

ore American teens are catching up on their z'snot just on weekends, but on school days too. The nearly 20-year effort

to start high school classes later in the morning-pushed in some cases by students-has gained momentum, with hundreds of schools in dozens of districts across the U.S. bowing to mounting research on the adolescent body clock.

In the past two years, high schools in Long Beach, California; Stillwater, Oklahoma; Decatur, Georgia; and Glens

TAKF THE OUIZ

What's Your Sleep IQ?

WWW.UPFRONTMAGAZINE.COM

Falls, New York, have pushed back their opening bells, joining schools in Connecticut, North Carolina, Kentucky, and Minnesota. The Seattle school board is considering the issue. The superintendent of Montgomery County, Maryland, supports the shift; and the school board in Fairfax County, Virginia, is working to develop options for starts after 8 a.m. Last summer, Secretary of Education Arne Duncan posted his endorsement for later start times on Twitter.

New research suggests that later high school starts have widespread benefits. Sleep experts at the University of Minnesota studied eight high schools before and after they moved to later start times. They found that the later a school's start time, the better off students were on measures like mental health, car crash rates, attendance, and, in some schools, grades and standardized test scores.

Researchers have known for some time that quality sleep directly affects learning. During R.E.M. (rapid eye movement) sleep—a period of deep sleep that happens three to five times a night in well-rested people—the brain is wildly active, sorting and categorizing the day's data. The more sleep you get, the better the information is absorbed.

"Without enough sleep," says Jessica Payne, an assistant professor of psychology at the University of Notre Dame in Indiana, "teenagers are losing the ability not only to solidify information but to transform and restructure it, extracting inferences and insights into problems."

The solution is not as simple as hitting the sack earlier. During puberty, as hormones surge and the brain develops, teenagers have a later release of the "sleep" hormone melatonin, which means they may not feel drowsy until about 11 p.m. Nighttime use of technology like smartphones and iPads, which emit a blue light that tricks the brain into thinking it's still daytime, further slows the release of melatonin.

## **Twitter Activism**

One of the schools that recently got on board with later start times is Rock Bridge High School in Columbia, Missouri—thanks, in large part, to one student. As a sophomore last year, Jilly Dos Santos rarely made it to school by the first bell, at 7:50 a.m. Then she heard the school board was planning to make the day start even earlier, at 7:20 a.m., which meant she'd have to wake up at 6:00 a.m.

"I thought, 'If that happens, I will die,'" recalls Jilly, 17. "I will drop out of school!"

Encouraged by her teachers, who mentioned that the school board would soon be meeting on the issue, Jilly became a sleep activist. She created SIFEP By the Numbers

9.25

Number of hours of sleep teens need each night to function best (for some, 8.5 hours is enough).

SOURCE: NATIONAL SLEEP FOUNDATION

15%

Percentage of teens who report sleeping at least 8.5 hours on school nights.

SOURCE: NATIONAL SLEEP FOUNDATION

7:59a.m.

The average start time for public high schools in the U.S.

SOURCE: NATIONAL CENTER ON EDUCATION STATISTICS; 2011-12 SCHOOL YEAR

4%

Percentage of American public high schools that start at 9 a.m. or later.

SOURCE: NATIONAL CENTER ON EDUCATION STATISTICS; 2011-12 SCHOOL YEAR

a Facebook page and set up a Twitter account, alerting hundreds of students about the school board meeting: "Be there to have a say in your school district's decisions on school start times!"

She then got in touch with Start School Later, a nonprofit in Maryland, which provided her with scientific ammunition. She recruited friends and divvied up sleep-research topics. With a blast of e-mails, she enlisted the help of high school teachers in the district. She started an online petition.

At a meeting packed with students and parents, Jilly presented her case to the board. After a heated debate, it decided against the earlier start time. The next day, Jilly began campaigning to start school later. The board met again on the issue in March 2013, and Jilly addressed it one last time. "I know it's . . . going to get some pushback," she said, referring to the later time, "but it is the right decision."

This time, the board voted 6 to 1 to push back the start time to 8:55 a.m. "Jilly kicked it over the edge for us," says Chris Belcher, the superintendent.

Nine months into the new normal at Rock Bridge High, some parents and first-period teachers say students seem more rested and alert.

But the 4:05 p.m. end to the day has been problematic for some, including athletes, who often miss the last period to make it to away games. The district has tried to adjust, adding Wi-Fi access on buses so athletes can do homework on the road, and having some classes meet only once or twice a week, with supplemental online instruction. More sports practices and clubs meet before school.

At 8:53 a.m. on a recent day, Jilly burst through the north entrance door at Rock Bridge, long hair uncombed, wearing no makeup, lugging her backpack.

"Even when I am late to school now," she said, dashing down a corridor to make that 8:55 bell, "it's only by three or four minutes."

Jilly Dos Santos of Columbia, Missouri, convinced her school board to adopt a later start time at her high school.

Jan Hoffman covers teen and family issues for The New York Times.