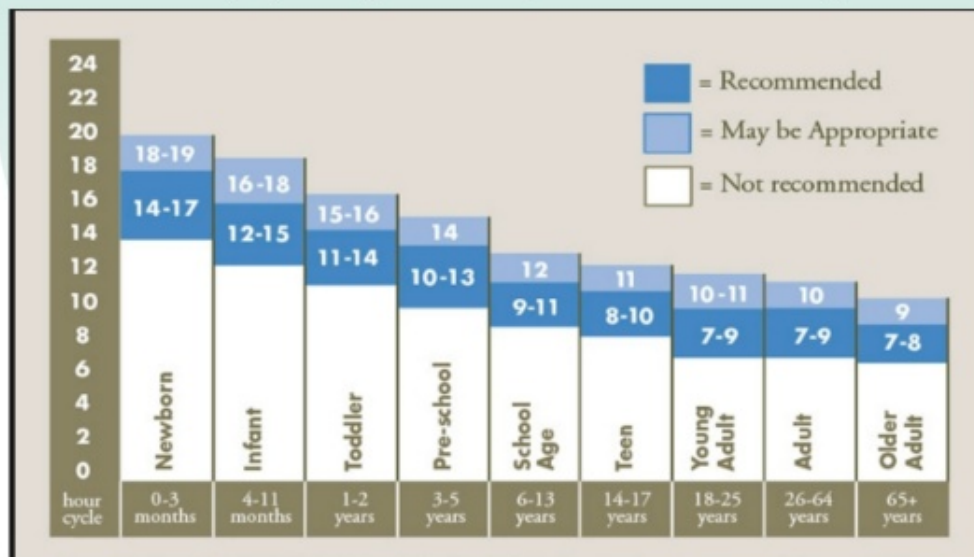


Adolescent Sleep & Well-Being



Myth: Teens don't need much sleep

Truth: Adolescents need between 8-10 hours of sleep per night for optimal functioning.



How much?

Why do they need it?

Adolescent sleep need...

A sample of 15-17 year old adolescents were sleep deprived in lab setting... estimated sleep need for optimal functioning **9.3hrs** (Short et al., 2018)



American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN®



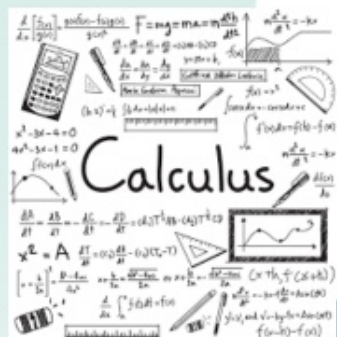
What
do they
get?

Adolescents are Sleep Deprived

According to a 2015 CDC study, 6 out of 10 middle school student and 7 out of 10 high school students DON'T get at least 8 hours/night

34% of EPSD middle school students AND 79% of EHS students DON'T get a minimum of 8 hours/night





Sleep Supports...

Health

Growth- body and brain

Cognitive functioning... learning!

Emotion Regulation

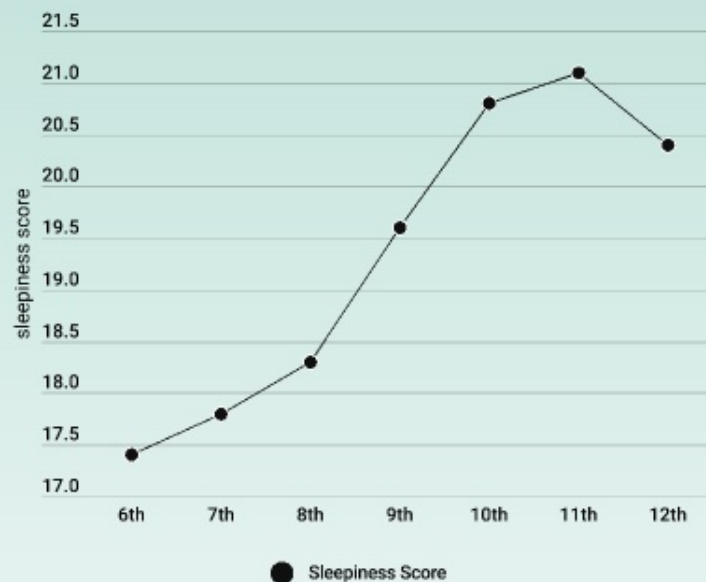


What we see...



"Wow! That's some growth spurt!"

We asked the EPSPD community about the effects of sleepiness...



Teachers, Parents, and Students overwhelmingly agreed that sleepiness negatively impacts learning, behavior, and well-being

Other
impacts



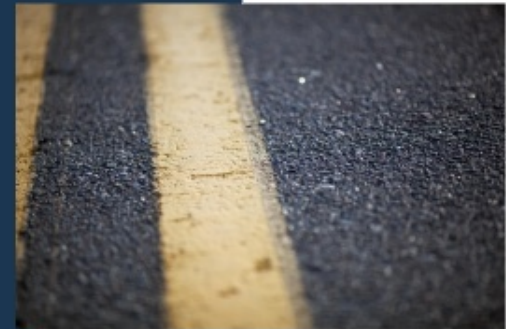
Getting to school...

24% of EHS and 20% of Middle School students report being late 3 or more times during the school year because of sleepiness

18% of EHS and 10% of Middle School students report being absent 3 or more times because of sleepiness

Getting around...

36% of students who drive report driving while sleepy



Adolescent Sleep & Well-Being



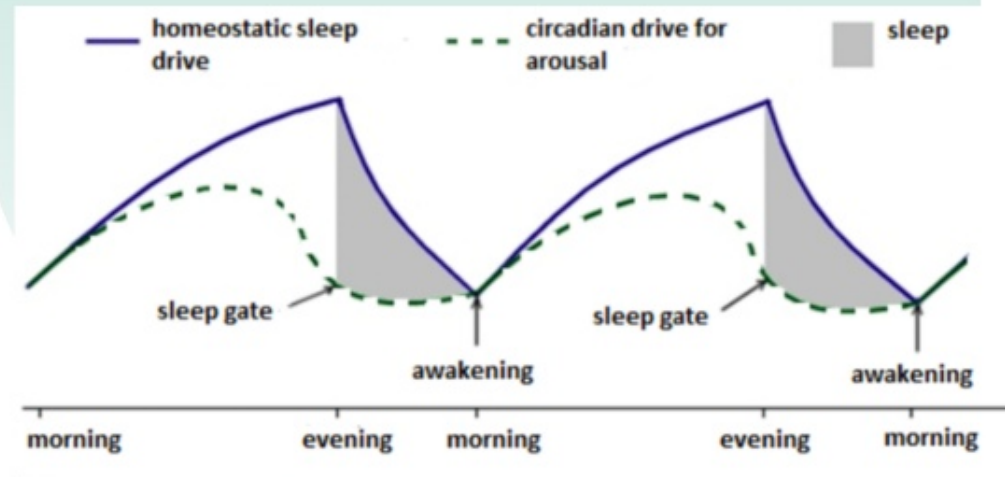
Myth: Teens should
just go to bed earlier

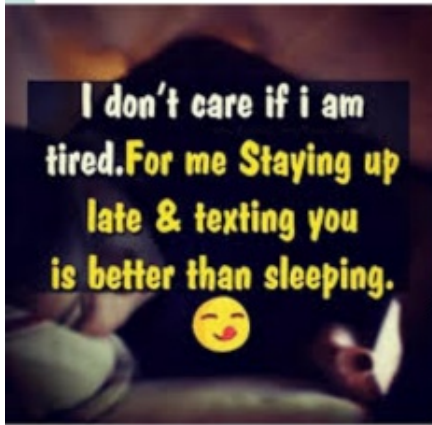
Truth: It's not that simple.

Pubertal
Changes

Two-Process Model of Sleep Regulation

(Borbely, 1982)





-Omar

What happens at puberty to sleep regulation?

Sleep pressure builds up more slowly... post-pubertal adolescents take longer to fall asleep compared to same age pre-pubertal peers (Jenni et al., 2005)

Circadian rhythms are affected by greater light exposure and less regular schedules/routines. In addition, hormonal changes lead to a **circadian shift**, from morning lark to night owl (Jenni & Carskadon, 2004)

Social
Changes



Changing Environment

- Greater academic demands
- Increasing opportunities for and interest in socializing
- Increased responsibilities and activities that may push into night
- Decreased parental control on adolescent sleep



Adolescent Sleep & Well-Being



Out of
Sync

Myth: Teens can "catch
up" by sleeping in on the
weekend and taking naps

Truth: Catch up sleep doesn't really work

AND

Social
Jet lag

Truth: Sleep variability has its own problems





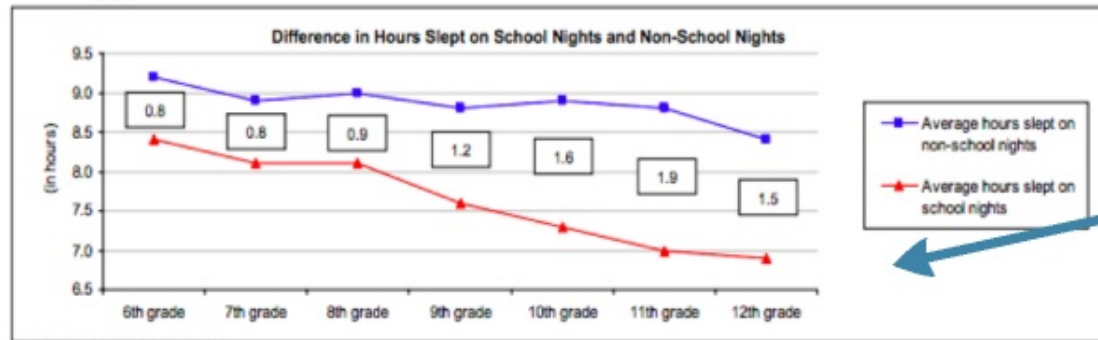
Social Jet Lag

Great shifts in bedtime and wake time lead to the experience of social jet lag... same symptoms as if one had taken a trip to Paris, WITHOUT the yummy croissants

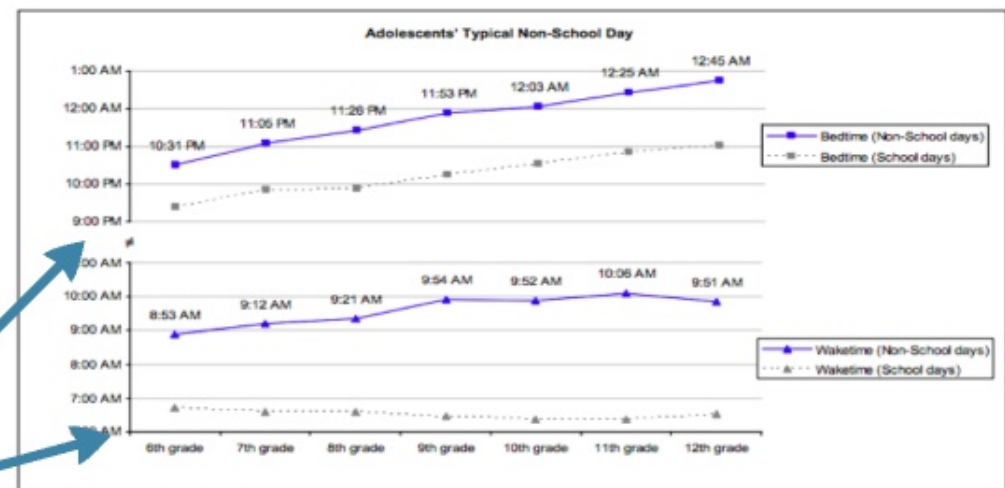


Shifting
sleep

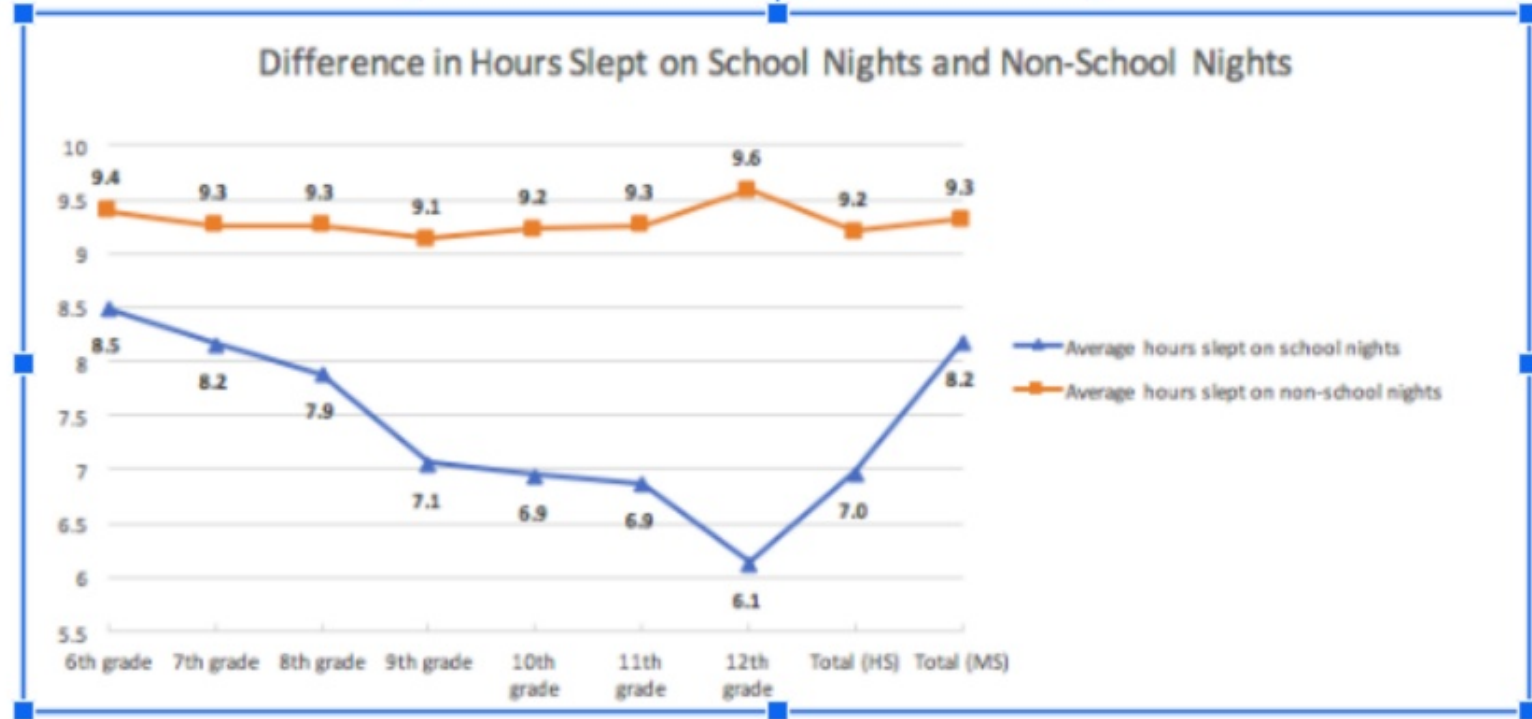
In ESPD



Variability in
total sleep time



Variability in
sleep onset and
waking



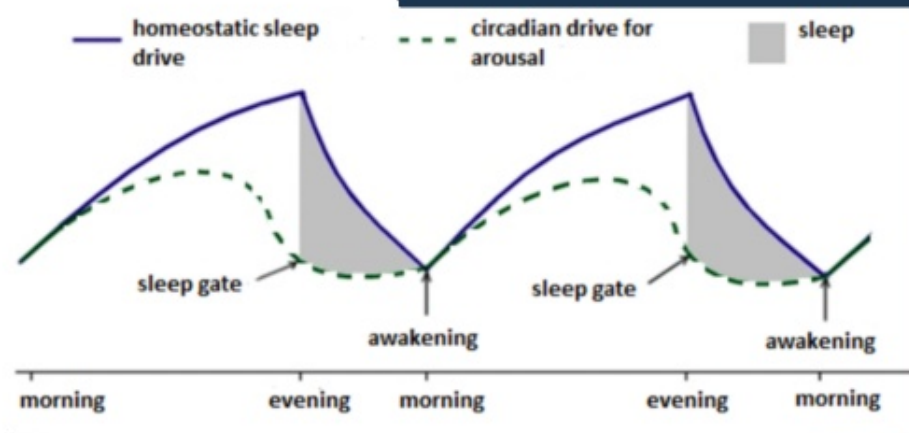
Irregular sleep schedules put sleep pressure and circadian rhythms out of sync

Napping

Other Counter-Measures

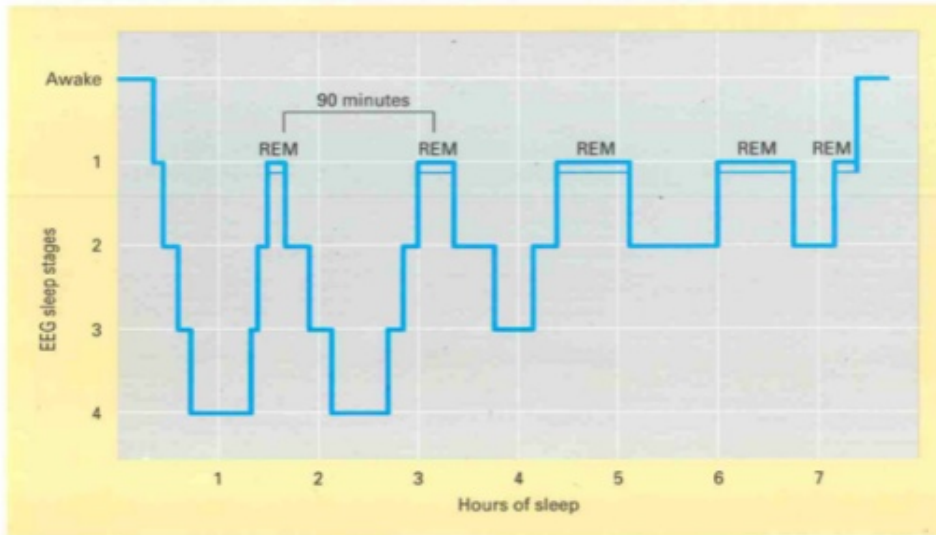
EPSD Students

Sleep pressure responds quickly to changes in routine, circadian rhythms take longer



Napping affects sleep cycles

Not all sleep is the same...
Accumulation of sleep matters



Adolescent stimulant use is on the rise.

Reason for concern....

- Impact on ability to maintain healthy sleep patterns
- Health consequences
- Abuse potential





EHS Students are battling sleepiness:

24% report napping during the school week

24% report consuming caffeinated beverages

18% report consuming sugary foods

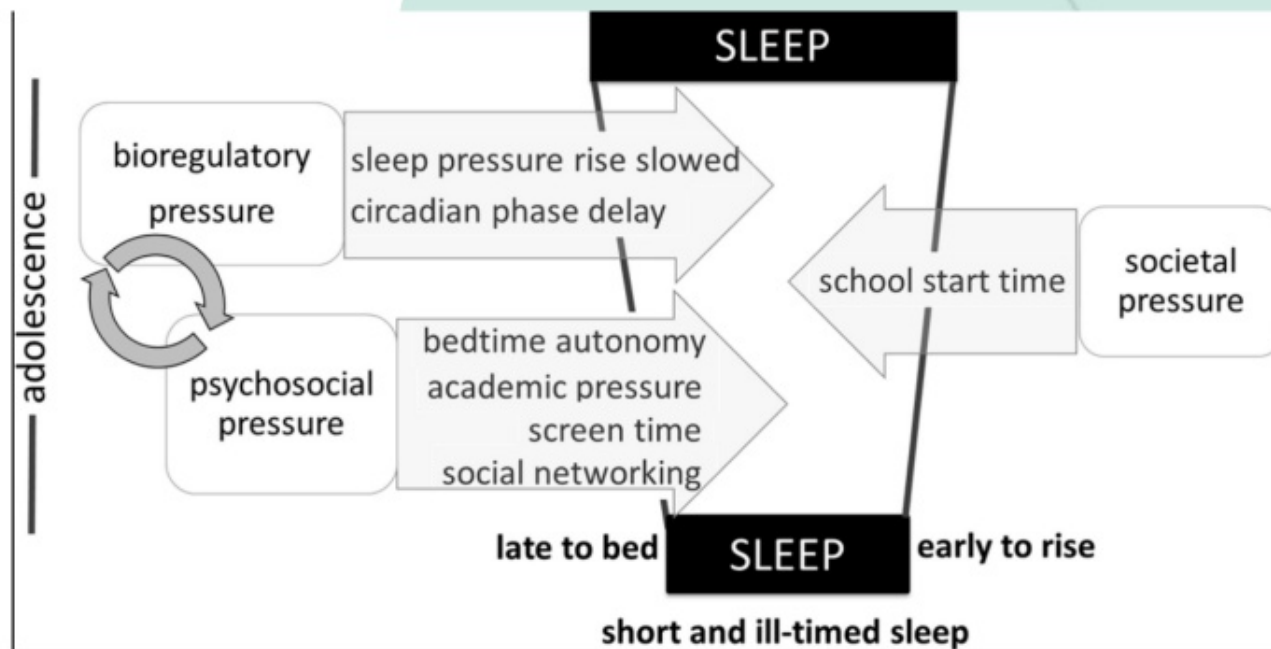


Adolescent Sleep & Well-Being



Myth: Nothing can be done.

Truth: There is room for intervention.



Later School Start

(Carskadon, 2004)

School Start Time Changes



Changes to school start time have large effect sizes

- 1 hour delay leads to ~45 minute increase in total sleep time

Rand Corporation economic analysis concludes within 3 years, cost neutral

- Reduction in motor vehicle crashes
- Improved tests scores
- Reduction in delinquency and tardy rates
- Improved graduation rates

Adolescent Sleep & Well-Being

