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Sleep Helps Process Traumatic Experiences

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Summary: A new study reveals sleep could be used as an early prevention strategy against PTSD.

Source: University of Zurich.

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If we sleep in the first 24 hours after a traumatic experience, this helps pigeonhole and process the distressing memories more effectively, as researchers from the University of Zurich and the Psychiatric University Hospital Zurich demonstrate in a new study. Sleep could thus be used as an early prevention strategy for posttraumatic stress disorders.

Does sleep help process stress and trauma? Or does it actually intensify emotional reactions and memories of the event? This previously unanswered question is highly relevant for the prevention of trauma-related disorders, such as posttraumatic stress disorder (PTSD). How extremely distressing experiences are processed right at the outset can influence the further course and development of posttraumatic stress disorders. PTSD patients experience highly emotional and distressing memories or even flashbacks where they feel as if they are experiencing their trauma all over again. Sleep could play a key role in processing what they have suffered.

A study conducted by a team from the Department of Psychology at the University of Zurich and the Psychiatric University Hospital Zurich has now tackled the question as to whether sleep during the first 24 hours after a trauma has a positive impact on highly emotional distress and memories related to traumatic events. In the lab, the researchers showed test subjects a traumatic video. The recurring memories of the images in the film that haunted the test subjects for a few days were recorded in detail in a diary. Virtually out of the blue, the test

subjects would see a snapshot of what they had seen in their mind's eye, reawakening the unpleasant feelings and thoughts they had experienced during the film. The quality of these memories resembles those of patients suffering from posttraumatic stress disorders. Other than after a traumatic event, however, they reliably disappear after a few days.

Fewer Distressing Emotional Memories

Study participants were randomly assigned to two groups. One slept in the lab for a night after the video while their sleep was recorded via an electroencephalograph (EEG); the other group remained awake. "Our results reveal that people who slept after the film had fewer and less distressing recurring emotional memories than those who were awake," explains first author Birgit Kleim from the Department of Experimental Psychopathology and Psychotherapy at the University of Zurich. "This supports the assumption that sleep may have a protective effect in the aftermath of traumatic experiences."



(<https://i1.wp.com/neurosciencenews.com/files/2016/12/sleep-trauma-neurosciencenews.jpg>)

Sleep helps process traumatic experiences. NeuroscienceNews image is will appear in the University of Zurich press release.

On the one hand, sleep can help weaken emotions connected to an existing memory, such as fear caused by traumatic experiences, for instance. On the other hand, it also helps contextualize the recollections, process them informationally and store these memories. However, this process presumably takes several nights.

According to the authors of the study, recommendations on early treatments and dealing with traumatized people in the early phase are few and far between. "Our approach offers an important non-invasive alternative to the current attempts to erase traumatic memories or treat them with medication," says Birgit Kleim. "The use of sleep might prove to be a suitable and natural early prevention strategy."

ABOUT THIS NEUROSCIENCE RESEARCH ARTICLE

Source: [University of Zurich \(http://www.media.uzh.ch/en\)](http://www.media.uzh.ch/en)

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Original Research: [Abstract \(http://www.journalsleep.org/ViewAbstract.aspx?pid=30874\)](http://www.journalsleep.org/ViewAbstract.aspx?pid=30874) for "Effects of Sleep after Experimental Trauma on Intrusive Emotional Memories" by Birgit Kleim, PhD; Julia Wysokowsky, MSc; Nuria Schmid, MSc; Erich Seifritz, MD; and Björn Rasch, PhD in *Sleep*. Published online December 2016
[doi:10.5665/sleep.6310 \(http://dx.doi.org/10.5665/sleep.6310\)](http://dx.doi.org/10.5665/sleep.6310)

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<<http://neurosciencenews.com/sleep-trauma-psychology-5732/>>.

Abstract

Effects of Sleep after Experimental Trauma on Intrusive Emotional Memories

Study Objectives:

To investigate sleep's effect in the immediate aftermath of experiencing an analog trauma in the laboratory on reducing intrusive emotional memory formation.

Methods:

Sixty-five healthy women were exposed to an experimental laboratory trauma. They viewed a neutral and a trauma film in the laboratory and were randomly allocated to either a group that slept following film viewing or a group that remained awake. Sleep was recorded with electroencephalogram in a subgroup of participants in the sleep group. All participants recorded intrusive memories in the week following the film.

Results:

The sleep group experienced fewer and less distressing intrusive trauma memories compared to the wake group. These effects were particularly evident toward the end of the week. Duration spent in stage N2 as opposed to light N1 sleep, a higher number of fast parietal sleep spindles and a lower rapid eye movement sleep density predicted intrusion frequency.

Conclusions:

Our results have clinical implications and set the ground for early-intervention sleep studies following trauma and prevention of chronic posttrauma disorders.

“Effects of Sleep after Experimental Trauma on Intrusive Emotional Memories” by Birgit Kleim, PhD; Julia Wysokowsky, MSc; Nuria Schmid, MSc; Erich Seifritz, MD; and Björn Rasch, PhD in *Sleep*. Published online December 2016 doi:10.5665/sleep.6310

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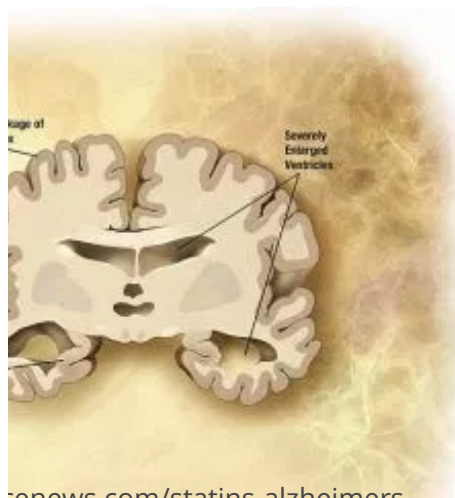
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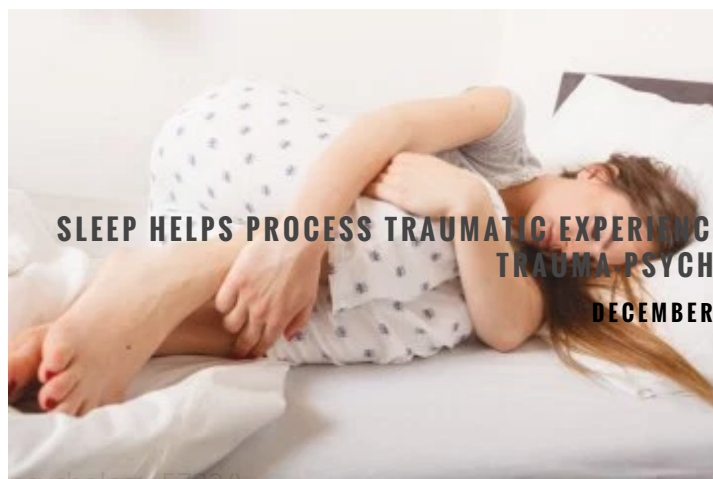
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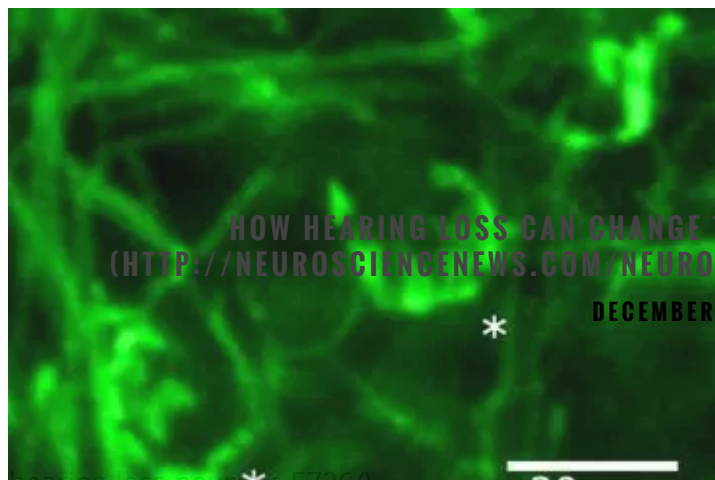
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