



Teen Drowsy Driving and Other Risky Behavior

What Do School Start Times
Have To Do With It?

June 1, 2016

AACO SADD Chapter Leader Meeting



CDC Evaluates Risky Behavior & Sleep

- In the April 8, 2016 Weekly Morbidity and Mortality Weekly Report (MMWR) from the U.S. Centers for Disease Control (CDC), data from 50,370 high school students in the Youth Behavior Risk Survey was evaluated for the association between ***sleep duration*** on an average school night and ***injury-related risk behaviors***.



How much sleep do teens need?

- 8.5-9.5 hours required*
- To achieve that much sleep for a 7:17 a.m. start time (and ~5:45 a.m. wake up), teen need to be *asleep* by ~9 p.m.
 - Many things make that difficult
 - Homework
 - Sports
 - Jobs
 - Time with family and friends
 - And most importantly, *a shifting circadian rhythm*

* National Sleep Foundation



How much sleep do teens get*?

- Nationally*
 - 6.3% of high school students report less than 4 hours of sleep on an average school night
 - 10.5% report 5 hours of sleep
 - 21.9% report 6 hours of sleep
 - 30.1% report 7 hours of sleep
 - In total, 69% of high school students report that they are getting 7 hours of sleep or less on an average school night.
- 2014 YRBS for AACO
 - Only **21%** of high school and **59%** of middle school students report 8+ hours of sleep
 - 32% for freshmen, decreases each year to 15% for seniors

* From April 8, 2016 MMWR



MMWR Conclusion

- What is already known about this topic?
 - Insufficient sleep is common among high school students and is associated with an increased risk for unintentional injury from drowsy driving crashes and other causes.
- What is added by this report?
 - Students who reported sleeping ≤ 7 hours on school nights were **more likely to report** several injury-related risk behaviors when compared with students who sleep 9 hours :
 - **infrequent seatbelt use,**
 - **riding with a driver who had been drinking,**
 - **drinking and driving, and**
 - **texting while driving.**
- What are the implications for public health practice?
 - High school faculty and administrators, as well as parents of high school students, should be made aware of the increased likelihood for risky behavioral choices among students who do not get enough sleep.



Other Research Conclusions

Chronic sleep deprivation for teens increases:

- Feelings of Hopelessness
 - For each hour of sleep lost, the odds of them feeling sad or hopeless increased by 38%
- Suicide Ideation
 - For each hour of sleep lost, the odds of seriously considering suicide increased by 21% (controlled for hopelessness)
 - For each hour of sleep lost, the odds of attempting suicide increased by 14% (controlled for hopelessness and suicide consideration)
- Substance Abuse
 - For each hour of sleep lost, the odds of using tobacco, alcohol or marijuana increase by 23%
 - For each hour of sleep lost, the odds of using illicit/prescription substances increases by 37%



Rockville, MD

Nicole Lee was killed by a drowsy driver in a head-on collision a year after graduating.





How impaired are drowsy drivers?

- Drowsy driving causes 328,000 accidents and 6,400 fatal crashes*
 - 1 in 6 deadly accidents and 1 in 8 crashes requiring hospitalization
- Drivers 16-25 years old are involved in more than 50% police reported fatigue related traffic accidents.**
 - One in seven fall asleep behind the wheel every month.
 - Fatigue related accidents under-reported.
 - There is no equivalent breathalyzer test for drowsiness.
 - More likely to be fatal (driver makes no effort to avoid accident) because they are asleep (micro-sleep)
 - Can happen at any time of the day/night
- National Sleep Foundation Poll (2011)
 - 42% of 13-18 year olds have driven drowsy.
 - Percentage of 16-18 driving drowsy likely higher, since 13-16 year olds don't have driving licenses.

*AAA Foundation for Traffic Safety

**National Highway Transportation Safety Administration



How impaired are drowsy drivers?

- Similar impairment to drunk driving or distracted driving*
- “Some scientists believe that anyone arriving at work at 4am [~5:30 wake up for 7:17am school start]... has an ability to process information that is as bad as if they'd had a few whiskies or beers. It's not as much fun as being drunk [and] it is a struggle to think straight.” **

* Over 20 studies

** <http://www.bbc.com/news/magazine-33638905>



How impaired are drowsy drivers?

- ↓ judgment
 - ↓ impulse control
 - ↑ risk-taking

 - ↓ peripheral vision
 - ↓ reaction time
 - ↓ coordination
- In several clinical and field studies conducted by major news outlets in conjunction with scientists, *drivers actually performed worse in a sleep deprived state than they did while under the influence of alcohol.*



Today Show

https://www.youtube.com/watch?v=X7Ui_Hlcin4

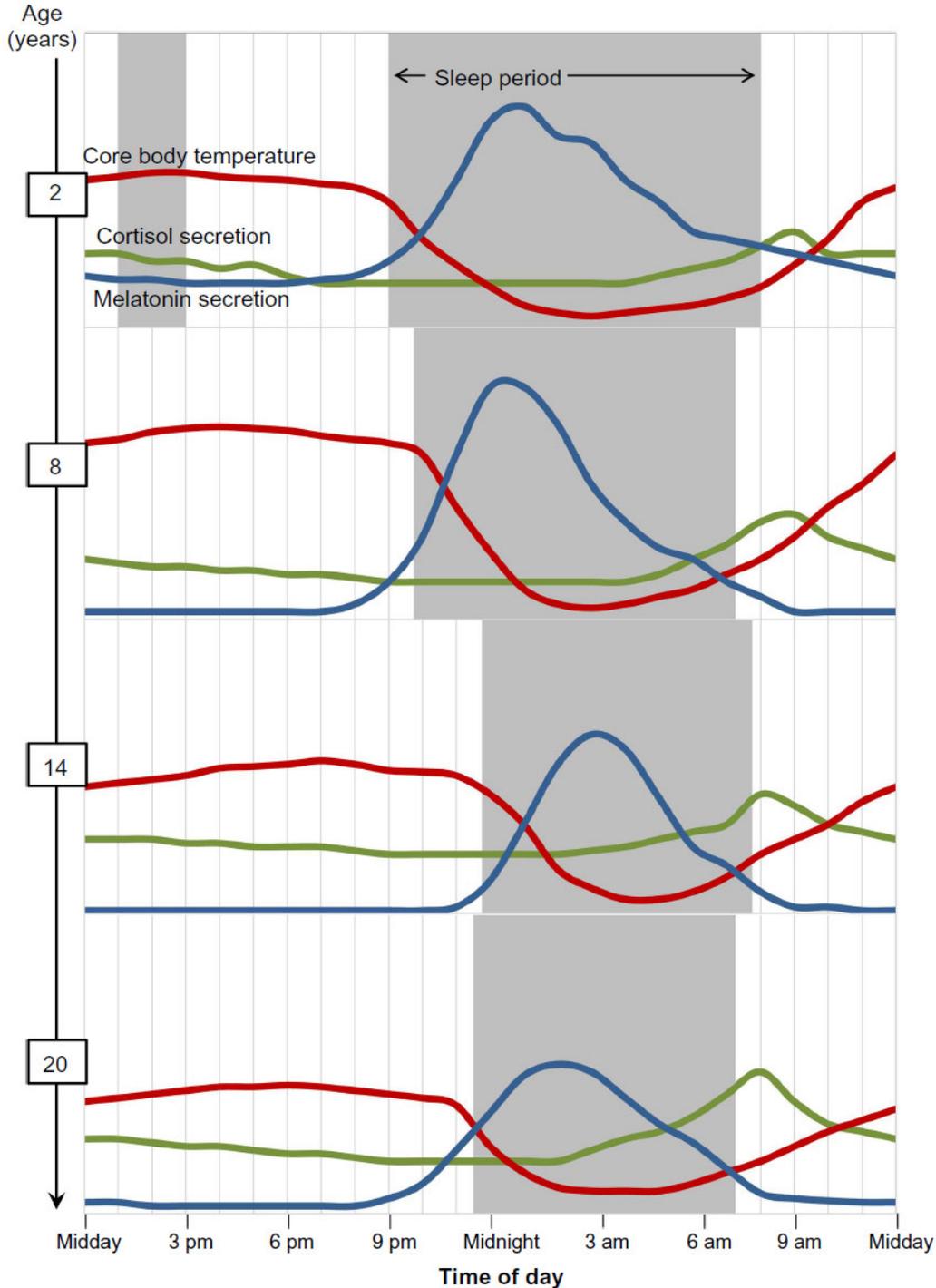


How do school start times affect drowsy driving?

- Teens biological clocks are delayed which means their brains and bodies live on East Coast time (9am) but they go to school at West Coast time (6am).



How do school start times affect drowsy driving?





How do school start times affect drowsy driving?

- "We should always be driven to do what is best for the child, and not what is convenient for society. And ultimately, there's no money that will take back the life of a child who has died in a sleepy driver related accident – a known consequence of early start times"

Dr. Maida Chen (Seattle Children's Hospital)



Delaying school start times can help

- After delaying school start times:
 - One Kentucky district had 16.5% decrease in teen car accidents, compared to a 7.8% statewide increase (24% decrease in total)
 - One Wyoming district had a 70% decrease in teen car accidents
 - One Minnesota district had a 65% decrease in teen car accidents
- In studies conducted in two nearby demographically similar districts
 - Virginia Beach and Chesapeake- there were significantly more teen crash rates (41%) in the district with earlier start times.
 - Chesterfield County (7:20 a.m. start) and Henrico County (8:45 a.m. start)
 - Higher occurrence of accidents in the hour before and two hours after school in the county with earlier start times (27-29%).
 - Early-start teens were often involved in the type of crash (run off the road) commonly associated with drowsy driving.



#TakeABreakToStayAwake

- Arianna Huffington (of Huffington Post fame) wrote *Sleep Revolution* (published April 2016). She mentions Drowsy Driving in her book and has a petition:
 - <https://www.change.org/p/take-the-pledge-to-not-drive-drowsy-takeabreaktostayawake>
- **Share and Sign the petition**
- **#TakeABreakToStayAwake**
- **No Zzzz's, no Keys**
- <https://www.facebook.com/HuffingtonPost/videos/10153890591726130/>
 - Student killed while drowsy driving home from school



South River HS student on the way to school. February 12, 2016.

Caused by drowsy driving? No idea.
Drowsy driving can occur at any time, day or night.





Join us in educating new drivers on drowsy driving

- National Sleep Foundation's Drowsy Driving Week is the first week in November (highlighting daylight savings ending)



**Join us in advocating
for healthy and safe
school hours for *all*
ages**

Via Email

- sslaaco@gmail.com

Or via our Facebook page

- www.facebook.com/StartSchoolLaterAnneArundelCountyMD

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- [@StartSchoolLaterAACo](https://twitter.com/StartSchoolLaterAACo)

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