## Sleepy Teens: High School Should Start Later in the Morning

from Scientific American

By Mark Fischetti | August 26, 2014 |

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High school begins across the U.S. this week and next. And it begins too early! Too early in the day, that is. Ask any groggy teenager waiting for a bus or yawning in "home room" and he or she will tell you that it's just too darn early in the morning to learn chemistry equations or analyze a narrative by some Russian novelist.

Are they just lazy? No. Scientific studies of teen sleep patterns say they're right. So do results from numerous schools across the country that have delayed start times: The later classes begin, the more academic performance improves. Bonus points: attendance goes up, teen depression goes down, and fewer student drivers get into car crashes.

Seeing the mounting evidence, the American Academy of Pediatrics yesterday released a new policy statement recommending that middle and high schools delay the start of

class to 8:30 a.m. or later. Doing so will align school schedules to the biological sleep rhythms of adolescents, whose sleep-wake cycles begin to shift up to two hours later at the start of puberty, the policy statement says. The conclusions are backed by a technical report the academy also released yesterday, "Insufficient Sleep in Adolescents and Young Adults: An Update on Causes and Consequences," which is published in the September 2014 issue of *Pediatrics*.

The "research is clear that adolescents who get enough sleep have a reduced risk of being overweight or suffering depression, are less likely to be involved in automobile accidents, and have better grades, higher standardized test scores and an overall better quality of life," said pediatrician Judith Owens, lead author of the policy statement, titled "School Start Times for Adolescents."

The debate over whether to start school later has run for years, but a host of new studies have basically put it to rest. For one thing, biological research shows clearly that circadian rhythms shift during the teen years. Boys and girls naturally stay up later and sleep in later. The trend begins around age 13 or 14 and peaks between 17 and 19. The teens also need more sleep in general, so forcing them to be up early for school cuts into their sleep time as well as their sleep rhythm, making them less ready to learn during those first-period classes.

Practice is proving the science. Hundreds of school districts in the U.S. have experimented with later start times and the academic performance of students has improved across the board. A study released in February that tracked 9,000 high school students in three states showed that grades in science, math, English and social studies all rose when school began at 8:35 or later. Controlled experiments with different start times among the same classes of students at two North Carolina high schools and among the freshman class at the U.S. Air Force Academy also showed that academic performance improved.

The later the start, the better the result, too, according to Kyla Wahlstrom, director of the Center for Applied Research and Educational Improvement at the University of Minnesota. She published the study of the 9,0000 students. Delaying the opening bell from 7:30 a.m. to 8:30 a.m., for example, paid off more than delaying only until 8:00 a.m. Research indicates that students who get at least eight hours of sleep, and preferably nine, perform better than those who do not, Wahlstrom says, so a greater delay raises the chances of achieving those numbers.

School districts may balk at such a large adjustment. But Wahlstrom says any change "will create some amount of community disruption, so there's no real reason to make only a small shift; make the bigger shift and get the maximum benefit." Most districts find that a change entails a full year of disruption, she say, "but then they don't want to go back," because the benefits are so tangible. The biggest resistance is just resistance to change, she says. "We're into homeostasis."

What's more, communities find that the usual worries about starting school later do not pan out, according to an analysis by the National Sleep Foundation. Students still succeed in holding part-time jobs, and after-school programs such as sports and theater still run well. "I get tired of the argument that these kids have to do all these activities and community service and therefore can't start school later," Wahlstrom says. "The issue is not the start time. It's that the students are overly busy. There is too much pressure to cram it all in just to have a good resume to get into college." Students, parents and school advisors should all be more judicious with what students choose to participate in, she says, with emphasis on doing certain activities well rather than piling up a long list.

Studies in other countries such as Brazil, Italy and Israel also show that later start times improve learning. Across Europe, the equivalents of high school rarely begins before 9:00 a.m. "Europeans are shocked that Americans start so early," Wahlstrom says.

According to the pediatricians' academy, 40 percent of U.S. high schools start before 8 a.m., and only 15 percent start at 8:30 a.m. or later.

If school districts and parents are still not convinced, data about car crashes may make them take notice. Controlled studies are difficult, because so many factors are involved: the age of drivers varies within a school district, school districts with different start times have different mixes of students. But a few studies stand out. In Jackson Hole, Wyoming, for example, there is only one high school within a hundred mile radius. Delaying the start time from 7:35 a.m. to 8:55 a.m. correlated with a 70 percent reduction in car crashes among drivers ages 16 to 18.

Another intriguing study was done more than 10 years ago by University of Kentucky researchers. In Fayette County, which has only one school district, crash rates of teen drivers dropped 16.5 percent in the two years after start times were delayed one hour, compared with the two years before the change. The kicker: the teen crash rate for the rest of the state went up 7.8 percent in the same time period. Sure enough, the portion of Fayette County students who got at least eight hours of sleep during weeknights rose from 36 percent to 50 percent, and those who got at least nine hours rose from 6 percent to 11 percent.

Nonetheless, more comprehensive results are needed before fewer accidents can be reliably linked to later school start times, Wahlstrom says. But anecdotally, the idea makes sense. "Driving is monotonous," she notes. "So if you're sleep-deprived, you're more likely to lose attention, have your head nod or fall asleep at the wheel."

## **Assignment:**

- 1. Read through the article, "Sleepy Teens: High School Should Start Later in the Morning."
- 2. Consider the possible positive and/or negative outcomes of starting school later. Would it be worth it? Feel free to explore other articles on the topic, and consider how this issue would affect you personally.
- 3. Decide where you stand on the issue.
- 4. Write a 3 paragraph argument in which you employ the rhetorical strategies of ethos, pathos, and logos to make a balanced and convincing argument.

This assignment is due one week from the date assigned.