



Depression

This review article examined the literature concerning the use of transcranial magnetic stimulation in the treatment of depression. Results showed the high-frequency, repetitive transcranial magnetic stimulation treatment to be an effective, side-effect free therapy for depression that may hold promise for treating related psychiatric disorders as well. **(1)**

Noting that there is good reason to believe the pineal gland is a magnetosensitive system and that application of magnetic fields in experimental animals has a similar effect to that of acute exposure to light with respect to melatonin secretion, the authors propose that magnetic treatment could be a beneficial new therapy for winter depression in humans. **(2)**

This review article notes that transcranial magnetic stimulation has been shown to elicit antidepressant effects, electrically stimulating deep regions of the brain. **(3)**

In this theoretical paper, the author argues that deep, low-rate transcranial magnetic stimulation can produce therapeutic effects equivalent to those of electroconvulsive therapy but without the dangerous side effects. **(4)**

This study examined the effects of millimeter wave (MW) therapy as a supplemental treatment in patients suffering from various types of depression. MW therapy involved the use of a "Yav'-1" apparatus (5.6 mm wavelength, 53 GHz), and consisted of up to 60 minutes of exposure per day, 2 to 3 times per week, for a total of as many as 15 exposures. Results showed that combined MW/conventional treatment produced a complete recovery in over 50 percent of cases studied, a significant improvement in 41 percent, and some improvement in 8 percent. Recovery rates among controls (conventional treatment only) were 4, 48, and 41 percent, respectively. **(5)**

Results of this study led researchers to conclude that patients suffering from major depression experienced a significant reduction of depressive symptoms following treatment with transcranial magnetic stimulation coupled with standard medication relative to patients taking the medicine. This was true after just three TMS treatments. **(6)**

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Depression (Cont.)

Citations:

- (1) M.T. Kirkcaldie, et al., "Transcranial Magnetic Stimulation as Therapy for Depression and Other Disorders," *Aust N Z J Psychiatry*, 31(2), April 1997, . 264- 272.
- (2) R. Sandyk, et al., "Magnetic Fields and Seasonality of Affective Illness: Implications for Therapy," *International Journal of Neurosci*, 58(3-4), June 1991, . 261-267.
- (3) C. Haag, et al., "Transcranial Magnetic Stimulation. A Diagnostic Means from Neurology as Therapy in Psychiatry?" *Nervenarzt*, 68(3), March 1997, . 274-278.
- (4) T. Zyss, "Will Electroconvulsive Therapy Induce Seizures: Magnetic Brain Stimulation as Hypothesis of a New Psychiatric Therapy," *Psychiatr Pol*, 26(6), November-December 1992, . 531-541.
- (5) G.V. Morozov, et al., "Treatment of Neurotic Depression with a Help of Extremely High Frequency Electromagnetic Radiation," *Zh Nevropatol Psikhiatr Im S S Korsakova*, 96(6), 1996, . 28-31.
- (6) Conca, et al., "Transcranial Magnetic Stimulation: A Novel Antidepressive Strategy?" *Neuropsychobiology*, 34(4), 1996, . 204-207.

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