



ESTHER BUSH

## Teens and Sleep

This month, the “Take Charge of Your Health Today” page focuses on teens and sleep. Erricka Hager and Bee Schindler, community engagement coordinators, University of Pittsburgh’s Clinical and Translational Science Institute, and Esther L. Bush, president and CEO of the Urban League of Greater Pittsburgh spoke about this topic.

**BS:** Good morning, Ms. Bush. I thank you for the chance to talk with you today about teens and sleep. A 2014 study published in the journal *Pediatrics* showed that, while most people in the study did not get the eight to nine hours of sleep per night that’s suggested by the Centers for Disease Control and Prevention, black male participants had the least amount of sleep, which could play a role in daily life activities like school performance.

**EB:** That’s a great point, Bee, especially when, as Dr. Hasler states, school start times are the earliest they have ever been. If young people are not getting enough sleep, we have to wonder whether discipline rates for attentiveness begin to shift. And we know that studies have repeatedly shown that black students in the United States are subject to disciplinary action at rates much higher than their white counterparts.

**BS:** Right; the effects of sleep are multifaceted. And it’s interesting that Dr. Hasler also notes that trying to make up sleep on the weekends actually has worsening effects on overall health.

**EB:** Esther and I previously discussed the “sleep gap” and how it negatively affects the health of black adult shift-workers. However, researcher Tiffany Yip, PhD, professor of psychology at Fordham University, has found that the sleep gap between white and nonwhite students starts as young as 2 years old and only grows from there. Tiffany’s study has shown that white students have slept hundreds of hours more than black students. The study cites how the effect of stressors like discrimination from peers or teachers not only affects sleep but also hinders academic performance.

**EB:** Yes, Erricka; I remember our conversation about how black Americans are suffering from a “sleep gap,” but I didn’t realize that it starts at such an early age. It’s unfortunate that this disparity isn’t receiving much attention, especially when we understand how important sleep is to our health. What are some suggestions to help teens get more sleep and ultimately reduce the sleep gap?

**BS:** Dr. Hasler notes that keeping track of sleep patterns, limiting the blue light from smart devices before bed and being mindful of teenagers’ natural daily cycles could help young folks get more restful sleep. It sounds as if these steps could also potentially reduce the sleep gap.

**EB:** Thank you so much for having this conversation with me, Erricka and Bee. We’ve provided some great information and ways that readers can take charge of their health today. I look forward to next month as we discuss the importance of oral health.

# Take charge of your health today. Be informed. Be involved.

## DO YOU HAVE A SON OR DAUGHTER WHO IS A HIGH SCHOOL JUNIOR OR SENIOR AND IS 16-19 YEARS OLD?

They may be eligible for the SLEEPING LATE TEENS research study

Researchers at the University of Pittsburgh are studying how teens’ sleep schedules affect their mood and behavior.

To find out more about the research study, contact us:

Call: 412-246-6422

E-mail: [slate@pitt.edu](mailto:slate@pitt.edu)

Website: [slate.pitt.edu](http://slate.pitt.edu)

Parental consent will be required for those who are under age 18. Participants will be compensated for each stage of the study.



## Getting enough sleep is necessary for teens’ overall health

Have you ever gotten frustrated with a teenager who wants to go to bed late and sleep until late in the morning? Does the teen always seem to want sleep—except at night? In those moments of frustration, remember that teens’ sleep patterns are a result of their age, biology and internal clocks.

Sleep is fuel for our bodies; everyone needs it. Sleep does not just help us feel better. Research shows that getting enough sleep is necessary for our overall health, too. Being well-rested helps us fight illness, be at a healthy weight, lower our risk for serious health problems, like diabetes and heart disease, reduce stress, make good decisions and get along better with people. Teens experience the same health benefits from getting enough sleep, but their sleep patterns change.

“There are marked changes that occur in sleep and in circadian rhythms, especially postpuberty and during adolescence,” said Brant P. Hasler, PhD, assistant professor of psychiatry, School of Medicine, of psychology, Dietrich School of Arts and Sciences, and of clinical



BRANT P. HASLER, PHD

and translational science, University of Pittsburgh. “The timing of sleep changes for adolescents in that they increasingly prefer and pursue both later bedtimes and later wake-up times. We know that that’s driven in part by changes in their circadian rhythms.”

A circadian rhythm is a 24-hour internal clock that regulates our sleep/wake cycles, along with many other processes in our brain and body, including temperature, cardiovascular function, and digestion. The circadian rhythm is always running in the background of our brains and is controlled by a portion of the brain called the hypothalamus. In recent years, researchers have found that the molec-

ular basis of our clocks, the molecular clock, is not just in that central clock but is in essentially every cell of our bodies.

“One way to think about it is that the central clock is the conductor, but there’s this orchestra of clocks that are throughout other parts of our brain, our body and in every organ and tissue,” said Dr. Hasler. Making sure this orchestra is playing in tune is very important to health. Many research studies have shown that there are various negative health effects—including problems with mood, metabolism and cardiovascular health—when different clocks are no longer in time with one another.”

Researchers know that teens’ internal clocks change and cause them to not feel sleepy until later at night, which makes them want to sleep in later. Even though their internal clocks may be shifting later, teens still need between eight and 10 hours of sleep a night to feel well-rested. Dr. Hasler notes that the problem is that only around one-third of adolescents report sleeping that long every night,

especially during the school week.

“The problem is that teens typically have some of the earliest school start times they’ve ever experienced,” said Dr. Hasler. “This happens at the same time as their internal clocks are telling them to go to sleep later than ever, so there’s a mismatch. During the school week, they’re trying to go to bed earlier than their internal clock is telling them to and may have trouble falling asleep as a result. Then they have to get up well before their internal clock is ready. Thus, they end up getting fewer hours of sleep than they need. On the weekend, they tend to change their schedule by going to bed later and sleeping in to try to make up the sleep they’ve lost during the week. But we know that it’s not possible to make up for five days of insufficient sleep in only two days.”

Teens are essentially living in a school time zone and a weekend time zone and bouncing back and forth between them. Researchers’ term for this is “social jet lag.” Research is showing that the effects

of social jet lag are similar to those of regular jet lag, which we know has all sorts of effects on health. The difference is that teens are doing this chronically, week in and week out. Dr. Hasler is examining social jet lag in detail in a study called “Social Jet Lag in Teens.” (For more information about Dr. Hasler’s studies or to find out how to participate, see the contact information elsewhere on the page.)

Though some school districts are experimenting with later start times—the current recommendation from many major medical organizations is for schools start at 8:30 a.m. or later—many schools still start before 8 a.m. The general recommendations for helping teens to get as much sleep as possible are to turn off devices earlier, wearing “blue blockers” in the evenings (blue light can suppress the production of the sleep-promoting hormone melatonin; blue blockers are glasses that block the blue light in LED devices), keeping a more regular sleep schedule the entire week and being aware of the internal clock issue.

## Join us for Dinner & Dialogue about Teens and Sleep in Homewood

**Who:** The Urban League of Greater Pittsburgh, New Pittsburgh Courier, UPMC Center for Engagement & Inclusion, University of Pittsburgh’s Clinical and Translational Science Institute (CTSI), and YOU. Teens are encouraged to come!

**What:** We invite you to join in a conversation getting at the root causes of issues related to sleep and teens. We hope to think about how the blue-light emitting from smart phones, mental health contributors, stress from working, family and environmental factors and more all affect young folks. The floor will be open to robust dialogue. The free and open to the public Dinner and Dialogue series will discuss Allegheny County-specific health disparities and current research and resource opportunities. Researchers and community leaders will be on hand to present findings and explore solutions. Dinner and child care will be provided. There will be panelists and opportunities to engage in deeper conversation around youths and sleep and the disproportionate ways that sleep affects communities of color. The event will highlight opportunities for all voices to be heard in the space.

**Where:** Community Engagement Center in Homewood at 622 North Homewood Avenue, Pittsburgh, PA 15208

**When:** September 24, 2019, from 5:30-7:00 p.m.

**Why:** This unique event seeks to boost community health education and advocacy, increase diverse participation in clinical and translational research and encourage individuals to become empowered and actively engaged in their own health and well-being.

RSVP to [bos23@pitt.edu](mailto:bos23@pitt.edu) with your name, number in your party, if you have any food allergies. Please let us know if you will require child care.

Join us for a

### Dinner and Dialogue series

that will discuss Allegheny County-specific health disparities and current research and resource opportunities.

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622 North Homewood Avenue  
Pittsburgh, PA 15208

**WHEN:** Tuesday, September 24, 2019  
5:30-7:00 p.m.

Free and open to the public. Dinner and child care will be provided. Attendees need not work or live in Homewood to attend this event.

The event will highlight opportunities for all voices to be heard in the space.

Email RSVPs to [bos23@pitt.edu](mailto:bos23@pitt.edu)

Researchers and community leaders will be on hand to present findings and explore solutions, and the floor will be open to dialogue.

There will be panelists, and break out sessions to engage in deeper conversation around teens and sleep.

This unique event seeks to boost community health education and advocacy, increase diverse participation in clinical and translational research, and encourage individuals to become empowered and actively engaged in their own health and well-being.



The Urban League of Greater Pittsburgh | New Pittsburgh Courier | UPMC Center for Engagement & Inclusion | The University of Pittsburgh’s Clinical and Translational Science Institute (CTSI)