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### Insufficient sleep associated with risky behavior in teens

Mental health issues, substance abuse, accidents more likely for high school students sleeping less than six hours per night

*Date:* October 1, 2018

*Source:* Brigham and Women's Hospital

*Summary:* Researchers examined a national data sample of risk-taking behaviors and sleep duration self-reported by high school students over eight years and found an association between sleep duration and personal safety risk-taking actions.

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Tired student (stock image).

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Adolescents require 8-10 hours of sleep at night for optimal health, according to sleep experts, yet more than 70 percent of high school students get less than that. Previous studies have demonstrated that insufficient sleep in youth can result in learning difficulties, impaired judgement, and risk of adverse health behaviors. In a new study, researchers at Brigham and Women's Hospital examined a national data sample of risk-taking behaviors and sleep duration self-reported by high school students over eight years and found an association between sleep duration and personal safety risk-taking actions. Results are published in a *JAMA Pediatrics* research letter on October 1.

"We found the odds of unsafe behavior by high school students increased significantly with fewer hours of sleep," said lead author Mathew Weaver, PhD, research fellow, Division of Sleep and Circadian Disorders, Brigham and Women's Hospital. "Personal risk-taking behaviors are common precursors to accidents and suicides, which are the leading causes of death among teens and have important implications for the health and safety of high school students nationally."

Compared to students who reported sleeping eight hours at night, high school students who slept less than six hours were twice as likely to self-report using alcohol, tobacco, marijuana or other drugs, and driving after drinking alcohol. They were also nearly twice as likely to report carrying a weapon or being in a fight. Researchers found the strongest associations were related to mood and self-harm. Those who slept less than six hours were more than three times as likely to consider or attempt suicide, and four times as likely to attempt suicide, resulting in treatment. Only 30 percent of the students in the study reported averaging more than eight hours of sleep on school nights.

The Youth Risk Behavior Surveys are administered biannually by the U.S. Centers for Disease Control and Prevention (CDC) at public and private schools across the country. Researchers used data from 67,615 high school students collected between 2007 and 2015. Personal safety risk-taking behaviors were examined individually and as composite categories. All analyses were weighted to account for the complex survey design and controlled for age, sex, race, and year of survey in mathematical models to test the association between sleep duration and each outcome of interest.

"Insufficient sleep in youth raises multiple public health concerns, including mental health, substance abuse, and motor vehicle crashes," said senior author Elizabeth Klerman, MD, PhD, director of the Analytic Modeling Unit, Division of Sleep and Circadian Disorders, Brigham and Women's Hospital. "More research is needed to determine the specific relationships between sleep and personal safety risk-taking behaviors. We should support efforts to promote healthy sleep habits and decrease barriers to sufficient sleep in this vulnerable population."

#### Story Source:

Materials provided by **Brigham and Women's Hospital**. *Note: Content may be edited for style and length.*

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#### Journal Reference:

1. Matthew D. Weaver, Laura K. Barger, Susan Kohl Malone, Lori S. Anderson, Elizabeth B. Klerman. **Dose-Dependent Associations Between Sleep Duration and Unsafe Behaviors Among US High School Students**. *JAMA Pediatrics*, Oct. 1, 2018; DOI: 10.1001/jamapediatrics.2018.2777

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