

Sleep disturbances hurt memory consolidation

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Sleep disturbance negatively impacts the memory consolidation and enhancement that usually occurs with a good night's sleep, according to a study published Mar. 28 in the open access journal *PLoS ONE*.

It is becoming widely accepted that sleep is crucial for cementing long-term memory, so in this new study, the researchers went a step further to investigate whether these beneficial effects only arise after some minimum amount of continuous sleep. The authors, led by Ina Djonlagic at Brigham and Women's Hospital in Boston, found that patients with [sleep apnea](#), which leads to sleep disturbances, showed significantly lower overnight improvement and plateau performance for a newly learned motor task than seen for the control group. Both groups had comparable initial learning performance during the training phase, suggesting that the overnight sleep disturbance was likely related to the subsequent poorer performance.

"Optimal overnight [memory consolidation](#) in humans requires a certain amount of sleep continuity independent of the total amount of sleep" conclude the authors.

More information: Djonlagic I, Saboisky J, Carusona A, Stickgold R, Malhotra A (2012) Increased Sleep Fragmentation Leads to Impaired Off-Line Consolidation of Motor Memories in Humans. *PLoS ONE* 7(3): e34106. [doi:10.1371/journal.pone.0034106](https://doi.org/10.1371/journal.pone.0034106)

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