

Multiple instruments can best assess transcranial magnetic stimulation success

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Symptom burden during repetitive transcranial magnetic stimulation

(rTMS) treatment for major depressive disorder (MDD) may be most accurately assessed through the use of multiple instruments, according to a study published in the December issue of *Psychiatry Research*.

Michael K. Leuchter, M.D., from the University of California, Los Angeles, and colleagues compared the performance of four scales in measuring symptom change among 708 participants with MDD undergoing clinical rTMS [treatment](#).

The researchers found that all four scales (Inventory of Depressive Symptomatology 30-item, Patient Health Questionnaire 9-item [PHQ], Profile of Mood States 30-item, and Hamilton Depression Rating Scale 17-item) were correlated and detected significant improvement. There was significant variation seen in the degree of improvement over time as well as response (33 to 50 percent) and [remission](#) (20 to 24 percent).

Across all scales, higher baseline severity was associated with a lower likelihood of remission and greater improvement by sessions 5 and 10 predicted response. There was a 14 to 36 percent risk for failing to detect response/remission indicated by another scale by only using a single scale to assess outcome. The PHQ was the scale most likely to indicate improvement and least likely to miss response or remission.

"What we're seeing in our analysis of our large data set is that a majority of patients get significantly better," Leuchter said in a statement. "What's most exciting to see is that these patients generally start reporting improvement within a week of starting treatment, even though the treatment itself continues for several weeks to build the full benefit."

Two authors disclosed ties to the medical technology industry.

More information: Michael K. Leuchter et al, A comparison of self- and observer-rated scales for detecting clinical improvement during

repetitive transcranial stimulation (rTMS) treatment of depression, *Psychiatry Research* (2023). [DOI: 10.1016/j.psychres.2023.115608](https://doi.org/10.1016/j.psychres.2023.115608)

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