DENVER, CO — A new study by researchers at National Jewish Health finds that parents of adolescents got more sleep when middle and high schools start about an hour later, while the sleep habits of parents of younger children were unaffected by earlier elementary school start times.

The study is the first-ever to examine parent sleep as an outcome for changing school start times. National Jewish Health partnered with the Cherry Creek School District (CCSD) in Arapahoe County near Denver, to examine the impact of adjusting the school district’s start times, with elementary schools starting an hour earlier, while high schools started 70 minutes later and middle schools were delayed 50 minutes. Researchers surveyed parents and conducted focus groups on how the adjustments affected their sleep and daily routine.

“We know adolescents are sleep deprived. We know that early school start times are a major factor contributing to it, but kids don’t live in a vacuum; they live within a very complex family system. So, it was important to look at parents’ sleep and how this policy change impacted the entire family,” said Lisa Meltzer, PhD, a pediatric psychologist at National Jewish Health and lead author of the study.

Parents of elementary school students moved both bedtimes and wake times slightly earlier without any significant impact to their sleep duration. Parents of middle and high school students were not staying up any later at night, but were able to sleep later in the morning with the later start times.

“For some parents, it was just nine or 10 minutes, but for others, it was up to 25 minutes a night,” Dr. Meltzer said. “Over the course of the week, even 10 minutes a night can add up and become almost an extra hour of sleep per week.”

The percentage of parents who reported getting sufficient sleep, defined as at least seven hours for adults, also increased for parents who had children in middle or high school, with fewer parents reporting being tired during the day.

“Parents were really feeling the benefits of not having to wake up as early, drag their kids out of bed, and try and get them to school on time,” Dr. Meltzer said. “A lot of parents said that it not only helped their sleep, but also it helped make their morning routine easier, and I think those improvements to the way families function are really important as well.”

That was certainly the case for Kelly Osuna, who has two teenage boys at home and also interacts with classrooms full of teens as a high school Spanish teacher at Overland High School in the CCSD.
“It used to be a constant struggle getting the students in my first class to come in ready to learn. They were constantly nodding off, and it was really hard for them to focus on what I was teaching,” Osuna said. “After start times were adjusted to later in the morning, I noticed a big difference in the mood that kids come to school in, and I think other districts would see that too, if they made the same switch.”

Osuna says she’s able to sleep an hour later than she used to and that her mornings are much calmer these days.

“We actually have time to eat breakfast together before we go to school.” Osuna said. “And I notice that I still have some energy at the end of the day. I’m not dragging like I used to, so that helps our family time in the evening.”

Experts acknowledge that there are challenges to swapping school start times. Bus routes and extracurricular schedules would need to be modified and families would have to make adjustments based on what time their child began and ended their day. However, Dr. Meltzer says it is well worth the effort to figure out the logistics of changing school start times for the health and wellbeing of students and their families.

“Three out of four teens in America right now are getting less than seven hours of sleep a night, and early school start times are one of the major contributing factors,” Dr. Meltzer said. “We know that insufficient sleep is associated with several health problems, including obesity and high blood pressure, and is very strongly associated with mental health issues, including depression and anxiety. It also impacts their ability to pay attention and learn in school, which is critical in order for kids to be successful.”

Research has shown that adolescents are not biologically equipped to rise early in the morning, as the sleep hormone melatonin is released about two hours later in the day during puberty. California recently passed a state law that will go into effect next school year requiring high schools to start at 8:30 a.m. or later. Experts are hoping that the mounting evidence on the benefits of this change will urge districts across the country to implement similar changes.

National Jewish Health is the leading respiratory hospital in the nation. Founded 123 years ago as a nonprofit hospital, National Jewish Health today is the only facility in the world dedicated exclusively to groundbreaking medical research and treatment of patients with respiratory, cardiac, immune and related disorders. Patients and families come to National Jewish Health from around the world to receive cutting-edge, comprehensive, coordinated care. To learn more, visit the media resources page.

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