

Sleep to forget: Downtime helps our brains refine, sharpen memories

[W]hile scientists have long understood that our memories rely on connections being built between neurons in our brains, it's not been clear how sleep actually helps to consolidate that information.

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Now, a pair of studies from the University of Wisconsin and Johns Hopkins University have provided evidence for another benefit to sleeping, suggesting that it allows us to 'prune' our memories and fine-tune the lessons we've learned while awake.

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Over the past four years, the biologists analysed thin brain shavings from a handful of mice which had slept, another few which had been kept awake and entertained with toys, and a few more which were kept awake but unstimulated.

The scientists then measured the size and shape of some 6,920 synapses across hundreds of brain sections. Slices taken from the sleeping mice contained synapses which were 18 percent smaller than the synapses in those which were awake.

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"Sleep allows the brain to reset, helping integrate, newly learned material with consolidated memories, so the brain can begin anew the next day," [explained](#) Giulio Tononi of the University of Wisconsin's Centre for Sleep and Consciousness....

[The two studies involved can be found [here](#) and [here](#).]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [Scientists have figured out how our brains sharpen our memories while we sleep](#)