

About Ampa One

Product

- **Simple:** Ampa One is an FDA-cleared transcranial magnetic stimulation (TMS) system.
- **Simple + Ampa:** Our clinic offers TMS using the FDA-cleared Ampa One system.
- **Feature-forward:** Ampa One is an FDA-cleared transcranial magnetic stimulation (TMS) system featuring a camera-enabled coil designed to support coil positioning and repeatable session setup.
- **Workflow-forward:** Ampa One is an FDA-cleared transcranial magnetic stimulation (TMS) system designed for high-volume clinical practice, with features that support repeatable session setup and clinician workflow.

Indication

- **Indication:** Ampa One is FDA-cleared for the treatment of treatment-resistant depression.
 - **Prescription:** Ampa One is FDA-cleared for the treatment of treatment-resistant depression by prescription only.
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What is TMS?

Definition

- **Standard:** TMS (transcranial magnetic stimulation) is a non-invasive brain stimulation treatment that uses magnetic pulses delivered through a handheld device placed on the head.
- **Simple:** During treatment, the Ampa One coil is positioned near the head and delivers magnetic stimulation to the brain under clinician supervision.
- **Patient experience:** During a session, you sit comfortably while a handheld TMS device rests lightly against your head. You hear clicking sounds and feel tapping on the scalp for a few minutes at a time.
- **Non-drug (simple):** TMS is a non-pharmacologic treatment.
- **Non-drug (with mechanism):** TMS is a well-studied, non-pharmacologic treatment that uses brief magnetic pulses to stimulate brain cells.

Is TMS right for me?

- **Patient-fit question:** Is TMS right for you? A clinician can help determine whether TMS may be an appropriate treatment option.
- **Candidate framing:** TMS may be an option for patients with depression who have not improved with prior treatments; eligibility is determined by your clinician.
- **Consultation prompt:** Talk with your clinician to learn whether TMS is an appropriate option for your situation.
- **Not for everyone:** TMS is not appropriate for every patient, and candidacy depends on medical history and clinician judgment.

Citations

1. Oostra E, Jazdyk P, Vis V, Dalhuisen I, Hoogendoorn AW, Planting CHM, van Eijndhoven PF, van der Werf YD, van den Heuvel OA, van Exel E. More rTMS pulses or more sessions? The impact on treatment outcome for treatment resistant depression. *Acta Psychiatr Scand*. 2025 Apr;151(4):485-505. doi: 10.1111/acps.13768. Epub 2024 Nov 21. PMID: 39569643; PMCID: PMC11884915. A meta-analysis of outcomes across 87 RCT of TMS in depression. Largest, most recent to date.
2. Brunoni AR, Chaimani A, Moffa AH, Razza LB, Gattaz WF, Daskalakis ZJ, Carvalho AF. Repetitive Transcranial Magnetic Stimulation for the Acute Treatment of Major Depressive Episodes: A Systematic Review With Network Meta-analysis. *JAMA Psychiatry*. 2017 Feb 1;74(2):143-152. doi: 10.1001/jamapsychiatry.2016.3644. Network meta-analysis of 81 RCTs (n=4,233) comparing multiple rTMS approaches for acute depression

How TMS Works

Mechanisms

- **Mood regions:** TMS uses magnetic pulses to stimulate nerve cells in brain regions involved in mood regulation.
- **Regulating circuits:** TMS uses magnetic stimulation to stimulate specific brain circuits involved in regulating thoughts, behaviors, and emotions.
- **Physics:** TMS uses magnetic pulses to stimulate brain cells without passing electrical current through the skin.
- **Patterns:** TMS helps reset patterns of brain activity that arise in depression.
- **Neuroregulation:** TMS helps support the brain's capacity for emotional regulation, coping capacity, and resilience to life stresses.

Citations

1. Downar J, Siddiqi SH, Mitra A, Williams N, Liston C. Mechanisms of Action of TMS in the Treatment of Depression. *Curr Top Behav Neurosci*. 2024;66:233-277. doi: 10.1007/7854_2024_483. PMID: 38844713. Review linking clinical benefit to network-level effects (DLPFC connectivity with subgenual/dorsal ACC and salience-network regions) and longer-term synaptic plasticity processes (including dopamine D1 and NMDA-dependent mechanisms)
2. Downar, J., 2025. Noninvasive transcranial brain stimulation to treat cognitive aspects of other psychiatric diseases. In *Handbook of Behavioral Neuroscience* (Vol. 34, pp. 373-398). Elsevier. Selectively modulating certain circuits with TMS can yield cross-diagnostic improvements in cognition and related symptoms

Modality comparison

- **Non-drug:** Unlike medications, TMS does not involve any pharmaceuticals circulating throughout your body.
- **Different duration:** Unlike medications, TMS is delivered in a finite series of clinic sessions rather than taken daily.
- **Not ECT:** TMS is not electroconvulsive ("shock") therapy, and does not involve anesthesia or seizure induction.
- **Unlike ECT,** TMS is not typically associated with memory loss.

Citations

1. Downar J, Siddiqi SH, Mitra A, Williams N, Liston C. Mechanisms of Action of TMS in the Treatment of Depression. *Curr Top Behav Neurosci*. 2024;66:233-277. doi: 10.1007/7854_2024_483. PMID:

38844713. Review linking clinical benefit to network-level effects (DLPFC connectivity with subgenual/dorsal ACC and salience-network regions) and longer-term synaptic plasticity processes (including dopamine D1 and NMDA-dependent mechanisms)

2. Rossi S, Antal A, Bestmann S, et al. Safety and recommendations for TMS use in healthy subjects and patient populations, with updates on training, ethical and regulatory issues: Expert Guidelines. Clin Neurophysiol. 2021 Jan;132(1):269-306. doi: 10.1016/j.clinph.2020.10.003. Epub 2020 Oct 24. PMID: 33243615; PMCID: PMC9094636. Consensus update to the 2009 safety guidelines (meeting Oct 2018; updates through Apr 2020), adding guidance on newer devices/pulse configs and emerging use-cases
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How Effective Is TMS?

Majority-respond

- **Simple:** The majority of people with depression respond to TMS, though individual results may vary.
- **Published studies:** Published clinical studies and real-world data have reported that the majority of people with depression respond to TMS.

Durability & Follow-up

- **Not always permanent:** The effects of TMS may not be permanent, and some patients may require additional or ongoing depression care.
- **Follow-up care:** Depression symptoms may return over time, and follow-up treatment may be recommended.
- **Maintenance possibility:** Some patients may benefit from additional sessions or maintenance treatment after an initial course.
- **Continue other therapy:** Some patients may need to continue other forms of depression therapy alongside or after TMS.

Citations

1. Sackeim HA, Aaronson ST, Carpenter LL, Hutton TM, Mina M, Pages K, et al. Clinical outcomes in a large registry of patients with major depressive disorder treated with Transcranial Magnetic Stimulation. *J Affect Disord* 2020;277:65–74. - A large naturalistic study of >5000 patients from the Neuronetics TMS treatment registry, showing >55% remission on PHQ9.
2. Prentice A, Arns M, Middleton V, Bowman J, Donachie N, Kiske J, et al. Sequential bilateral dorsolateral prefrontal versus right lateral orbitofrontal/left dorsolateral prefrontal TMS for major depression: A large naturalistic case series. *Brain Stimul* 2025;18:704–6. - A naturalistic study of >3000 patients from a large community practice, treated on a different TMS system (MagVenture rather than Neuronetics), also showing >65% response and >40% remission on PHQ9.
3. Gershon et al., *Journal of Psychiatric Research* (2020) – meta-analysis reporting overall response ~66% depending on protocol.
4. Dunner et al., *Journal of Clinical Psychiatry* (2014) – open-label trial showing response 63% and remission 41%.
5. Carpenter et al., *Depression and Anxiety* (2012) – a multisite naturalistic study of >300 patients showing a 58% response and 37% remission rate with figure-8 coil rTMS.

Evidence depth

- **Research history:** TMS has been studied as a treatment for depression since 1995, with over 85 randomized trials in depression.

Citations

1. Oostra E, Jazdyk P, Vis V, Dalhuisen I, Hoogendoorn AW, Planting CHM, van Eijndhoven PF, van der Werf YD, van den Heuvel OA, van Exel E. More rTMS pulses or more sessions? The impact on treatment outcome for treatment resistant depression. *Acta Psychiatr Scand*. 2025 Apr;151(4):485-505. doi: 10.1111/acps.13768. Epub 2024 Nov 21. PMID: 39569643; PMCID: PMC11884915. A meta-analysis of outcomes across 87 RCT of TMS in depression. Largest, most recent to date.
 2. Brunoni AR, Chaimani A, Moffa AH, Razza LB, Gattaz WF, Daskalakis ZJ, Carvalho AF. Repetitive Transcranial Magnetic Stimulation for the Acute Treatment of Major Depressive Episodes: A Systematic Review With Network Meta-analysis. *JAMA Psychiatry*. 2017 Feb 1;74(2):143-152. doi: 10.1001/jamapsychiatry.2016.3644. Network meta-analysis of 81 RCTs (n=4,233) comparing multiple rTMS approaches for acute depression;
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Safety and Side Effects

Tolerability

- **Device tolerability:** TMS is generally well tolerated.

Side effects (full)

- **Simple:** Side effects are typically mild and temporary.
- **Simple + Seizure:** Side effects are usually mild (e.g. temporary scalp discomfort or headache). The most serious possible side effect, seizure, is very rare (less than 1 in 10,000 sessions).

Warnings / Contraindications (Eligibility & Screening)

- **Contraindications:** TMS is not appropriate for patients with certain implanted metallic or electronic devices near the head; your clinician will review contraindications before treatment.
- **Precautions:** Before treatment, your clinician will perform safety screening and review any relevant precautions.
- **Not for everyone:** Not all patients are candidates for TMS; eligibility is determined by your clinician.

Psychiatric Safety Monitoring

- **Symptom monitoring:** As with any depression treatment, symptoms may worsen or suicidal thoughts may emerge in some patients; patients should be monitored and discuss concerns with their clinician.

Urgent concerns: Patients experiencing worsening mood or suicidal thoughts should contact their clinician immediately.

Comparison to medication

- **Simple:** TMS is non-pharmacologic and is generally associated with fewer systemic side effects than pharmacologic alternatives.
- **Finite:** Unlike medications, TMS is delivered in clinic sessions rather than taken daily.

Citations

1. van der Velde T, Swartswe J, Schruers K, Schuhmann T. Monitoring adverse effects in TMS: From controlled trials to clinical reality. *Curr Opin Psychol.* 2026 Feb;67:102187. doi: 10.1016/j.copsyc.2025.102187. Epub 2025 Sep 29. PMID: 41076757. Review emphasizing structured adverse-event monitoring as TMS scales clinically.
2. McClintock et al., *The Journal of Clinical Psychiatry* (2018) – consensus TMS safety guidelines noting that TMS avoids systemic side effects because it is non-pharmacologic.
3. Gaynes et al., *Comparative Effectiveness Review for AHRQ* (2011) – describing systemic side effects from medication and non-systemic profile of TMS.

One-Day / Accelerated Scheduling Options

Program offer

- **Minimal:** We offer a One-Day TMS Program.
- **Minimal + Ampa:** We offer a One-Day TMS Program using Ampa One.
- **Multiple sessions:** We offer a One-Day TMS Program where patients receive multiple TMS sessions in a single day.
- **Course:** For added convenience, we offer a One-Day TMS Program where patients complete their TMS program in a single day.
- **Explanation:** Traditional schedules can be challenging for some patients, and accelerated scheduling options may better fit certain needs. In these formats, sessions are spaced throughout the day with rest periods in between, and patients return home the same day.
- **Patient-directed:** Ask your clinician whether a One-Day TMS Program is appropriate for you.

Treatment Course Reminder

- **One session per day is most typical:** A typical course of TMS traditionally involves one treatment session per day over multiple days. In some cases, multiple sessions per day may be offered, to reduce the number of days required to complete the course.
- **Individualized plan:** The number of sessions and treatment schedule vary by patient and are determined by your clinician.

Citations

1. Holtzheimer PE 3rd, McDonald WM, Mufti M, Kelley ME, Quinn S, Corso G, Epstein CM. Accelerated repetitive transcranial magnetic stimulation for treatment-resistant depression. *Depress Anxiety*. 2010 Oct;27(10):960-3. doi: 10.1002/da.20731. PMID: 20734360; PMCID: PMC3020591. Publication of TMS program with 10+ sessions in a single day.

Neuroplasticity-Related Preparation

- Minimal: Your clinician may recommend additional techniques intended to enhance neuroplasticity during treatment.
- Research: Some evidence suggests that pairing TMS with additional techniques may have complementary effects on neuroplasticity.

Full: Some clinics use additional techniques to enhance neuroplasticity during TMS treatment. These approaches vary by clinic and are evolving as new research emerges.

Citations

1. Brown JC, Higgins ES, George MS. Synaptic Plasticity 101: The Story of the AMPA Receptor for the Brain Stimulation Practitioner. *Neuromodulation*. 2022 Dec;25(8):1289-1298. doi: 10.1016/j.neurom.2021.09.003. Epub 2021 Dec 18. PMID: 35088731; PMCID: PMC10479373. Review of TMS and neuroplasticity.
2. Hendrikse J, Kandola A, Coxon J, Rogasch N, Yücel M. Combining aerobic exercise and repetitive transcranial magnetic stimulation to improve brain function in health and disease. *Neurosci Biobehav Rev*. 2017 Dec;83:11-20. doi: 10.1016/j.neubiorev.2017.09.023. Epub 2017 Sep 23. PMID: 28951250. Pairing aerobics with TMS to enhance neuroplasticity.

Guidance: Pairing Recommendation

- Any “response/effectiveness” line should be paired with: **“Individual results may vary.”**
- Any “One-Day” line should be paired with: **“Schedules vary and are determined by your clinician.”**
- Any safety section should include at least one **Contraindications/Screening** line.