

TMS TRENDS

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PILOT STUDY ON TMS SHOWS PROMISE FOR TREATING COCAINE ADDICTION

Cocaine abuse represents a significant health problem worldwide, but there are few treatment options available. Moreover, there are currently no FDA-approved medications for cocaine use disorder, so people are typically given drugs to help with symptoms that arise during cocaine withdrawal. While some potential pharmacological agents are being tested in clinical trials, another promising avenue has also emerged: repetitive transcranial magnetic stimulation, or rTMS. Until now, rTMS has not been tried for cocaine addiction, but recently, *European Neuropsychopharmacology* published a pilot study of 32 people with cocaine use disorder, which found that rTMS was far superior to pharmacological treatment (a mix of agents to help manage depression, anxiety and sleep problems). Over a 29-day test period, 69 percent of participants who underwent rTMS in their dorsolateral prefrontal cortex did not test positive for cocaine compared with 19 percent in the pharmacological group. After that, all the pharmacological participants were invited to switch to rTMS for a 63-day follow-up period, and during this time, 70 percent of these users remained abstinent. In addition to the abstinence measures (which were objectively quantified through urine tests as opposed to self-reporting), the participants in rTMS reported lower craving scores than the pharmacological group. "As with all preliminary studies, caution is necessary, and there is still a ton of work to do to prove that these improvements are real," said lead study author Antonello Bonci, M.D., a scientific director at the National Institute on Drug Abuse. "But that shouldn't dampen the enthusiasm for the potential of this work." The rTMS maintained a 100 percent compliance rate during the study period. Bonci and his collaborators are now designing a larger study using sham stimulation as the control instead of medication to better clarify rTMS's effectiveness.

IMPROVING DEPRESSION CAN REDUCE RISK OF MAJOR CARDIOVASCULAR PROBLEMS

Depression is a known risk factor for cardiovascular disease, but as a person's depression improves -- or grows worse -- their risk for heart disease has remained largely unknown.

But now, a new study by researchers at the Intermountain Medical Center Heart Institute in Salt Lake City found that effectively treating depression can reduce a patient's chance of having a stroke, heart failure, a heart attack or death. In fact, effective treatment for depression can reduce a patient's heart risks to the same level as those who never had short-term depression, the study found.

"Our study shows that prompt, effective treatment of depression appears to improve the risk of poor heart health," said Heidi May, PhD, a cardiovascular epidemiologist with the Intermountain Medical Center Heart Institute.

"With the help of past research, we know depression affects long-term cardiovascular risks, but knowing that alleviating the symptoms of depression reduces a person's risk of heart disease in the short term, too, can help care providers and patients commit more fully to treating the symptoms of depression," she said. "The key conclusion of our study is: If depression isn't treated, the risk of cardiovascular complications increases significantly."

Researchers haven't completely understood whether a short-term encounter with depression affects a person's cardiovascular risk forever, or how changes in the symptoms of depression over time affect cardiovascular risk. Dr. May and her team found answers to these questions by studying data compiled in Intermountain Healthcare's depression registry, a database of more than 100,000 patients.

"What we've done thus far is simply observe data that has previously been collected," Dr. May said. "In order to dig deeper, we need to do a full clinical trial to fully evaluate what we've observed."