

TMS TRENDS

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NEURONETICS ANNOUNCES FIRST CLINICAL TRIAL EVALUATING TMS FOR ADOLESCENT PATIENTS WITH MAJOR DEPRESSION

Neuronetics Inc., the market leader in transcranial magnetic stimulation (TMS) technology, announced the start of enrollment for the first ever randomized controlled clinical trial to evaluate the acute and long-term effectiveness of TMS Therapy in adolescent patients 12-21 years of age living with major depressive disorder (MDD).

Approximately 11 percent of adolescents living in the U.S. have been diagnosed with a depressive disorder. Although the disease state is a continuum into adulthood, symptoms in adolescents can differ from those seen in adult patients. Recognizable symptoms include complaints of feeling sick, refusal to participate in daily activities like going to school, misbehaviors in the classroom and excessive worry of losing a caregiver.

“The physical and emotional strain can be debilitating for the youth living with it and for their families,” said Christopher Thatcher, President and CEO of Neuronetics. The trial will evaluate the safety and efficacy of NeuroStar TMS in approximately 100 adolescent patients in study sites across the U.S. and Canada, using a six-week acute treatment course with follow-up after 6 months. Patients who do not improve have the option to enter the open-label phase and receive known active TMS treatment. All who improve will then continue in the follow-up phase for 6 months, with TMS retreatment as necessary.

“TMS is an appealing non-pharmacologic option with a promising tolerability profile that we hope to confirm in the study,” said Dr. John Campo, Chair of the Department of Psychiatry and Behavioral Health at The Ohio State University College of Medicine. He continues, “Patients or their parents and caregivers should speak with a healthcare provider if they are interested in learning more about how to participate in this clinical trial.”

NEUROFEEDBACK SHOWS PROMISE IN HELPING YOUTH MANAGE EMOTIONS

Neurofeedback is a kind of biofeedback that uses real-time brain activity displays to teach self-regulation of brain function. Although routinely used with adults, the study published in the journal *NeuroImage* demonstrates that the technique shows promise for youth as well.

Researchers studied a sample of kids from 7 to 16 years old, using fMRI-based neurofeedback, focused on the insula in the cerebral cortex, which is involved in emotion regulation. The participants could see the level of activation of the insula on a “thermometer” presented on the MRI projector screen and were instructed to reduce or increase activation using cognitive strategies while verifying effects on the thermometer. All of them learned how to increase the insula activity (decreasing was more difficult). “Childhood and adolescence is an extremely important time for young people’s emotional development. Therefore, the ability to shape brain networks associated with the regulation of emotions could be crucial for preventing future mental health problems, which are known to arise during this vital period when the brains emotional capacity is still developing,” said Jennifer Lau, Ph.D., who took part in the study.



HAPPY HOLIDAYS!

From the TMS Institute of Pennsylvania