



# BOH & Schools Collaborating

June 22, 2021

# Agenda

---



Kicking off collaboration  
School Start Times

Climate Change Planning

--  
What happens next?

# BOH and Schools Collaborating

1

# Collaborating with the Schools

---

## Health Department's Mission

### PREVENT

PREVENT and reduce public health risks;

### PROMOTE

PROMOTE a healthy community through vaccination clinics, health education, information sharing, and environmental mitigation;

### PREPARE

PREPARE the community by planning for emergencies;

### PROTECT

PROTECT the community by enforcing codes and regulations.

# School Start Times

2

## August 4, 2020 letter to School Committee

- Letter sent to School Committee on August 4, 2020 supporting changes in School Start Times
  - Start Grade School Schoolers at circa 8:00 am
  - Start Junior High and High School at circa 9:00 am
- July 20, 2020 meeting: the BOH discussed the evidence in support of aligning school start times with the circadian rhythms of grade school, middle school and high school-aged children, such that grade schoolers would start school earlier than adolescents.
- In 2016, the American Medical Association (AMA) issued a statement recommending that adolescents start high school after 8:30 am, in keeping with several reports by the American Pediatric Association and other sleep experts.

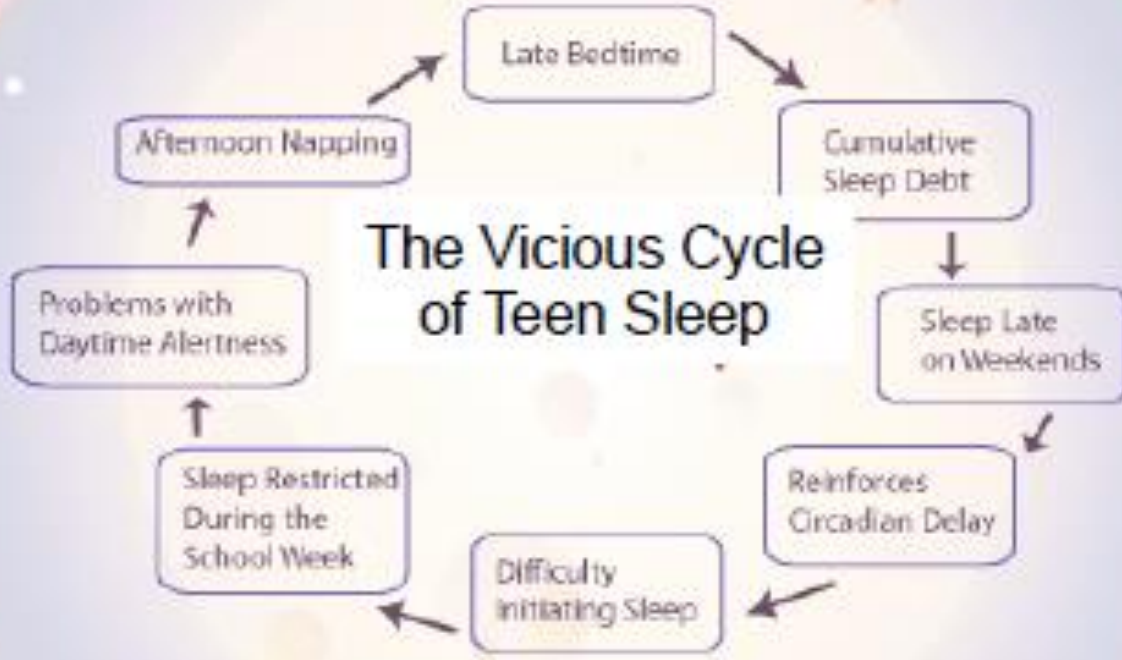
*"While implementing a delayed school start time can be an emotional and potentially stressful issue for school districts, families, and members of the community, the health benefits for adolescents far outweigh any potential negative consequences," said Dr. Kobler.*

- Jesse Meltz (BHS '12) went over his successful experience moving BHS's start time back to 7:50 am in 2011 and his presentation to the School Committee (2010).



# Teen Sleep Needs

Jesse Dickinson Meltz



Interviewed Jessie Meltz

- Part of the maturation process in teenagers involves a shift in the Circadian Rhythm
- Melatonin released in teens between 11pm and 8am.
- Difficult for a teens to fall asleep before 11pm.



# Why don't they just wake up early

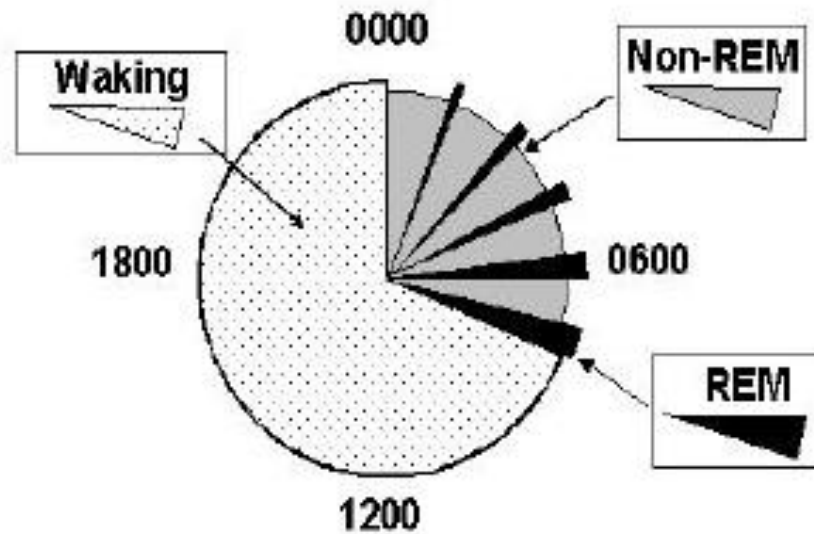
---



- Immediately before naturally waking (roughly 8am), teenagers enter the longest episode of REM sleep.
- REM sleep - concretizes memories from the day.
- \* Dr. Matthew Walker of UC Berkeley - during REM sleep, teenagers shift what was learned during the day into more efficient regions of the brain. Short term memory is converted into long term memory.

REM: auditory, emotional, memory

Figure 1. The 24-Hour Sleep/Wake Cycle



*NOTE: Across the night, brief episodes of stage 1 sleep (not illustrated) occur within and between REM and non-REM*

Non-REM: vocabulary, factual information

Each sleep cycle has a function in learning



A research-based recommendation implemented Fall 2017

from Superintendent Dr. Scott Carpenter  
Monomoy Regional School District

---

*“Everybody learns better when they are awake.”<sup>1</sup>*

Mary Carskadon, Brown University Professor of Psychiatry and Human Behavior

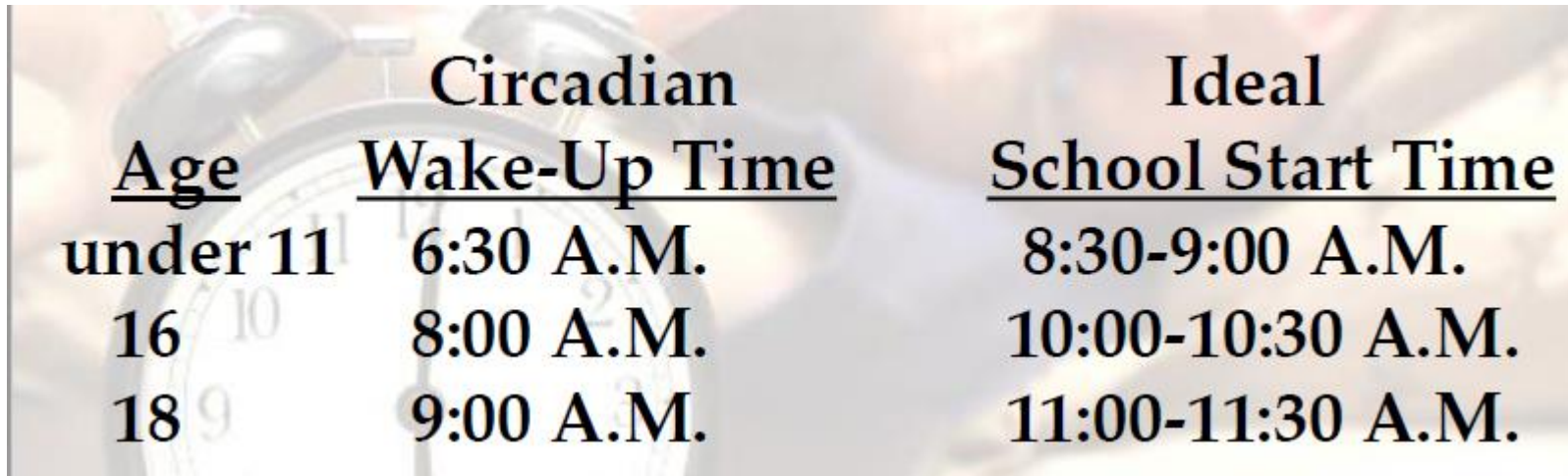
<sup>1</sup> <http://www.theatlantic.com/education/archive/2015/08/why-school-should-start-later/401489/>

**A decision to adjust start times will not make everyone happy, but if we focus our decision on what research is telling us and the successes seen in other districts that have better aligned school start times to the circadian rhythms of children, the decision should be more clear.**

Recommended article: [http://www.nytimes.com/2016/03/29/upshot/schools-are-slow-to-learn-that-sleep-deprivation-hits-teenagers-hardest.html?\\_r=0](http://www.nytimes.com/2016/03/29/upshot/schools-are-slow-to-learn-that-sleep-deprivation-hits-teenagers-hardest.html?_r=0)

Impact of Swapping School Start Times

# A Disconnect Between “Wake-Up Time” and School Start Time



<u>Age</u>	<u>Circadian Wake-Up Time</u>	<u>Ideal School Start Time</u>
under 11	6:30 A.M.	8:30-9:00 A.M.
16	8:00 A.M.	10:00-10:30 A.M.
18	9:00 A.M.	11:00-11:30 A.M.

**The research would suggest 10 A.M. start times for high schools would be more optimal, but is a 10 A.M. start time realistic?**

Based on the findings in Kelly et al. (2015) available online at <http://dx.doi.org/10.1080/17439884.2014.942666>.

# Area Schools Start Times

Town	PreK -2	3-5	Middle	High School	Bedford High earlier by
<b>Bedford</b>	<b>9:02 am</b>	<b>8:22 am</b>	<b>7:40 am</b>	<b>7:45 am</b>	
<b>Lexington</b>	9:00		8:00 am	8:30 am	<b>45 min</b>
<b>Newton</b>	8:10 am		7:50/7:55 (Bigelow/Brown) 8:05/8:20 (Day/Oak Hill)	<b>9:00 am</b>	<b>1 <u>hr</u> 15 min</b>
<b>Concord-Carlisle</b>	9:00 am (Alcott, Thoreau, & Willard)		8:15 am & 8:25 am	8:00 am	<b>15 min</b>
Billerica	7:55 <u>Dutile</u> 8:35 am ( <u>Ditson</u> , Hajjar & Kennedy)		7:30 am (Locke) 7:55 am (Parker)	7:15 am	<b>( -30 min)</b>
<b>Burlington</b>	8:10 am (Memorial, Pine Glen, & Fox Hill) 8:35 am Francis Wyman		7:30 am	8:35 am (High & Shawsheen)	<b>50 min</b>
Chelmsford	8:59 am		8:19 am	7:19 am	<b>(- 26 min)</b>



# Climate Change Planning

3

# Climate Change is happening

---

- We are concerned about the increasing number of hot days we will be seeing at the beginning and end of school years.
- Expand availability of air conditioned/temperature controlled classrooms and gathering spaces in the schools, given the potential impact on learning and student/staff health while school is in session (school year and for summer school).
- The BOH views this as a HIGH priority.



## Next Steps

### Collaborating with the School Committee:

- Board of Health added to your agenda every 2-3 months, and
  - Schools join our agenda every 2-3 months
- 

### School Start Times:

- BOH Highly recommends changing school starting times so that Elementary Schools start before JGMS and BHS

### Climate Change:

- Team up with the BOH for an overall plan to protect our community