

ECT-induced seizure length tied to major depressive disorder remission

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For patients with major depressive disorder (MDD), seizure duration of 60 to 69 seconds induced by electroconvulsive therapy (ECT) is associated with the highest remission rates compared with seizure duration of less than 20 seconds, according to a study [published](#) online

July 25 in *JAMA Network Open*.

Cecilia Gillving, from the University Health Care Research Centre at Örebro University in Sweden, and colleagues conducted a population-based cohort study using data from the Swedish National Quality Register for ECT to examine the association between seizure duration, potential confounding variables, and ECT treatment outcome. A total of 6,998 patients with unipolar MDD treated with unilateral electrode placement were included. The analysis used electroencephalographic (EEG) seizure duration from the first ECT treatment session for each patient.

The researchers found that 39.3% of patients achieved remission after ECT. The highest remission rates were seen for patients with EEG seizure duration of 60 to 69 seconds compared with those with seizure duration of less than 20 seconds (odds ratio, 2.17). Associations were seen for anticonvulsant medications with shorter seizure duration and lower remission rates (e.g., lamotrigine: β coefficient, -6.02 ; adjusted odds ratio, 0.67).

"This [cohort study](#) is the largest yet supporting the association between seizure length and remission from MDD after ECT," the authors write. "Seizure duration appeared to be indicative of adequate treatment quality."

Several authors disclosed ties to the pharmaceutical industry.

More information: Cecilia Gillving et al, Seizure Duration and Electroconvulsive Therapy in Major Depressive Disorder, *JAMA Network Open* (2024). [DOI: 10.1001/jamanetworkopen.2024.22738](https://doi.org/10.1001/jamanetworkopen.2024.22738)

James Luccarelli, Unraveling the Importance of Seizure Duration in Electroconvulsive Therapy, *JAMA Network Open* (2024). [DOI:](#)

[10.1001/jamanetworkopen.2024.22693](https://jamanetwork.com/doi/10.1001/jamanetworkopen.2024.22693)

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