

Healthy Adolescent School Start Times: A Sleep Health Policy Statement from the National Sleep Foundation

Position: Early school start times contribute to poor physical and mental health among adolescents and younger students. A robust body of scientific evidence and recommendations from major medical organizations support the implementation of later school start times, which can significantly improve sleep health and mental and physical wellbeing in the student population. The National Sleep Foundation (NSF) supports healthy school start times and other measures to optimize sleep. School administrators, policy makers, and other stakeholders around the country should embrace the scientific evidence supporting the benefits of appropriate school start times. *NSF recommends a school start time of 8:30 am or later for middle and high school students.*

NSF asserts that the Federal Government can help benefit adolescent sleep health and the public by:

1. Recommending that middle and high school students start school no earlier than 8:30 a.m.
2. Providing evidence-based implementation resources for later school start times including best practices for transitions to later school start time
3. Tracking and publishing school start times nationwide, enabling research and policy evaluation
4. Recommending sleep health is incorporated into K-12 educational curricula
5. Implementing a national monitoring program that integrates metrics of school start times, sleep, health, safety, and academic outcomes
6. Funding research to evaluate and mitigate disparities in sleep health related to school start times

The NSF recognizes that insufficient sleep for adolescents is a critical public health issue. A National Sleep Foundation Sleep in America Poll found that over 45% of adolescents in the United States obtained inadequate sleep, with 73% percent of U.S. high school students getting less than the recommended 8-10 hours of sleep on school nights.^{1,2} Chronic sleep loss in adolescents poses risks to physical and mental health, public safety, and reduced academic performance.³ NSF further recognizes that a number of factors, including biological changes and academic demands, make it difficult for adolescents to get enough sleep.⁴ NSF supports initiatives that encourage school districts to learn about the developmental changes in sleep-wake biology of children and adolescents, and to adjust school start times in order to mitigate the effects of sleep deprivation on students' health, safety, and academic performance.

Delaying school start times is one of the most evidence-based strategies to reduce inadequate sleep among adolescents at the population-level. A substantial body of research has demonstrated that delaying school start times is an effective intervention to prevent chronic sleep loss in adolescents and has a wide range of potential benefits to students with regard to physical and mental health, academic achievement and public safety.⁵

Early school start times may be particularly harmful for vulnerable youths. It is essential that all policies that impact school start times and sleep health consider and evaluate disparities in sleep, health, and well-being in vulnerable populations, including certain racial/ethnic minorities and youth from socioeconomically

disadvantaged backgrounds. The NSF is committed to understanding and reducing disparities in sleep health, with the goal of improving sleep, health, and well-being for all people.^{6,7}

NSF's mission is to improve the sleep health and well-being of the public through education and advocacy. Understanding the range of factors that can negatively impact adolescent sleep and proposing solutions to help improve their sleep health is a critical component to fulfilling the mission of the organization.

¹ Hirshkowitz M, Whitton K, Albert SM, et al. National Sleep Foundation's sleep time duration recommendations: methodology and results summary. *Sleep Health*. 2015;1(1):40-43.

² Wolfson AR, Carskadon MA. Understanding adolescents' sleep patterns and school performance: a critical appraisal. *Sleep Med Rev*. 2003;7(6):491-506.

³ Sharman, Rachel & Illingworth, Gaby. (2019). Adolescent sleep and school performance – the problem of sleepy teenagers. *Current Opinion in Physiology*. 15. 10.1016/j.cophys.2019.11.006.

⁴ Hagenauer MH, Perryman JI, Lee TM, Carskadon MA. Adolescent changes in the homeostatic and circadian regulation of sleep. *Dev Neurosci*. 2009;31(4):276-284.

⁵ Dahl RE. Biological, developmental, and neurobehavioral factors relevant to adolescent driving risks. *Am J Prev Med*. 2008;35(3 Suppl):S278-S284.2008.06.013

⁶ James, S., Chang, A. M., Buxton, O. M., & Hale, L. (2020). Disparities in adolescent sleep health by sex and ethn racial group. *SSM - population health*, 11, 100581.

⁷ Hale L, Troxel W. Embracing the School Start Later Movement: Adolescent Sleep Deprivation as a Public Health and Social Justice Problem. *Am J Public Health*. 2018;108(5):599-600.