NEUROSCIENCE

Controlled forgetting

Curr. Biol. https://doi.org/10.1016/j.cub.2018.07.042 (2018)

Credit: sebastiano secondi/Alamy Stock Photo

Some things we encounter we know we have to memorize for future occasions, but others, we realize we might just as well forget. But how exactly does the brain manage this voluntary forgetting?

Carina Oehrn, of Marburg University, and colleagues addressed this question in an elegant study in which patients who were prepared for surgery to address their epileptic seizures — and therefore had electrodes implanted that measure neuronal activity directly — played a task in which some words had to be remembered, while others had to be forgotten. The authors found that directed forgetting relies on an interplay between brain structures, where communication flow (measured as synchronization in neuronal activity) from prefrontal areas to the hippocampus increases when participants process words that they are instructed to forget.

The present results support findings from studies that used less-direct recordings of neuronal activity and have come to similar conclusions. There is considerable interest in voluntary forgetting, not least because of the possibility that a better a understanding of the mechanism may one day help to develop interventions, for example, for people suffering from traumatic experiences.

Anne-Marike Schiffer

Published online: 27 September 2018
https://doi.org/10.1038/s41562-018-0453-x