



Research that causes the district to ask the question: Should start times be adjusted for teenage students?

U of M Study:

Relationships between school start times, sleep duration, and adolescent behaviors

Conclusions: Given that later start times allow for greater sleep duration and that adequate sleep duration is associated with more favorable mental health- and substance use-related issues and behaviors, it is important that school districts prioritize exploring and implementing policies, such as delayed start times, that may increase the amount of sleep of adolescent students, which is needed for their optimal development.

--Kyla L. Wahlstrom, Aaron T. Berger, Rachel Widome

<https://experts.umn.edu/en/publications/relationships-between-school-start-time-sleep-duration-and-adoles>

Examining the Impact of Later High School Start Times on the Health and Academic Performance of High School Students: A Multi-Site Study

Schools: Mahtomedi High school, St. Louis Park High School, South Washington County Schools (all in Minnesota); and two high schools in Colorado and one in Wyoming)

Despite the hurdles of conducting research in school districts, the findings of this research study reveal that there are empirically-based positive outcomes for adolescents whenever the start time of their high school is moved to a later time—with the starting time of 8:30 AM or later clearly showing the most positive results.

--Center for Applied Research and Educational Improvement, University of Minnesota

<https://conservancy.umn.edu/handle/11299/162769>

Facts from the MN Sleep Society

Biology of Sleep for Teenagers

1. Teenagers have a biological tendency to go to sleep later, as much as two hours later, than their younger counterparts. Their natural time for bed is around 10:45 pm and the brain remains in the sleep mode until about 8:00 am.
2. Teens are biologically more alert in the evening. This makes it difficult or impossible to fall asleep early enough to obtain the 8-10 hours of sleep recommended before having to wake early for school.
3. Teens try to make up for lost sleep by sleeping in on the weekends. This shifting schedule in sleep pattern from the school week to the weekend, affects the rhythm of the “master clock.” The master clock is in the brain. There are “organ clocks” as well, in the liver, kidney and lungs. The master clock is the leader. When this master clock becomes out of sync due to the shift in sleep schedule, the organ clocks become disoriented as well.

Important Facts about Sleep

1. Sleep is needed for memory and learning. Teenagers perform better on mental tasks when they are well rested. Sleep allows the brain to act as a filter, retaining the important things and filtering out those unimportant things that happened during the daytime.
2. Teenagers are not dreaming as much as they once did. They are waking up for school during the time they would normally be having the dream-rich, rapid eye movement (REM) stage of sleep.

3. *Lack of deep sleep reduces the ability to remember positive memories, causing mainly negative memories to be retained.*
4. *Teens who are sleep deprived need up to two weeks of sleep without forced awakening to eliminate their “sleep debt” due to insufficient sleep on school days. Weekend “oversleep” is insufficient to erase the sleep debt from a week of early rising.*

Consequences of Sleep Loss

Mental Health

- *Sleep deprivation causes a higher risk for suicide, even if the teenager is not depressed or using alcohol.*
- *Sleep loss leads to emotional outbursts, behavioral problems, anxiety and depression. Obtaining the right amount of sleep can act as a buffer and help prevent the downhill slide to these issues.*
- *A teenager getting less than 8 hours of sleep per night is significantly more likely to use cigarettes, alcohol, drugs and be sexually active.*

Physical Health/Safety

- *Sleep loss affects appetite, metabolism and weight gain for teenagers.*
- *Car accidents are the #1 cause of death for teenagers and starting high school before 8:30 am is associated with higher car accident risk for teen drivers. Brain impairment with insufficient sleep is similar to alcohol intoxication, with reduced reaction times, awareness of traffic and the ability to remain alert.*
- *There is a higher risk of sport injury in a teenager who is sleep deprived.*

Academic Performance

- *Less sleep is associated with poorer test scores and reduced academic performance. Academic performance improves with a later school start time.*

<https://www.mnsleep.net/school-start-time/quick-facts-for-teensparents/>

Facts about comparison districts and the state of Minnesota:

MN school districts that have a later start time (after 8:15 a.m.):

- Edina (1996)
- South Washington County (2009)
- St Louis Park (2010)
- Alexandria (2014)
- Buffalo-Hanover-Montrose (2016)
- Burnsville (2016)
- Wayzata (2016)
- West St. Paul / Mendota Heights / Eagan
- Mounds View (going into effect fall 2018)
- North St. Paul / Maplewood
- St. Paul Public Schools (implementing fall 2019)

School districts within Dakota County that have later high school start times**

Burnsville ** (8 a.m.)
 Farmington
 Hastings
 Inver Grove Heights (review in process)
 Lakeville ** (8:02 a.m.)
 Rosemount-Apple Valley-Eagan
 South St. Paul (review in process)
 West St. Paul **

Start/End Times of East Metro Conference Schools

High School Start Times	Start Time	End Time
ISD 200 Hastings	7:50 a.m.	2:30 p.m.
ISD 197 Henry Sibley	8:30 a.m.	3:04 p.m.
Hill-Murray 6-12 Grade	7:55 a.m.	2:29 p.m.
ISD 832 Mahtomedi	8:00 a.m.	2:30 p.m.
ISD 622 North	8:15 a.m.	2:45 p.m.
Saint Thomas Academy	8:00 a.m.	3:00 p.m.
Simley	7:40 a.m.	2:30 p.m.
South St. Paul	7:50 a.m.	2:30 p.m.
ISD 622 Tartan	8:15 a.m.	2:45 p.m.

School Start Times in U.S. States

Live Science Article by Rachael Rettner, senior writer (Aug. 2015)

(www.livescience.com)

Most U.S. middle and high schools start too early — with an average start time of around 8:00 a.m., according to a new study. Some children's health organizations recommend that schools start no earlier than 8:30 a.m., to help teens get the sleep they need.

The study (of middle and high school start times) also found that school starts times varied greatly by state, with schools in Louisiana starting at 7:40 a.m., on average, and schools in Alaska starting at 8:33 a.m., on average. States surrounding Minnesota had the following results:

- Illinois: 8:13 a.m.
- Iowa: 8:23 a.m.
- Michigan: 7:54 a.m.
- **Minnesota: 8:18 a.m.**
- North Dakota: 8:31 a.m.
- South Dakota: 8:13 a.m.
- Wisconsin: 7:59 a.m.

AMA (American Medical Association) policy encourages middle schools and high schools to start no earlier than 8:30 a.m. "to improve adolescent wellness." (June 14 – 2016)

New AMA policy encourages middle schools and high schools to start no earlier than 8:30 a.m.

As sleep deprivation continues to negatively impact the health and well-being of adolescents in the United States, the American Medical Association (AMA) today adopted policy during its Annual Meeting to encourage reasonable school start times that allow students to get sufficient sleep. The new policy specifically calls on school districts across the United States to implement middle and high school start times no earlier than 8:30 a.m. The new policy also encourages physicians to actively educate parents, school administrators, teachers and other community members about the importance of sleep for adolescent mental and physical health based on their proven biological needs.

(www.ama-assn.org press center)

Other research available:

- **Let Them Sleep: American Academy of Pediatrics (AAP) Recommends Delaying Start Times of Middle and High Schools to Combat Teen Sleep Deprivation** (www.aap.org)
- **Most US middle and high schools start the school day too early** (www.cdc.gov)