

Excitatory brain stimulation protocols beneficial in schizophrenia

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Excitatory noninvasive brain stimulation (NIBS) interventions over the left dorsolateral prefrontal cortex are associated with improvement in the severity of negative symptoms in schizophrenia, according to a systematic review and network meta-analysis published online June 22 in *JAMA Psychiatry*.

Ping-Tao Tseng, M.D., Ph.D., from Asia University in Taichung, Taiwan, and colleagues compared the efficacy and acceptability of different NIBS interventions for treating negative symptoms among

participants with schizophrenia. Data were included from 48 randomized clinical trials (RCTs) with 2,211 participants.

The researchers found that excitatory NIBS strategies over the left dorsolateral prefrontal cortex with or without other inhibitory stimulation protocols in the contralateral regions of the brain were associated with significantly larger reductions in negative symptoms compared with sham control interventions (standardized mean differences, -2.19 for [high-definition](#) transcranial random noise stimulation; -1.32 for intermittent theta-burst stimulation; -1.28 for anodal transcranial direct current stimulation; -0.43 for [high-frequency repetitive transcranial magnetic stimulation](#) [rTMS]; and -0.45 for extreme high-frequency rTMS). There was no significant between-group difference observed in acceptability.

"Our findings might serve as a starting point for future large-scale RCTs with longer follow-up periods and sham control to investigate the association between NIBS and negative symptoms in schizophrenia," the authors write.

One author disclosed financial ties to the pharmaceutical industry.

More information: Ping-Tao Tseng et al, Assessment of Noninvasive Brain Stimulation Interventions for Negative Symptoms of Schizophrenia, *JAMA Psychiatry* (2022). [DOI: 10.1001/jamapsychiatry.2022.1513](#)

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