

# Major Depressive Disorder (MDD)

Depression affects over 17 million adults in the U.S. If you or a family member suffers from depression, you know how difficult it can be.

Historically, depression has been treated with some combination of drugs, talk therapy, and/or electroconvulsive therapy. For some patients, these treatments work well. Nevertheless, drugs can have side effects; and electroconvulsive therapy can lead to loss of memory and other unwanted side effects.

For many patients with MDD, drugs and other kinds of therapy don't work well enough to enable them to live happy, productive lives.

*The NEST may be able to help you overcome depression without drugs.*

## NEST

NEST (NeoSync EEG Synchronized TMS) is a new, noninvasive product that is being studied for the treatment of MDD. It is an outpatient procedure that incorporates a new technology called sTMS (synchronized transcranial magnetic stimulation).

Research has shown that the neuronal activity in the brains of people with MDD is overly rhythmic resulting in low energy in the areas directly associated with depressive symptoms. NEST is based on the theory that the brain is a resonant system and can be "tuned" using low energy, sinusoidal (shaped like a sine curve) magnetic energy fields synchronized with each patient's brain waves. It is believed that this will restore normal brain rhythm, function and energy, relieving or eliminating the depressive symptoms.

NEST is completely non-invasive. As shown in the picture below, the patient lies comfortably, the NEST treatment arm is lowered against the patient's head, and therapy is delivered for approximately 30 minutes.



### What's involved in the NEST - MDD study?

The NEST protocol consists of 5 treatments per week for 6 weeks. Each treatment takes approximately 30 minutes. There isn't any recovery period, so the patient leaves right after each treatment is over. Patients must be between 22 and 65 years old.

### What is sTMS?

sTMS (synchronized transcranial magnetic stimulation) uses a series of magnets to create a low energy, sinusoidal (shaped like a sine curve) magnetic energy field synchronized to the intrinsic alpha wave (IAF) of each individual patient. sTMS causes virtually no pain or discomfort, and minimal side effects were observed in preliminary studies.

### How does sTMS work?

Many objective measurements like PET scans, MRI and SPECT confirm that MDD patients often have low neuronal activity in regions of the brain associated with mood. Their brain waves, measured with EEG, are too rhythmic, lacking energy. It is theorized that sTMS can stimulate or reset these neurons back to a normal, higher energy state.

### Would I stop my medication if I became part of a NEST-MDD study?

Yes. The study is designed to test the effect of the NEST on your depression. The best way to assess that is if the NEST is tested alone as a method of treatment.

### What does NEST treatment cost?

For patients who are accepted into the study, the 30 treatments are provided at no cost.

### Is NEST approved by the FDA?

Not yet. The study is designed to help gather the information necessary for the FDA to approve the NEST. The study is, however, approved by the IRB (Institutional Review Board) of your hospital.

### How do I Find NEST?

Currently, NEST is being studied in selected clinical trial sites across the U.S. Ask your clinician or refer to [www.clinicaltrials.gov](http://www.clinicaltrials.gov) (ID: NCT01370733).



## A New Tool for Fighting Depression

The NEST\* is a non-invasive, non-drug tool for your clinician to use to help you fight your depression. It is based on cutting edge scientific discoveries and could make the difference for you.

Studies are under way throughout the United States using the NEST as part of treatment programs for depression.

\* For investigational use only.  
Not approved for use in the United States.

**For patients with depression, new, non-invasive treatments are showing promise.**

New clinical studies to treat depression are being initiated in sites across the US to test a new, innovative technology. **You may be eligible to participate.**

**NeoSync**<sup>TM</sup>

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**Depression can take over your life.**



*The NEST<sup>TM</sup> is designed to treat depression non-invasively.*

**NeoSync**<sup>TM</sup>