

With Magstim® TMS Therapy for Depression





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Treatment Resistant Depression

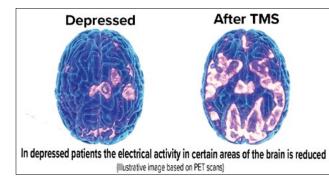
For many people coping with Major Depressive Disorder (MDD) antidepressants have proven to provide adequate symptom relief enabling them to resume the life they once enjoyed. However, some patients experience a form of MDD known as Treatment Resistant Depression (TRD) for whom standard medications tend to provide little to no relief.

For many people coping with Major Depressive Disorder (MDD) antidepressants provide adequate symptom relief, allowing them to resume usual activities and enjoyment of their life. However, for a number of people medications unfortunately provide little to no symptom relief. These people are referred to as suffering from Treatment Resistant Depression (TRD).¹

Some researchers define TRD as a case of depression that doesn't respond to two different antidepressants from different classes. Other experts say that a person needs to try at least four different treatments before depression can be truly considered treatment-resistant¹. The number of antidepressants that one failed to respond to may be important for insurance coverage. You should discuss the following questions with your doctor:

- Has your treatment failed to make you feel better?
- Has your treatment helped a bit, but you still don't feel like your old self?
- Have the side effects of your medication been hard to handle?

TMS Therapy & Depression



While there are several theories about what causes depression, the condition most likely results from a complex interplay of individual factors, one of the most widely accepted explanations cites abnormal brain chemistry. Researchers have suggested that for some people, having too little of certain substances in the brain (called neurotransmitters) could contribute to depression². Restoring the balance of brain chemicals could help alleviate symptoms, Transcranial Magnetic Stimulation (TMS) is noninvasive and non-systemic (non-drug) method to help restore this balance.

TMS Therapy involves the use of short pulses of magnetic energy to stimulate nerve cells in the brain. These pulses are delivered to the area in the brain that

researchers believe is responsible for emotional judgement and mood regulation².

The rapid magnetic pulses created by the coil, pass directly through the skull and generate an electric current in the brain directly under the treatment coil. These electric currents cause neurons to fire and stimulate surrounding brain cells³.

Approximately 58% of patients with treatment resistant MDD respond positively to TMS therapy.³

^{1.} Rush, A. J., Trivedi, M. H., Wisniewski, S. R., Nierenberg, A. A., Stewart, J. W., Warden, D., ... & McGrath, P. J. (2006). Acute and longer-term outcomes in depressed outpatients requiring one or several treatment steps: a STAR* D report. American Journal of Psychiatry, 163(11), 1905-1917.

^{2.} De Raedt, R., Vanderhasselt, M. A., & Baeken, C. (2015). Neurostimulation as an intervention for treatment resistant depression: From research on mechanisms towards targeted neurocognitive strategies. Clinical Psuchologu Review, 41, 61-69.

^{3.} Carpenter LL, Janicak PG, Aaronson ST, Boyadjis T, Brock DG, Cook IA, et al. Transcranial Magnetic Stimulation (TMS) for major depression: a multisite, naturalistic, observational study of acute treatment outcomes in clinical practice. Depress Anxiety 2012;29:587—96.

Comparing TMS, Antidepressants, and ECT

	Anti- Depressants	ECT	тмѕ
Anxiety	•	•	
Blurred Vision	•		
Diarrhea / Constipation	•		
Dizziness	•	•	*Transient
Dry mouth	•	•	
Headache	•	•	*Transient
Scalp Discomfort			*Transient
Insomnia / Drowsiness	•	•	
Nausea	•	•	
Sexual Dysfunction	•		
Weight Gain	•		
Memory Loss	•	•	

TMS & Antidepressants

TMS is typically prescribed when antidepressants have failed, or the side effects are intolerable. Antidepressants are systemic, which means that the medication is absorbed into the blood stream. This can cause numerous side effects. TMS is a noninvasive, outpatient procedure with no systemic side effects^{4,5}.

TMS & ECT

TMS and Electroconvulsive Therapy (ECT) are both effective in the treatment of depression, but ECT is associated with more side effects such as memory loss. ECT requires general anesthesia while the electric currents are passed through the brain to induce a seizure. When given as an outpatient procedure the patient may not drive for 24 hours following ECT.

- 4. George, M. S., Lisanby, S. H., Avery, D., McDonald, W. M., Durkalski, V., Pavlicova, M., ... & Holtzheimer, P. E. (2010). Daily left prefrontal transcranial magnetic stimulation therapy for major depressive disorder: a sham-controlled randomized trial. Archives of general psychiatry, 67(5), 507-516.
- 5. O'Reardon, J. P., Solvason, H. B., Janicak, P. G., Sampson, S., Isenberg, K. E., Nahas, Z., ... & Demitrack, M. A. (2007). Efficacy and safety of transcranial magnetic stimulation in the acute treatment of major depression: a multisite randomized controlled trial. Biological psychiatry, 62(11), 1208-1216.
- 6. Rossi, S., Hallett, M., Rossini, P. M., Pascual-Leone, A., & Safety of TMS Consensus Group (2009). Safety, ethical considerations, and application guidelines for the use of transcranial magnetic stimulation in clinical practice and research. Clinical neurophysiology: official journal of the International Federation of Clinical Neurophysiology, 120(12), 2008–2039. doi:10.1016/j.clinph.2009.08.016

What to Expect & Possible Side Effects

TMS therapy is a treatment that occurs five days a week for 6 weeks. Your doctor will determine the ideal stimulation intensity (dosage) and treatment protocol.

To determine the proper dosage, your doctor will perform a mapping called a 'motor threshold assessment'. During this process, an electromagnetic coil will be placed against a part of your head called the motor cortex. A series of single pulses at different power levels will be delivered in order to find the specific intensity (dosage) to cause your thumb to twitch. The doctor will make calculations based on the number of thumb twitches and the intensity of the pulse to determine your dosage.

For treatment, the coil will be placed on the specific treatment location determined during the motor threshold assessment. Each treatment will last between 3 and 37.5 minutes depending on the clinical protocol prescribed by your physician.



TMS is a safe and well tolerated treatment with few known side effects. Clinical studies show that the most common side effects are mild to moderate scalp discomfort and mild headaches, both of which are short term⁷.

7. Gaynes BN, Lloyd SW, Lux L, et al. Repetitive transcranial magnetic stimulation for treatment-resistant depression: a systematic review and meta-analysis. J Clin Psychiatry. 2014;75(5):477—489

^{*}Short-term transient side effects have been noted in some cases. There have been infrequent reports of seizures associated with TMS. The estimated seizure risk is 0.03% of treatment sessions, or <1% of patients ⁶

Tish's TMS Story

Over 20 years ago, I was diagnosed with major depression. I've tried numerous antidepressants and natural supplements to battle this issue, but nothing ever gave me complete relief. Then came more diagnoses; fibromyalgia, chronic fatigue syndrome, and trigeminal neuralgia.

I became even more depressed, every day I coped with pain - my body hurt all over, and I could barely function well enough each day to pretend to be normal. I coped with this depression and pain by sleeping at least 16 hours a day. I even stopped working because my brain was so fatigued that I could barely concentrate on anything. I was taking high doses of antidepressants and other [pain] medications, but neither seemed to be very effective. I decided to turn to TMS Therapy in desperation when my health seemed to be at its worst.

new hope! I encourage anyone who suffers from depression that hasn't been successfully treated

ssfully treated try this protocol After two weeks of treatment, I noticed that I wasn't sleeping as much. Also, my brain seemed to be waking up, and I was able to concentrate more.

After three weeks of TMS, I become more involved in my family and their lives again, and I noticed the absence of the negative voices in my head. Now, [at the time of writing], I can honestly say that I feel a sense of true contentment. My head feels clearer, and my burdens seem lighter. In addition, I've been successful at tapering down my antidepressants to less than a fourth of my original dose. TMS Therapy has truly given me new hope! I encourage anyone who suffers from depression that hasn't been successfully treated with medication to try this

protocol with the goal of relief or even remission from depression.

Bridget's TMS Story

I had suffered from horrible depression and anxiety for most of my life. I lived in a deep dark fog. I spent years looking for help. After years of searching and trying multiple medications, I finally found a doctor who gave me a medication that worked as well as talk-therapy, and I felt I was doing much better. I felt like I could finally get out in the world and be among the "normal" people.

A few months after having my daughter, I decided to go back to work. Everything was going good for me; got married to an amazing man, and had a baby, I found an amazing new job, and I made friends! Then one day, my depression came crashing back down on me with a vengeance.

I immediately called my doctor, and we decided the medications were no longer helping me. That is when my doctor suggested TMS Therapy. The day I began treatment was one of the best days of my life. Three weeks later, I was taking walks, seeing colors, hearing the birds (and actually listening to them) and, yes, smelling the roses!

TMS therapy has given me a new lease or life, and I thank God every single day that He led me to this treatment.

All of the little things that people take for granted were giving me such peace and joy. I couldn't remember ever feeling this way.

TMS therapy has given me a new lease on life, and I thank God every single day that He led me to this treatment. It has now been 3 months [at the time of writing] I have been in remission, and I am still as happy as the day I finished my treatments. My family has seen the difference, and I have so much fun with them, something I never thought I would do. It was a great experience, and I stand behind TMS Therapy 1000%.

Stacie's TMS Story

For the last 15 years, because of depression, I have slowly watched my life slip away from me. I tried over 15 different anti-depressants, exercised, took supplements, made dietary changes, tried meditation and yoga, read self-help books, as well as saw multiple doctors/therapists, I sill fell deeper into the abyss.

Not only did I suffer, but it also seemed everyone and everything around me suffered — family, friends, work, home, and church. I could not get enough sleep, and I was always exhausted, irritable, worried, sad, confused, and scared. I was not able to provide for the needs of my children because of crushing fatigue, hopelessness, pain, and sadness. My marriage changed from happy to

TMS worked! I can't say TMS treatment "gave me my life back", because the lif I have now is a life I have never known My life is full of joy, light, energy, and promise. strained as my husband became my care-taker. My exhaustion and inability to focus and adequately function at work meant I was unable to be mentally present for anyone or anything. When my doctor suggested TMS, I jumped at the opportunity.

TMS worked! I can't say TMS treatment "gave me my life back", because the life I have now is a life I have never known. My life is full of joy, light, energy, and promise. Not only am I now easily excelling at my job. My family life is now peaceful because I am present and they no longer have the burden of

worrying about me. Instead of waking up wondering how I am going to manage to get through the day, I wake up eager to get going. Without trying to manage through a layer of worry, confusion, and exhaustion, I can get things done! Until the day I die, I will be grateful and sing the praises of TMS to anyone who will listen. I thank God, my doctor, TMS creators, and anyone else even remotely involved with this therapy for literally saving my life. In 6 weeks, I went from a suicidal, nearly bed-ridden, shell of a person to a happy, energetic, and hopeful woman. I never thought I would ever be able to say these words again, but — I AM SO VERY HAPPY!



They said, "something's different about You and whatever it is, we like it." Desiree. TMS Patient





Magstim® TMS Therapy

- Safe & Effective³
- Few Known Side Effects
- Non-Invasive

- No Anesthesia
- Outpatient Treatment
- Covered by Insurance