

Damage to the left precentral gyrus is associated with Apraxia of speech (AOS) in acute to subacute stroke patients, suggesting a role of this brain region in motor speech production ¹⁾.

A study supports the role of the left precentral gyrus in phonological output computation as well as seizure activity in a case of reading epilepsy ²⁾.

Case reports

A Japanese patient with pure agraphia displaying differential disturbances in processing Kanji (morphogram) and Kana (syllabogram) letters after an infarction in the middle and superior portions of the left precentral gyrus. Kana errors reflected the patient's difficulty with retrieving both motor and visual letter images, whereas Kanji errors included partial letter stroke omissions or additions. This present case suggests that differences in writing disturbances between Kana and Kanji letters are caused by a differential dependency on letter motor images ³⁾.

¹⁾

Itabashi R, Nishio Y, Kataoka Y, Yazawa Y, Furui E, Matsuda M, Mori E. Damage to the Left Precentral Gyrus Is Associated With Apraxia of Speech in Acute Stroke. *Stroke*. 2016 Jan;47(1):31-6. doi: 10.1161/STROKEAHA.115.010402. Epub 2015 Dec 8. PubMed PMID: 26645260.

²⁾

Safi D, Béland R, Nguyen DK, Pouliot P, Mohamed IS, Vannasing P, Tremblay J, Lassonde M, Gallagher A. Recruitment of the left precentral gyrus in reading epilepsy: A multimodal neuroimaging study. *Epilepsy Behav Case Rep*. 2016 Jan 21;5:19-22. doi: 10.1016/j.ebcr.2016.01.003. eCollection 2016. PubMed PMID: 26909333; PubMed Central PMCID: PMC4744333.

³⁾

Kurosaki Y, Hashimoto R, Tatsumi H, Hadano K. Pure agraphia after infarction in the superior and middle portions of the left precentral gyrus: Dissociation between Kanji and Kana. *J Clin Neurosci*. 2016 Apr;26:150-2. doi: 10.1016/j.jocn.2015.08.030. Epub 2015 Nov 17. PubMed PMID: 26597609.

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