

SUMMARY

SCHOOL START TIMES: A REVIEW OF THE LITERATURE

February 2025

REVIEW CONDUCTED BY:

JOANNA GILMORE, PH.D.

GILMORE EDUCATIONAL CONSULTING

Review prepared for Charleston County School District
School Start Times: A Review of the Literature, [linked here](#)

IMPORTANCE OF SLEEP AMONG YOUTH

The American Academy of Pediatrics (AAP) classifies insufficient sleep as a major health risk for children and adolescents.

Recommended sleep durations: (Hirshkowitz et al., 2015)

- Preschoolers: **10–13 hours**
- School-aged children: **9–11 hours**
- Teenagers: **8–10 hours**

Sleep deprivation in adolescents is an epidemic (AAP, 2014)
(Owens et al., 2014a, p. 643)

WHY DO ADOLESCENTS STRUGGLE WITH SLEEP?

Two noteworthy changes occur during puberty that impact sleep and waking states:

1. **Delayed sleep drive:** Adolescents take longer to feel tired (Jenni et al., 2005).
2. **Circadian shift:** Melatonin release occurs later, delaying sleep cycles (Carskadon et al., 1997).
3. Adolescents are naturally suited to sleep **11 PM – 8 AM or later** (Owens et al., 2014).

EFFECTS OF INADEQUATE SLEEP

- **Health Issues:** Weight gain, less exercise, increased risk-taking, mental health concerns (Wahlstrom, 2012).
- **Use of drugs and other risk-taking behaviors** Pasch et al. (2012) and Wahlstrom (2014).
- **Academic Impact:** Lower focus, reduced test performance, more tardiness/absences (James et al., 2023).
- **Safety Risks:** Increased drowsy driving accidents (Danner & Phillips, 2008).

*“Researchers who have studied start time delays for adolescents have found that **student illnesses have declined.***

*Perhaps one of the most compelling cases was Kelley et al. (2017) who reported a **50% decrease in illnesses** (which represents a strong effect size of 1.07) 2 years after the delay (10:00 am) was implemented and then a **30% increase in illnesses** again after the delay was reversed (8:50 am).”*

BENEFITS OF LATER SCHOOL START TIMES

- AAP (2014) recommends middle & high school start no earlier than **8:30 AM**.
- Delayed start times improve **student alertness, attendance, and GPA** (Wahlstrom, 2014; James et al., 2023).
- Studies show **25–77 minutes of increased sleep** per night when school starts later (Alfonsi et al., 2020).
- Kelley et al. (2017): **50% decrease in student illnesses** after shifting start time to 10:00 AM.

PRACTICAL CONSIDERATIONS

- **Transportation & Safety:** Strategies include bus route adjustments, reflectors, and improved lighting (Dreilinger, 2019).
- **Childcare Needs:** Expand afterschool programs; partnerships with community organizations.
- **Impact on After-School Activities:** Minimal disruption observed; study halls at day's end can help athletes (Jacob & Rockoff, 2011).
- **Teacher Impact:** Teachers report more alert students and schedule benefits (Wahlstrom, 2002).

BEST PRACTICES FOR IMPLEMENTATION

- **Communication is key:** Hold public forums, provide clear information, and gather feedback before implementation.
- **Pilot Programs:** Short-term trials can help assess impact (Kelley et al., 2017).