

- Memory

Sleep can help remember faces and names: study

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Better recall of people's names and faces may be a matter of improved sleep, a study published Wednesday by the journal NPJ: Science of Learning found.



Study participants' name recall was enhanced when memories of newly learned face-name associations were reactivated using previously recorded audio while they were sleeping, with the key being uninterrupted, deep sleep, the researchers said. Those with uninterrupted sleep who heard recordings of people's names averaged just over 1.5 more names recalled when shown pictures of the people than those who did not experience deep sleep when they heard the recordings, the data showed. Among study participants with disrupted sleep based on electroencephalogram readings, memory reactivation during sleep did not help and may have had a negative effect, they said.

EEG records electrical activity in the brain through electrodes placed on the scalp, according to the researchers.

"We already know that some sleep disorders like apnea can impair memory," study co-author Nathan Whitmore said in a press release.

"Our research suggests a potential explanation for this: frequent sleep interruptions at night might be degrading memory," said Whitmore, a doctoral student at Northwestern University in Evanston, Ill.

Earlier studies have found that more and better sleep can improve memory and brain health and that light sleep may hinder cognitive function.

For this study, Whitmore and his colleagues asked 24 participants aged 18 to 31 years to memorize the faces and names of 40 students from a hypothetical Latin American history class and another 40 from a Japanese history class.

When each face was shown again, they were asked to repeat the name that went with it, the researchers said.

After the memory exercise, participants took a nap while the researchers carefully monitored brain activity by using EEG.

When participants reached a deepsleep state, as measured by EEG, some of the names were softly played on a speaker with music that was associated with one of the classes, according to the researchers.

When they woke up, they were retested on their ability to recall the name that went with each face, the researchers said.

Participants, on average, recalled 74 of the 80 names before sleep and 75 of the 80 names after sleep, the data showed.

However, those who experienced deep sleep during the playing of the name recordings recalled, on average, about 1.5 more names than those who slept less well, the researchers said.

In future studies, the researchers hope to assess whether sleep disruption always harms brain function and whether it can be used to weaken unwanted memories, such as abuse or trauma, they said.

"It's a new and exciting finding about sleep, because it tells us that the way information is reactivated during sleep to improve memory storage is linked with high-quality sleep," Whitmore said.