

What is PrTMS?

PrTMS is an acronym for Personalized Repetitive Transcranial Magnetic Stimulation. PrTMS is a drug-free, non-invasive, therapeutic treatment approach that has shown the ability to reduce symptom severity for patients who have Post Traumatic Stress Disorder (PTSD), Traumatic Brain Injury (TBI), anxiety, depression, insomnia, and many other neurocognitive disorders. It is the PERSONALIZED version of TMS treatment, which has been cleared by the FDA for the treatment of drug-resistant depression and migraines for over 20 years.

The Science & Treatment Process

Neurons, when exposed to traumatic forces (surgery, tumors, chemotherapy, physical injury, or emotional trauma), go into a mode of "self-preservation," slowing their oscillation. Their "frequency" becomes irregular and disorganized. Typically, pharmaceuticals have been used to treat neurocognitive disorders. However, treatment is not always practical. In fact, these drugs affect the whole brain, can be addictive and may produce unwanted side effects. Additionally, the drugs do not cure the problem and often require indefinite consumption.

PrTMS is an innovative technique that targets specific areas of the brain using brief magnetic pulses inside a hand-sized paddle that is placed over the patient's scalp. This magnetic pulse generates a weak electrical current in the brain which activates neuronal circuits at the stimulation site, at a prescribed rate, promoting neuronal harmony and optimal brain function. UCSD's PrTMS is customized to each patient's unique needs. Most importantly, no drugs are involved!

A physician will design a customized treatment plan using PrTMS based on three domains: the industries "gold-standard" assessments*, a diagnostic Electroencephalogram (EEG), and a physician interview with the patient. The number of PrTMS treatments needed will depend on the individual's diagnosis, severity of symptoms, and response rate. Typically, a patient will receive daily treatments (5) for at least 6-8 weeks (the treatment process can be accelerated if the procedures are done twice a day). Patients with a positive response will start to feel results within a few weeks of starting treatment, with some feeling relief within a few days.

***Gold-Standard Assessment include the following:**

- Posttraumatic Stress Disorder Checklist (PCL-5)
- Hamilton Anxiety Scale (HAM-A)
- Hamilton Depression Scale (HAM-D)
- Pittsburg Sleep Quality Index (PSQI)
- Rivermead Post-Concussion Symptoms Questionnaire (PC)
- Traumatic Brain Injury Checklist (TBI)
- Tinnitus & Hearing Survey (THS)
- Substance Use Index (SUI)