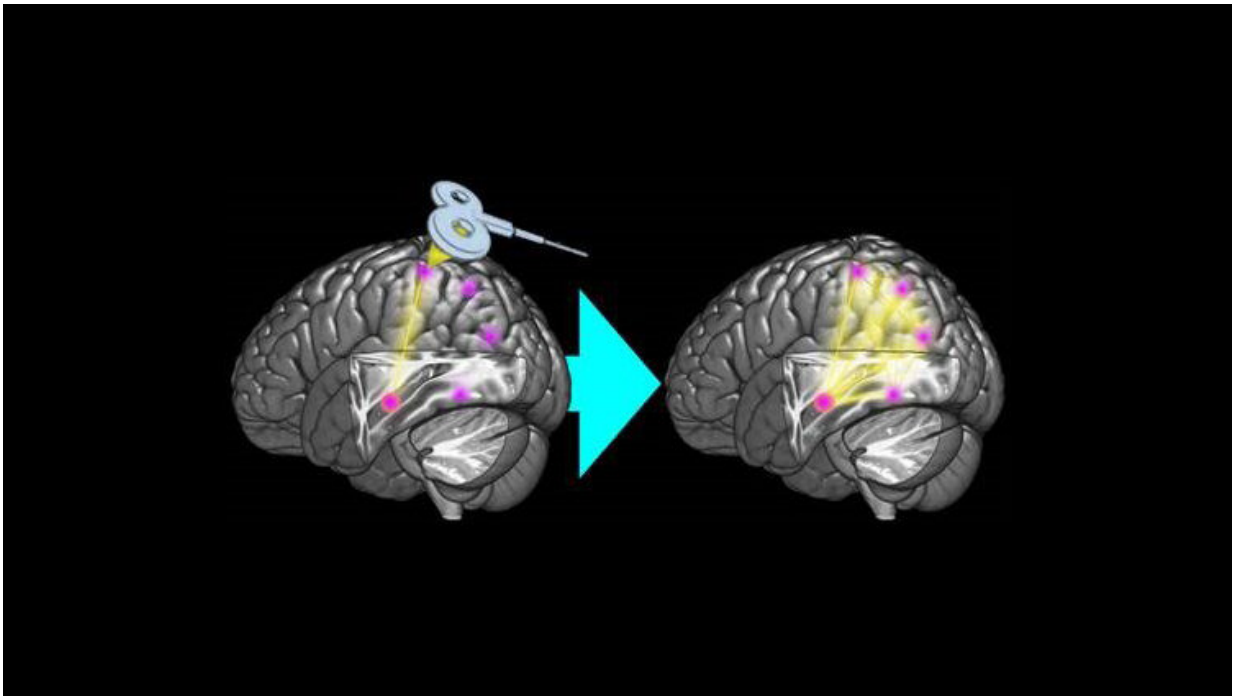


Enhancing memory network via brain stimulation

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(Left Panel) Repetitive transcranial magnetic stimulation (rTMS) was guided to the region in the posterior parietal cortex (PPC) that was maximally connected to the hippocampus at baseline. This PPC region was stimulated with 20-Hz stimulation during three consecutive daily sessions and changes in functional connectivity were measured 24 hours after the last rTMS session. (Right Panel) We observed significant increases in functional connectivity between the targeted hippocampal region and several cortical regions including the left precuneus, lateral parietal cortex, superior parietal cortex, and inferior frontal gyrus. Credit: Michael Freedberg

Magnetic stimulation of the posterior parietal cortex increases functional connectivity of a neural network implicated in memory, shows human research published in *eNeuro*. This finding confirms a previous study, validating further exploration of this technique for experimental and clinical applications.

Five daily sessions of repetitive transcranial magnetic stimulation had been previously shown by Wang et al. to increase functional connectivity of a hippocampal brain network and improve [memory](#) performance in humans.

Freedberg et al. now report a successful replication and extension of the original neuroimaging findings with fewer stimulation sessions in [healthy adults](#).

The researchers observed enhanced functional connectivity after as few as three daily sessions.

Unlike the original study, they did not assess memory performance.

More information: Michael Freedberg et al, Persistent enhancement of hippocampal network connectivity by parietal rTMS is reproducible, *eneuro* (2019). [DOI: 10.1523/ENEURO.0129-19.2019](https://doi.org/10.1523/ENEURO.0129-19.2019)

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