Children's Hospital of Philadelphia
PolicyLab

The Benefits of Healthy School Start Time Policy for Teens and Beyond

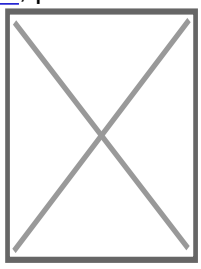
Adolescent Health & Well-Being

Date Posted:

Aug 16, 2022

Editor's Note: This post is part of this year's "Back to School" series in which our experts and guest authors discuss the need to support the health and well-being of youth as they return to school. For more, follow our hashtag #PolicyLabGoesBacktoSchool on Twitter.

This fall, California will implement the first statewide school start times policy. C.A. Senate Bill 328, passed in 2019, requires high schools to start no earlier than 8:30 a.m. and middle schools no earlier than 8:00 a.m. As other regions consider this policy, it is important to understand the science behind healthy school start times, and how this policy benefits not only adolescents, but also parents and caregivers, teachers, and communities.



The Science of School Start Times

Sleep is not optional, and adolescents have a biological need of 8.5 to 9.25 hours of sleep per night. However, in the U.S., 75% of adolescents are only getting 7 hours or less of sleep per night. Insufficient sleep impacts every aspect of functioning and well-being, including mood, behavior, learning, attention, risk taking and weight status. One of the most significant factors contributing to insufficient adolescent sleep is early school start times.

As sleep psychologists, parents often tell us that if their child just turned off their phone, they would have no problem falling asleep or waking up. However, that is not always true for teens due to our circadian rhythm, or internal clock.

Our internal clocks run on a 24.2-hour day, thus we are constantly working to keep our internal clocks on schedule (e.g., with meals and routines). But the strongest cues for our internal clock are light and dark. Evening darkness cues our brain to make melatonin, a naturally produced hormone that prepares our body for sleep. Bright light in the morning cues our brain to stop making melatonin and wake up.

Biology plays an important role in setting teens' internal clocks. When kids go through puberty, their hormones change, including melatonin. We know that the timing of the melatonin release moves 1 to 2 hours later during puberty. This delay makes it difficult for teens to fall asleep early enough to get the sleep they need before having to wake for an early school start time. In addition, teens are asked to wake up, often get behind the wheel of a car, and be awake enough to learn when they are at the physiological peak of sleepiness.

Because of the science, the American Academy of Pediatrics recommended in 2014 that middle and high schools start no earlier than 8:30 a.m. This recommendation has been supported by almost all major medical and psychiatry societies, as well as educational groups that include teachers, caregivers and school nurses. Yet the majority of middle and high schools in the U.S. do not follow this guideline.

Healthy School Start Times Benefit More Than Just Students

Following the implementation of healthy school start times, studies have shown adolescents not only get more sleep, but have better attendance, academic outcomes and graduation rates. In addition, students report less depression, caffeine use, and drowsy driving, and fewer teen motor vehicle crashes are reported.

However, adolescents live within a complex system, which includes elementary school-aged students, parents and teachers. When middle and high school start times are delayed, it is common for elementary school start times to be moved earlier. Families often worry about the negative impact this will have on younger students, but most elementary school-aged students are pre-pubertal and can adjust their bedtimes earlier to accommodate the earlier start time. Research studies show that this shift in both bedtimes and wake times for elementary school students has no negative impact on daytime functioning.

The benefits of healthy school start times extend to parents and teachers as well. Recent studies have found that teachers and parents of middle and high school students reported increased sleep duration and improved daytime functioning for themselves when school start times were moved later. Elementary school parents and teachers reported no changes in sleep duration or daytime functioning following the implementation of earlier elementary school start times.

As clinicians, researchers and parents, we understand that this policy change may impact families and communities, with concerns about caregiving, transportation and work schedules. Some school districts would also need to address changes to bus schedules, extracurricular activities and before/after school care. However, as outlined by the Pennsylvania Joint State Government Commission, there are solutions for these perceived challenges, and districts across the country have found ways to address the needs of communities.

Preparing to implement a new school start time requires partnerships and collaborative problem solving among the school district, teachers, families and community members. In addition, the Start School Later organization has resources to help communities think through and advocate for the equitable implementation of this policy change.

In the same way you have to breathe and eat, you have to sleep. Changing school start times is not coddling students, but setting them up for success by giving them the best chance to learn and succeed before they go off into the world. As Philadelphia and other cities and regions consider making this change, it will be important to engage parents, families, teachers, and other local community members in discussing the science—and benefits—of changing school start times.

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