

LOW INTENSITY FOCUSED ULTRASOUND FOR TREATMENT-RESISTANT DEPRESSION

Portable Non-Invasive Therapeutic Device

URGENT NEED

EFFECTIVE, ACCESSIBLE SOLUTION FOR DEPRESSION

Depression affects over 280 million people worldwide, with many experiencing treatment-resistant symptoms despite medication and therapy. Current options often require long durations with high dropout rates, or potentially addictive pharmaceuticals with lasting side effects.

Now more than ever, there is a critical need for rapid, effective, and accessible treatments that improve outcomes and quality of life for those struggling with persistent depression; one that doesn't require medications, invasive procedures, or intense psychotherapy.

*Significant Mood Improvement
in Under Two Hours;
No Drugs, No Surgery*

Solution: Open-LIFU

Open-LIFU is a wearable low intensity focused ultrasound (LIFU) device with potential for major advances in depression treatment, especially for those unresponsive to traditional therapies.

Delivering precise, low-intensity focused ultrasound to targeted brain regions, Open-LIFU provides rapid, non-invasive relief. In a clinical trial, participants experienced improved mood and well-being much faster than with conventional treatments, without drugs or hospitalization.

KEY BENEFITS:

- ◆ **RAPID, EFFECTIVE RELIEF:** Significantly reduces depressive symptoms in under two hours, with 45–60% showing improvement and 35% reaching clinical remission.
- ◆ **PRECISION NEUROMODULATION:** Uses an advanced, electronically steerable array to target the anterior medial prefrontal cortex—linked to persistent negative thoughts—without invasive procedures or long hospital visits.
- ◆ **WELL-TOLERATED AND SAFE:** Minimal side effects and a low dropout rate demonstrated the therapy's acceptability and ease of use.

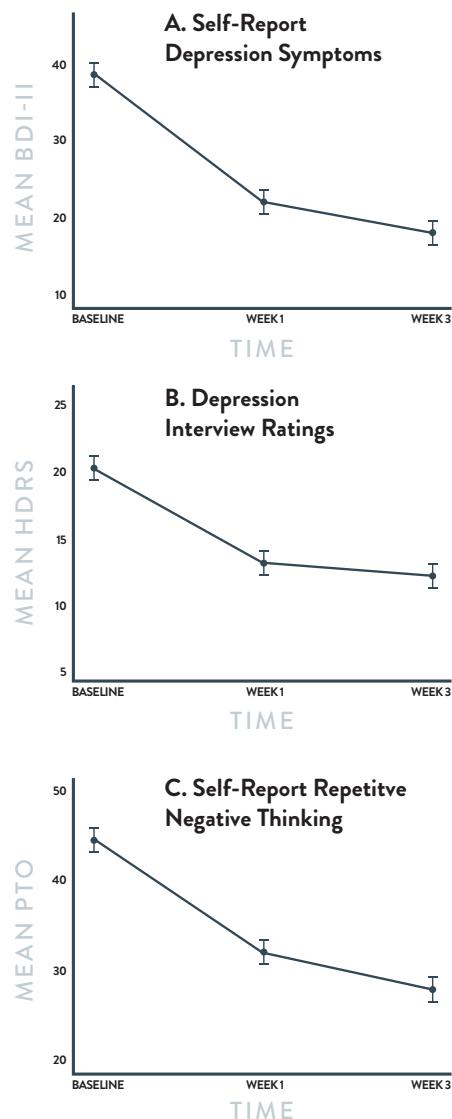
Open-LIFU

- ◆ **DEVELOPMENT KIT:** Pre-assembled, rapid prototyping
- ◆ **PORTABLE:** Lightweight, small footprint

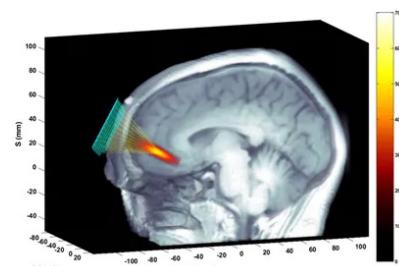
- ◆ **NON-INVASIVE:** External wearable devices
- ◆ **RAPID RESULTS:** Significant improvement in just weeks



Rapid symptom reduction achieved in less than two hours of total treatment time



Clinical Study Shows Significant Reductions in Depression



Ultrasound focused on the amPFC.

Participants receiving non-invasive transcranial focused ultrasound (Open-LIFU) showed substantial, clinically meaningful decreases in:

- ◆ Depression severity measured by the Beck Depression Inventory-II (BDI-II) and Hamilton Depression Rating Scale (HDRS)
- ◆ Repetitive negative thinking assessed by the Perseverative Thinking Questionnaire (PTQ)

Outstanding safety profile:

- ◆ No significant heating of skin or skull, all safety benchmarks met throughout the study
- ◆ Post-treatment MRI (including susceptibility-weighted imaging) showed no signs of micro-hemorrhages or tissue damage

Source: *Frontiers in Psychiatry*: "Transcranial focused ultrasound targeting the default mode network for the treatment of depression", Apr 3, 2025.



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