

Verbal Memory after anterior temporal lobectomy

Research aimed to broaden understanding of learning verbal material in participants with left- and right-sided [mesial temporal lobe epilepsy](#) (MTLE). Deifelt Streese et al. modeled word list learning to determine how anterior [temporal lobe resection](#) affects [verbal learning](#). Verbal learning (across trials) was assessed using the first five trials of the Rey Auditory Verbal Learning Test (RAVLT) in 128 participants with MTLE. Mixed-effects modeling was used to determine whether learning curves differed between participants with left- and right-sided MTLE pre-and post- anterior temporal lobe resection. Laterality of MTLE had a significant effect on both the model intercept and the linear slope, whereby participants with left-sided MTLE retained fewer words on both the first trial and on each subsequent trial than participants with right-sided MTLE; and this holds regardless of anterior temporal lobe resection status ($t(117) = -3.516$, $p < .001$; $t(120.50) = -2.049$, $p = .042$, for intercept and linear slope, respectively). There were no significant differences in the [learning curves](#) after anterior temporal lobe resection surgery in either left- or right-sided MTLE. These findings suggest that acquisition of verbal information may be especially impaired in patients with left-sided MTLE. Further, they showed that verbal learning across trials was not affected by surgical intervention. This finding contributes to the broader understanding of the impacts of anterior temporal lobe resection on verbal memory function and has important implications for the clinical management and surgical planning for patients with temporal lobe epilepsy ¹⁾.

¹⁾

Deifelt Streese C, Manzel K, Wu Z, Tranel D. Lateralized differences for [verbal learning](#) across [trials](#) in [temporal lobe epilepsy](#) are not affected by surgical intervention. *Epilepsy Behav.* 2022 Jan 19;128:108561. doi: 10.1016/j.yebeh.2022.108561. Epub ahead of print. PMID: 35065396.

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