Don't sleep on it: going to bed mad makes it worse

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Credit: Vera Kratochvil/public domain

A good night's sleep may reinforce negative memories in the brain,
researchers said on Tuesday, lending scientific credence to the time-worn caution against going to bed angry.

Slipping into slumber while holding on to a freshly-formed bad memory engraves it in the brain, making it harder to shake off later, a team from China and the United States reported in the journal Nature Communications.

"This study suggests that there is certain merit in this age-old advice: 'Do not go to bed angry'," study co-author Yunzhe Liu, who conducted the research at Beijing Normal University, told AFP.

"We would suggest to first resolve (the) argument before... bed."

Liu and colleagues used 73 male college students to test the impact of sleep on memory.

The participants were trained over two days to associate specific images with negative memories.

Later, they were made to look at the pictures again and instructed either to recall the negative associations, or to fight against it and not let the memory enter their mind.

The test was done twice—once after the participants had had a night of sleep, and once only half-an-hour after a training session.

All the while, scientists scanned the participants' brain activity.

Participants found it much harder to suppress memories after sleep, the team found.

And the scans revealed the souvenirs were likely being stored in a part of
the brain with longer-term memory connections.

Sleeping is known to affect how newly-acquired information is stored and processed in the brain, moving from short- to longer-term networks.

Memories of negative or traumatic events often last longer than those of positive or neutral experiences, said the research team.

But they can, to an extent, be consciously controlled.

An inability to suppress bad memories has been linked to a number of psychiatric problems including depression and post traumatic stress disorder (PTSD).

Before this latest study, "we did not know whether it is better or worse to suppress memories before or after sleep", said Liu.

Better understanding of such processes may boost the treatment of conditions such as PTSD.

"For example, sleep deprivation immediately after traumatic experiences may prevent traumatic memories from being consolidated... and thus provide the opportunity to block the formation of traumatic memories," the study authors wrote.

**More information:** Nature Communications, nature.com/articles/doi:10.1038/ncomms13375

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