



New Depression Treatment: Transcranial Magnetic Stimulation (TMS)



Contributor: [David Wolfe, MD, MPH](#)

David Wolfe, MD, MPH, is Chief of the Division of Outpatient Services in the Department of Psychiatry.

About one in 20 people in the United States suffer from depression. It's one of the leading causes of disability in the world.

The first-line treatment for depression is antidepressant medications, many of which work in the brain's serotonin system.

However, even after trying multiple medications and psychotherapy, one third of people with depression don't experience sufficient relief from their symptoms.

“For people who don’t respond to conventional treatments, the most effective treatment has been electroconvulsive therapy (ECT), a procedure in which electrical currents are delivered to the brain to produce a seizure while under anesthesia,” says [David Wolfe](#), MD, MPH, Chief of the Division of Outpatient Services in the Department of Psychiatry.

While ECT is effective, the medical procedure has side effects, such as short-term memory loss. The procedure also requires general anesthesia, which has its own [risks](#).

Recently, a non-invasive, non-pharmacological treatment has emerged that can relieve depression symptoms with minimal side effects.

“Repetitive Transcranial Magnetic Stimulation (rTMS) is a new option for people with treatment-resistant depression,” says Dr. Wolfe, who is Director of the [Transcranial Magnetic Stimulation Program](#) at the [Building for Transformative Medicine](#) at Brigham and Women’s Hospital (BWH).



David Wolfe, MD, MPH, Director of the Transcranial Magnetic Stimulation (TMS) Program at Brigham and Women's Hospital (BWH), treats persistent depression with TMS.

“ After four weeks of TMS treatment, most patients experience a reduction in depressive symptoms. Many report improvements in sleep and energy levels, an increased interest in activities and social engagement, and a sense of enhanced well-being.”

TMS uses magnetic pulses to induce electrical currents in the dorsolateral prefrontal cortex (DLPFC), located at the front/left side of the brain. Stimulating this area increases the functioning of brain cells and enhances the efficiency of networks by which they communicate. Stimulation of the DLPFC also affects areas deeper in the brain that are associated with depression.

To qualify for TMS treatment, an individual must not have sufficiently responded to several trials of antidepressant medications. TMS requires frequent visits but, unlike ECT, doesn't involve anesthesia, sedation or intense medical monitoring.

"After four weeks of TMS treatment, most patients experience a reduction in depressive symptoms. Many report improvements in sleep and energy levels, an increased interest in activities and social engagement, and a sense of enhanced well-being," says Dr. Wolfe.

Treatment can be obtained during a series of one-hour doctor visits, even over the lunch hour. To make an appointment at the [Transcranial Magnetic Stimulation Program](#), ask your physician or mental health provider to call (617) 732-6753.

Your doctor can also email BWH Psychiatry Triage at bwhpsychiatrytriage@partners.org. If you meet the criteria for TMS, a consultation will be scheduled at The Building for Transformative Medicine.

- By Dustin G.

