

Later High School Start Times Improve Student Learning and Health

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in Close the Achievement Gap

Update (5/30/15): *Adolescent sleep requirements and related outcomes continue to generate interest as in this article published by the [New York Times](#).*

Update (12/15/15): *The Wayzata School Board has voted to move to later start times at the high school level; Dr. Wahlstrom's research is featured in the [Star Tribune](#).*

During the school year, many teenagers find themselves nodding off during their early morning classes as high school bells ring around 7:30 a.m. While parents and teachers may attribute falling asleep during class to staying up too late checking Facebook statuses and texting with friends, medical evidence suggests that an early school start time before 8:30 AM is a greater culprit because classes are occurring when students' brains and bodies are still in biological sleep mode.

In fact, according to the [National Sleep Foundation](#) teenagers ages 13-19 have a natural sleep pattern that leads to a late-to-bed, late-to-rise cycle. This occurs because the brain chemical melatonin which is responsible for sleepiness is secreted from approximately 11 p.m. until 8 a.m. - the sleep phase shift. Early school start times interrupt this natural sleep pattern, leaving many high school students sleep deprived. Recognizing the negative effects sleep deprivation can have on learning and overall health, the University of Minnesota College of Education and Human Development [Center for Applied Research and Educational Improvement \(CAREI\)](#) conducted the first research study of its kind to determine how shifting to a later school start time impacts schools and students.

The [School Start Time Study](#) tracked high school students from two Minneapolis-area districts - Edina, a suburban district that changed their start time from 7:20 a.m. to 8:30 a.m. and the Minneapolis Public Schools that changed their school start time from 7:20 a.m. to 8:40 a.m. The study discovered that later school start times provided many positive benefits to high school students, including:

- Improved attendance and enrollment rates
- Less sleeping in class
- Less student-reported depression
- Fewer student visits to school counselors for behavioral and peer issues
- More even temperament at home

Five years later, a longitudinal follow-up study of the Minneapolis Public Schools revealed that the positive benefits continued to persist over time.

A common misconception that many parents and school administrators have is that students would use the later morning start time as an excuse to stay up later on

school nights. However, students actually continued to go to bed at the same time (approximately 15 minutes before 11 p.m.), which aligns with their natural sleep cycle. The later high school start time also did not affect enrollment in after-school sports and activities or increase transportation costs. In fact, coaches and teachers reported students were more mentally alert at the end of the day.

The School Start Time Study has captured national attention of teachers, superintendents, parents and school nurses who are looking to make a change in their districts. Since the study, more than 250 schools throughout the country have changed to a later school start time.

Tips for Getting a Good Night's Sleep

For teenage students attending school with an early start time, there are ways to ensure they are getting enough sleep:

- Develop a regular routine before bed to signal to the body and brain that you're moving into sleep mode
- Engage in quiet activities before bed like turning off the TV and electronic devices by 10 p.m. and reading in bed
- Don't eat, drink or exercise within a few hours of bedtime
- Keep a diary or to-do lists to clear your mind before you go to sleep. You'll be less likely to stay awake worrying or stressing.

Sleep deprivation can significantly affect students' learning and emotional health. Implementing later high school start times that align with teenagers' natural sleep cycles can improve the classroom environment and student performance.

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