

Extended sleep reduces pain sensitivity

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A new study suggests that extending nightly sleep in mildly sleepy, healthy adults increases daytime alertness and reduces pain sensitivity.

"Our results suggest the importance of adequate sleep in various [chronic pain conditions](#) or in preparation for elective surgical procedures," said Timothy Roehrs, PhD, the study's principal investigator and lead author. "We were surprised by the magnitude of the reduction in [pain sensitivity](#), when compared to the reduction produced by taking codeine."

The study, appearing in the December issue of the journal *SLEEP*, involved 18 healthy, pain-free, sleepy volunteers. They were randomly assigned to four nights of either maintaining their habitual [sleep time](#) or extending their sleep time by spending 10 hours in bed per night. Objective [daytime sleepiness](#) was measured using the multiple sleep latency test (MSLT), and pain sensitivity was assessed using a radiant heat stimulus.

Results show that the extended sleep group slept 1.8 hours more per night than the habitual sleep group. This nightly increase in sleep time during the four experimental nights was correlated with increased daytime alertness, which was associated with less pain sensitivity.

In the extended sleep group, the length of time before participants removed their finger from a [radiant heat](#) source increased by 25 percent, reflecting a reduction in pain sensitivity. The authors report that the magnitude of this increase in finger withdrawal latency is greater than the effect found in a previous study of 60 mg of codeine.

According to the authors, this is the first study to show that extended sleep in mildly, chronically sleep deprived volunteers reduces their pain sensitivity. The results, combined with data from previous research, suggest that increased pain sensitivity in sleepy individuals is the result of their underlying sleepiness.

More information: "Pain Sensitivity and Recovery From Mild Chronic Sleep Loss" *SLEEP*, 2012.

Provided by American Academy of Sleep Medicine

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