

Anomia

A problem with word finding. Impaired recall of words with no impairment of comprehension or the capacity to repeat the words.

Unsuccessful retrieval of proper names (PNs) is commonly observed in patients suffering from neurological conditions such as [stroke](#) or [epilepsy](#). While a large body of works has suggested that PN retrieval relies on a cortical network centered on the left [anterior temporal lobe](#) (ATL), much less is known about the [white matter](#) connections underpinning this process. Sparse studies provided evidence for a possible role of the [uncinate fasciculus](#), but the [inferior longitudinal fasciculus](#) (ILF) might also contribute, since it mainly projects into the ATL, interconnects it with the posterior lexical interface and is engaged in common name (CN) retrieval. To ascertain this hypothesis, Burkhardt et al. assessed 58 patients having undergone a neurosurgery for a left [low-grade glioma](#) by means of a famous [face naming task](#). The behavioural data were processed following a multilevel lesion approach, including location-based analyses, [voxel](#)-based lesion-symptom mapping (VLSM) and disconnection-symptom mapping. Different statistical models were generated to control for sociodemographic data, familiarity, biographical knowledge and control cognitive performances (i.e., semantic and episodic memory and CN retrieval). Overall, VLSM analyses indicated that damage to the mid-to-anterior part of the ventro-basal temporal cortex was especially associated with PN retrieval deficits. As expected, tract-oriented analyses showed that the left ILF was the most strongly associated pathway. Our results provide evidence for the pivotal role of the ILF in the PN retrieval network. This novel finding paves the way for a better understanding of the pathophysiological bases underlying PN retrieval difficulties in the various neurological conditions marked by white matter abnormalities ¹⁾.

see [tactile anomia](#)

¹⁾

Burkhardt E, Zemmoura I, Hirsch F, Lemaitre AL, Deverdun J, Moritz-Gasser S, Duffau H, Herbert G. The central role of the left inferior longitudinal fasciculus in the face-name retrieval network. Hum Brain Mapp. 2023 Apr 13. doi: 10.1002/hbm.26279. Epub ahead of print. PMID: 37051699.

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