

[Clinical Trial](#) > [CNS Spectr.](#) 2013 Dec;18(6):322-32. doi: 10.1017/S1092852913000357.
Epub 2013 Jul 30.

Transcranial magnetic stimulation (TMS) for major depression: a multisite, naturalistic, observational study of quality of life outcome measures in clinical practice

Philip G Janicak ¹, David L Dunner, Scott T Aaronson, Linda L Carpenter, Terrence A Boyadjis, David G Brock, Ian A Cook, Karl Lanocha, Hugh B Solvason, Dafna Bonneeh-Barkay, Mark A Demitrack

Affiliations + expand
PMID: 23895940 DOI: [10.1017/S1092852913000357](#)

Abstract

Background: Transcranial magnetic stimulation (TMS) is an effective and safe therapy for major depressive disorder (MDD). This study assessed quality of life (QOL) and functional status outcomes for depressed patients after an acute course of TMS.

Methods: Forty-two, U.S.-based, clinical TMS practice sites treated 307 outpatients with a primary diagnosis of MDD and persistent symptoms despite prior adequate antidepressant pharmacotherapy. Treatment parameters were based on individual clinical considerations and followed the labeled procedures for use of the approved TMS device. Patient self-reported QOL outcomes included change in the Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36) and the EuroQol 5-Dimensions (EQ-5D) ratings from baseline to end of the acute treatment phase.

Results: Statistically significant improvement in functional status on a broad range of mental health and physical health domains was observed on the SF-36 following acute TMS treatment. Similarly, statistically significant improvement in patient-reported QOL was observed on all domains of the EQ-5D and on the General Health Perception and Health Index scores. Improvement on these measures was observed across the entire range of baseline depression symptom severity.

Conclusion: These data confirm that TMS is effective in the acute treatment of MDD in routine clinical practice settings. This symptom benefit is accompanied by statistically and clinically meaningful improvements in patient-reported QOL and functional status outcomes.

Trial registration: ClinicalTrials.gov [NCT01114477](#).

[PubMed Disclaimer](#)

Similar articles

[Transcranial magnetic stimulation \(TMS\) for major depression: a multisite, naturalistic, observational study of acute treatment outcomes in clinical practice.](#)

Carpenter LL, Janicak PG, Aaronson ST, Boyadjis T, Brock DG, Cook IA, Dunner DL, Lanocha K, Solvason HB, Demitrack MA.
Depress Anxiety. 2012 Jul;29(7):587-96. doi: 10.1002/da.21969. Epub 2012 Jun 11.
PMID: 22689344

[Effectiveness of transcranial magnetic stimulation in clinical practice post-FDA approval in the United States: results observed with the first 100 consecutive cases of depression at an academic medical center.](#)

Connolly KR, Helmer A, Cristancho MA, Cristancho P, O'Reardon JP.
J Clin Psychiatry. 2012 Apr;73(4):e567-73. doi: 10.4088/JCP.11m07413.
PMID: 22579164

[A multisite, naturalistic, observational study of transcranial magnetic stimulation for patients with pharmacoresistant major depressive disorder: durability of benefit over a 1-year follow-up period.](#)

Dunner DL, Aaronson ST, Sackeim HA, Janicak PG, Carpenter LL, Boyadjis T, Brock DG, Bonneeh-Barkay D, Cook IA, Lanocha K, Solvason HB, Demitrack MA.
J Clin Psychiatry. 2014 Dec;75(12):1394-401. doi: 10.4088/JCP.13m08977.
PMID: 25271871

[Transcranial magnetic stimulation for major depressive disorder: a pragmatic approach to implementing TMS in a clinical practice.](#)

Derstine T, Lanocha K, Wahlstrom C, Hutton TM.
Ann Clin Psychiatry. 2010 Nov;22(4 Suppl):S4-11.
PMID: 21180663 Review.

[Quality of life: the ultimate outcome measure of interventions in major depressive disorder.](#)

IsHak WW, Greenberg JM, Balayan K, Kapitanski N, Jeffrey J, Fathy H, Fakhry H, Rapaport MH.
Harv Rev Psychiatry. 2011 Sep-Oct;19(5):229-39. doi: 10.3109/10673229.2011.614099.
PMID: 21916825 Review.

[See all similar articles](#)

Cited by

[Regulatory Clearance and Approval of Therapeutic Protocols of Transcranial Magnetic Stimulation for Psychiatric Disorders.](#)

Cotovio G, Ventura F, Rodrigues da Silva D, Pereira P, Oliveira-Maia AJ.
Brain Sci. 2023 Jul 5;13(7):1029. doi: 10.3390/brainsci13071029.
PMID: 37508962 [Free PMC article.](#) Review.

[Effect of transcranial magnetic stimulation on postural control of individuals with major depressive disorder: A case report.](#)

Bateni H, Soltani E, Ali K, Zhou H, Shad MU.
SAGE Open Med Case Rep. 2023 Feb 14;11:2050313X231153757. doi: 10.1177/2050313X231153757. eCollection 2023.
PMID: 36816824 [Free PMC article.](#)

[Repetitive transcranial magnetic stimulation may be a cost-effective alternative to antidepressant therapy after two treatment failures in patients with major depressive disorder.](#)

Zemplényi A, Józwiak-Hagymásy J, Kovács S, Erdősi D, Boncz I, Tényi T, Osváth P, Voros V.
BMC Psychiatry. 2022 Jun 28;22(1):437. doi: 10.1186/s12888-022-04078-9.
PMID: 35764989 [Free PMC article.](#)

[Accelerated transcranial magnetic stimulation \(aTMS\) to treat depression with treatment switching: study protocol of a pilot, randomized, delayed-start trial.](#)

Tan XW, Abdin E, Tor PC.
Pilot Feasibility Stud. 2021 May 5;7(1):104. doi: 10.1186/s40814-021-00845-9.
PMID: 33952345 [Free PMC article.](#)

[Maintenance treatment of transcranial magnetic stimulation \(TMS\) for treatment-resistant depression patients responding to acute TMS treatment.](#)

Chang J, Chu Y, Ren Y, Li C, Wang Y, Chu XP.
Int J Physiol Pathophysiol Pharmacol. 2020 Oct 15;12(5):128-133. eCollection 2020.
PMID: 33224435 [Free PMC article.](#) Review.

[See all "Cited by" articles](#)

Publication types

- > [Clinical Trial](#)
- > [Multicenter Study](#)

MeSH terms

- > [Adolescent](#)
- > [Adult](#)
- > [Age Factors](#)
- > [Aged](#)
- > [Aged, 80 and over](#)
- > [Depressive Disorder, Major / psychology*](#)
- > [Depressive Disorder, Major / therapy*](#)
- > [Female](#)
- > [Humans](#)
- > [Male](#)
- > [Middle Aged](#)
- > [Observation](#)
- > [Psychiatric Status Rating Scales](#)
- > [Quality of Life*](#)
- > [Self Report](#)
- > [Time Factors](#)
- > [Transcranial Magnetic Stimulation / methods*](#)
- > [Treatment Outcome](#)
- > [United States / epidemiology](#)
- > [Young Adult](#)

Associated data

> [ClinicalTrials.gov/NCT01114477](#)

Related information

[MedGen](#)

LinkOut – more resources

Full Text Sources

[Cambridge University Press](#)
[Ovid Technologies, Inc.](#)

Other Literature Sources

[scite Smart Citations](#)

Medical

[ClinicalTrials.gov](#)
[Genetic Alliance](#)

FULL TEXT LINKS

[CAMBRIDGE](#) [Journals Online](#)
Full text

ACTIONS

[“ Cite](#)

[📖 Collections](#)

SHARE



PAGE NAVIGATION

< [Title & authors](#)

Abstract
Similar articles
Cited by
Publication types
MeSH terms
Associated data
Related information
LinkOut – more resources

