Researcher: Electricity improves memory

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A German study finds that mild electrical stimulation of the brain during sleep appears to improve memory.

Jan Born of the University of Lubeck tested 13 medical students by having them memorize a list of words. He found that they did better after a nap and still better if a mild electrical current was passed through their brains during the nap, The Guardian reported.

Born believes that the electrical stimulation enhanced "slow wave sleep," the first part of the sleep cycle. During that phase, researchers have measured regular electrical fluctuations in the prefrontal neocortex.

The current, applied through electrodes stuck to the scalp, was timed to match those fluctuations. Current applied to other parts of the brain or at different frequencies had no effect on ability to memorize.

On average, the volunteer remembers 37.42 words before a nap and 39.5 afterwards. With the electrical stimulation, that increased to 41.27.