

A Retrospective Review of the Effects of PrTMS® on Sleep Improvement Scores

Introduction

Sleep is an essential human need whose importance in everyday function is often overlooked.

Quality sleep plays a vital role in how we think, act, and feel on a daily basis. Without proper sleep, your body and brain are unable to perform in the aspects necessary for repair, mood stabilization and hormone production (NIH 2022). These factors over extended periods of time can lead to both mental and physical dysfunction, thus affecting your quality of life.

In the United States alone, 50–70 million people suffer from a sleep disorder diagnosis. And with a staggering 33–50% of the adult population suffering from occasional symptoms of insomnia, it is clear that sleep deprivation is a wide-spread, universal health issue. Not to mention, people suffering from insomnia are also 5 times more likely to suffer from mental health issues such as depression (Smith 2022).

With treatment options for sleep deprivation being mostly limited to lifestyle changes and potentially addictive medications, **we sought to improve sleep condition and quality outcomes in patients of all ages, genders, and backgrounds with stimulation of multiple cortical sites including the dorsolateral prefrontal cortex (DLPFC) via personalized repetitive transcranial magnetic stimulation (PrTMS®).**

Methodology

Subjects

Subjects included in this analysis were 146 qualified patients of any age, sex, gender, ethnicity, and background who have completed 4–8 consecutive electroencephalogram (EEG) and neurocognitive survey submissions between the dates of June 1, 2020 and September 14, 2022. De-identified patient data has been pulled from multiple established PrTMS® providers across the United States.

Treatment

STEP 1: CQX Quick-20M qEEG acquisition + neurocognitive survey submission recorded for baseline and weekly thereafter

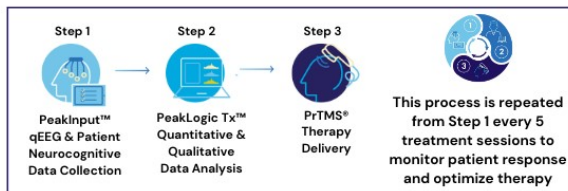
STEP 2: PeakLogic software and algorithm determines a recommended protocol – Welch’s FFT power spectrum of amplitude versus frequency

STEP 3: After physician approval, PrTMS® was delivered by a trained technician using a MagPro R30 stimulator and B-65 transducer.

Treatments were approximately 30 minutes per day, 5 days per week for 4–8 weeks.

Patients were seated in a quiet room with the eyes closed. No sedation was administered.

Stimulus frequency was selected to optimize each patient’s unique brain function. Magnetic field amplitude was 20–30% of machine power which equated to 50–60% of individual motor threshold.



Results

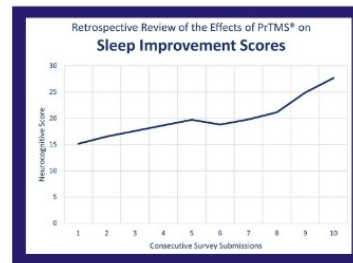
Scores of the Sleep Condition Indicator (SCI) were analyzed from each patient’s baseline until their 8th survey submission. The SCI measures sleep quality, duration, interruptions or lack thereof, and how these factors play into quality of life

An increase in SCI score indicates improvement of symptoms.

On average, treatment with PrTMS®

improved sleep in subjects, occurring as early as the first week. Overall, **88%** of the patients involved reported beneficial changes in their sleep at the end of their treatment course, with the average percent of change in SCI scores being **86.67%**

Personalized Repetitive Transcranial Magnetic Stimulation (PrTMS®) administered to multiple cortical sites yields therapeutic benefit in sleep quality, sleep duration, sleep interruptions and how these factors play into quality of life



As new locations are added regularly, please visit www.prtms.com/for-patients/find-a-doctor/ for the most up-to-date information



For more information on PrTMS®, please visit www.prtms.com

The use and results of personalized rTMS for sleep improvement have not been evaluated by the FDA to date. PeakLogic, Inc. owns PrTMS® and the PrTMS® method; all rights are reserved.

References: NIH (2022, July 15). Good Sleep for Good Health. National Institutes of Health. Retrieved 2023; Smith, L. (2022, November 23). 53 sleep statistics: How many people are sleep deprived? The Good Body. Retrieved 2023,