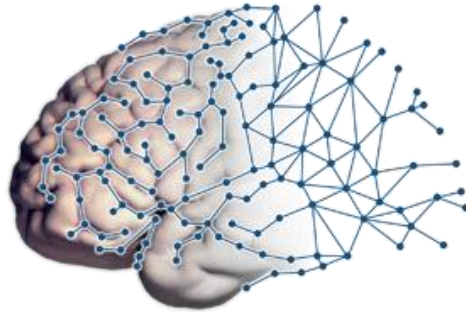


Gamma Induction for Amyloid Clearance: A Research Study

We would like to invite you to participate in a new research study that examines the effects of transcranial alternating current stimulation (tACS), a form of non-invasive brain stimulation, in patients with memory loss and its effect on brain activity, amyloid and tau.

What is tACS?

tACS is a non-invasive way of stimulating the brain. A weak electrical current travels through electrodes that are placed in a cap that you wear on your head. The current travels in an alternating fashion through the electrodes to your head. The tACS will be applied at a frequency of the brain waves that occur naturally in your brain, called gamma oscillations.



What are Amyloid and Tau?

Amyloid and Tau are proteins that are found naturally in your body. Amyloid and Tau can build up in the brain and may contribute to memory loss symptoms and have been associated with Alzheimer's disease.

What will happen as a part of this research study?

- ~ 8-16 weeks of participation
- 5 PET scans – to be conducted at Mass General Hospital
 - (2 at baseline; 3 at follow-up)
- 2 MRIs
 - (1 at baseline; 1 at follow-up)
- A transcranial magnetic stimulation (TMS) session
- Memory and Thinking Tests
- Blood draw
- Daily or twice daily 1 hour tACS sessions for 2-4 weeks (*varies depending on which group you are randomly assigned to)
- Repeat PET scans, MRI, TMS, blood draw, and memory and thinking tests following the 2-4 weeks of tACS



The purpose of this research study is to see if tACS can affect brain activity to decrease the amount of amyloid and tau that is present in the brains of people with memory loss.

If you are interested in learning more about this research study or other research projects, please contact Nainika Grover at 617-667-0362 or ngrover@bidmc.harvard.edu