

## Neural Mechanisms of Closed-loop Phase-locked Transcranial Magnetic Stimulation

**Status:** Recruiting

### Eligibility Criteria

**Sex:** Male or Female

**Age Group:** 18 years and over

This study is also accepting healthy volunteers

**Inclusion Criteria:**

- adults ages 18 to 65

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**Exclusion Criteria:**

- diagnosed with a psychiatric disorder - potential contraindications to EEG (e.g. visible scalp abrasions, non-removable hair extensions and/or hair styling that would impede proper EEG recording) - potential contraindication to TMS (as identified by the TMS safety screener) - any previous adverse reaction to TMS or MRI - diagnosed with epilepsy or previously experienced a seizure - diagnosed with a neurological condition, such as stroke or tinnitus - experienced a head trauma that was diagnosed as concussion - current use of or recent withdrawal from medications that can increase the risk of seizure - currently pregnant - any metal in the head (excluding mouth) or an implanted medical device

### Conditions & Interventions

**Conditions:**

Mental Health & Addiction

**Keywords:**

brain stimulation, EEG, healthy control, TMS, transcranial magnetic stimulation

### More Information

**Description:** This research aims to develop a personalized transcranial magnetic stimulation (TMS) protocol that delivers stimulation timed to a certain phase of an endogenous brain rhythm and explores the utility of physiologically informed neuromodulation in psychiatric disorders.

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**IRB Number:** STUDY00020385

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