FROM SOUTH JERSEY TO YOU

### Can teens skip sleep? In your dreams

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This might be a wake-up call that teenagers welcome.

Research shows teens need 9 to 9.25 hours of sleep a night to reboot their brains, allowing them to maintain attention, memory and focus, and boost overall mental and physical health.

But most teens fall short of that goal, averaging 6.5 hours to 7.5 hours a night, thanks in part to overscheduled lives, caffeine fixes and non-stop technology demands.

Sleep deprivation affects even those who wear bags under their eyes as badges, says Robert Stevenson, sleep lab manager at Advantage Sleep Center in Cherry Hill.

"People are sometimes proud they sleep three to four hours a day," says Stevenson. "For those losing sleep, you are paying for it "

The impact of that lost sleep isn't limited to the classroom. A growing body of research suggests sleep-deprived teens might be putting themselves at risk for health problems, including weight gain, diabetes and depression. More study is needed, but researchers believe inadequate sleep can

affect brain circuitry and hormone regulation, adding to the risk for some teens already vulnerable to certain health conditions.

Research is just starting to gear up and give us an inkling of what happens when teens do not get enough sleep, said Jodi Mindell, associate director of the sleep center at Children's Hospital of Philadelphia.

Some researchers believe time-honored stereotypes about teens — particularly their penchant for moodiness and risktaking — might be the result of not enough sleep. What's more, individual teens might vary in how they cope with sleep deprivation in part because of genetic influences, said Mary Carskadon, a professor of psychiatry and human behavior at Brown University and one of the nation's foremost experts on the sleep patterns of young people.

#### Internal clocks



Right now, Sherrie Wallace is savoring the 10 to 11 hours of sleep she gets. Once she begins her senior year at Mount Pleasant High School in Delaware, she will be back to five hours of sleep most nights.

This year's annual Sleep in America poll found 7 percent of 13- to 18-year-olds r eport getting less than 6 hours of sleep. The poll, by the National Sleep Foundation, also found that 54 percent wake up between 5 and 6:30 a.m. during the week.

They might be awake at that hour, but they aren't necessarily functioning well, said Carskadon, director of chronobiology and sleep research at Bradley Hospital in Rhode Island. "Teens are biologically set to fall asleep at 11 p.m., a later internal clock than adults', shifting them toward being more awake at night and sleepier in the morning."

Many of these kids aren't going to bed before midnight, Stevenson says.

"There have been many people for changing the structure of the schoolyear, starting later in the day. That impacts the after-school activities but you have some students who aren't performing at all before lunchtime."

Individual schools or districts in 19 states have pushed back their start times, and more than 100 school districts in an additional 17 states were considering delaying their start times, according to a 2007 report by the National Sleep Foundation. "I don't think Cherry Hill is considering any new start time at this time," says Susan Bastnagel, public information officer at the Cherry Hill School District, which operates two high schools. "Our high school starts at 8 a.m., which, I think, compared to other high schools in the area, is one of the later start times."

Kyla Wahlstrom, a researcher at the University of Minnesota, helped turn back alarm clocks in 1996, moving the start time from 7:20 to 8:40 a.m. for the 12,000 students in the Minneapolis school district.

Carskadon said teens are so used to getting by without sleep, they don't know what it's like to function any other way.

"You feel that way and it becomes the normal, she said. And then you get enough sleep for a week and you realize you don't have to always be out of it."

That's how the summer has been for Wallace.



"When I'm doing my summer reading at 7 or 8 in the morning, I'm actually awake," said Wallace, 17, who is in the International Baccalaureate program. "When the school year comes, I fall asleep in the shower. I can't open my eyes. In school, when the teachers are lecturing you, you look around and half the class is asleep."

#### **Rude awakenings**

When it's time to wake up teens for school, things can get ugly.

Some parents have even slapped their children or taken ice water and poured it on their heads, says William Kohler, medical director of the Florida Sleep Institute in Spring Hill, Fla.

Helene Emsellem, medical director of the Center for Sleep & Wake Disorders in Chevy Chase, Md., says she has heard similar stories from frustrated parents and their (often traumatized) teens. Neither sleep expert approves of such tactics. Both have better ideas.

But they understand the frustration many parents feel.

"It's unnerving when you start the day with a fight," says Emsellem, author of "'Snooze ... or Lose! 10 'No-War' Ways to Improve Your Teen's Sleep Habits."

Lara Embree, a teacher from Clayton, Mo., concurs. When her daughter, Chelsea, now 19, was in high school, Embree had to make wake-up calls each day. "I would call and call and eventually she would wake up," Embree says. "But it was very stressful for me."

But Samantha Bare's memories are kind of sweet: Her mom, Mary, used to come to her door and sing.

"There were six of us, and I guess we were just too lazy to get up, so she'd come around and sing to each of us," says Bare, now 21 and headed to graduate school.

Mary Bare, 57, of Westminster, Md., recalls those days well and says her repertoire included "Good Day Sunshine."

There's more, though. Samantha Bare says that if the singing didn't work, her mom would call out: Hark, the beautiful princess, awaken.

She says: "That gets really annoying when you're 15 or 16."

#### New insights



The importance of adequate rest can't be overstated, said Allison Harvey, a professor of psychology and director of the Golden Bear Sleep and Mood Research Clinic at the University of California-Berkeley. During sleep, the body uses the time to make critical neural connections in a teenager's developing brain. It's also when the brain sifts through and retains the important information it receives during the day.

The sleep they're getting during this phase is critical for them achieving physical development milestones, she said.

In the past decade, researchers have begun to understand more about sleep and how it affects learning and health. They have found links between being tired and decreased self-control, attentiveness and focus. Motor skills also are greatly improved by sleep, which may explain why drowsy driving contributes to more than 100,000 accidents and 1,500 deaths a year in both teens and adults, according to the National HighwaySafety Commission.

Researchers have begun looking at associations between chronic sleep d eprivation and metabolic problems. Those problems may be precursors to diabetes, weight gain or cardiovascular disease, Carskadon said. One study found teens who sleep less than eight hours a night eat almost 200 more calories than those who get enough rest.

If you're not getting enough sleep, the body's balance will be off, Stevenson says. Sometimes if that's off, your body will eat more than it needs and often the wrong types of food. People who are sleep deprived have been linked to craving more carbohydrates, which tends to lead to weight gain.

Another growing area is the study of mood disturbances, suggesting that teens with a genetic risk of depression could reduce their odds by getting enough sleep.

#### **Electronics beckon**

Teens today face more distractions, particularly from media, than past generations, Mindell said. On average, teens spend 7.5 hours a day watching TV, tweeting, texting or checking Facebook, sometimes at the same time.

This year's Sleep in America poll asked about technology for the first time. The results weren't surprising — 95 percent of adults and teens said they used some kind of electronics a few nights a week at least an hour before bed. More than half of all



teens said they watched TV, used the Internet or texted before bed. And 18 percent of teens said they were awakened a few times a week by a phone call, text message or email.

In a culture where technology never sleeps, many teens don't either.

"With the 24/7 society now, the computers, the cell phones, the TVs, you can be busy 24/7," Stevenson says. "People are spending a lot more time on them. They're starting to go to bed much later and people are seeing the effect, or the impact to their health, performance and happiness."

The misuse of time can lead to a misdiagnosis, he says.

Kids who don't get enough sleep may have the symptoms (that mimic) Attention Deficit Disorder, Stevenson says. And we have kids who will start developing ADD.

The incessant buzzing of an incoming message can rouse someone from a deep sleep, but Harvey said the bright light of a laptop or TV also can suppress the secretion of melatonin, which induces sleepiness.

"If we're closely connected to TV, computers, cellphones, we are getting in the way of the natural feeling of being sleepy, then falling off to sleep," she said. "It's sort of like your teddy bear. Your cellphone becomes your teddy bear. It's a source of connection. None of us wants to switch it off."

#### MORE INFORMATION

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