



Early School Start Times

Consensus Statement

SUMMARY STATEMENT

Optimal sleep during growth and development is critical for the health, safety and academic success of our nation's youth. Over half of high school youth and near one third in middle school report 7 hours or less sleep on school nights (National Sleep Foundation, 2014). These reports are in sharp contrast to recommended adolescent (age 12-17) sleep requirements of approximately 9 to 10 hours (Carskadon, 2011). The registered professional school nurse (hereinafter referred to as school nurse) is in a pivotal position to collaborate with students, families, teachers, pediatric nurses, school administration officials, and other health care professionals to address factors contributing to insufficient sleep. A significant modifiable factor contributing to insufficient sleep during adolescence is early school start times during middle school and high school. The National Association of School Nurses (NASN) and the Society of Pediatric Nurses (SPN) support delaying school start times for middle school and high school students as proposed in the policy statement on School Start Times for Adolescents by the American Academy of Pediatrics (Adolescent Sleep Working Group, 2014). This recommendation is based upon the following key factors in adolescent sleep:

- Adolescents require approximately 9-10 hours of sleep nightly (Carskadon, 2011).
- Developmental and physiological changes in adolescent sleep contribute to shifts in nighttime sleep times and later bedtimes, but not necessarily a decrease in sleep requirement (Carskadon, 2011).
- Home electronic media use by adolescents before bedtime affects sleep quality (National Sleep Foundation, 2014).
- Parents/guardians are unaware of adolescent sleep needs and/or the sleep duration of their adolescents (American Academy of Pediatrics [AAP] Adolescent Sleep Working Group, 2014).
- Parent/guardian enforced bedtimes throughout adolescence is associated with longer sleep duration (Short et al., 2011).
- Delaying school start times for adolescents to no earlier than 8:25 am is associated with longer sleep duration on school nights (Boergers, Gable, & Owens, 2014).
- Delay of school start times is associated with improved mood and reduced daytime sleepiness (Boergers, Gable, & Owens, 2014).
- Insufficient sleep and irregular sleep/wake patterns are associated with an increased risk for daytime sleepiness, academic and emotional difficulties, safety hazards, and cardio-metabolic disease (AAP, Adolescent Sleep Working Group, 2014).

RATIONALE

The need for sleep is a biological necessity for all mammals, and studies have shown that the absence of sleep results in impairment of functional ability (Iber, 2013). During the four stages of sleep – REM, N1, N2, and N3 - task learning is refined through the enhancement and pruning of synaptic connections. Each sleep stage has a responsibility for temporarily storing, evaluating, discarding “nonsense” information and preserving new and valued knowledge (Iber, 2013).

During adolescence, the secretion of the melatonin hormone begins later in the day resulting in a corresponding delay in the desire to sleep (Carskadon, 2013). The postponement of this biological event is further delayed if the adolescent is not in a dimly lit environment – often the case if there is homework to finish. However, although staying awake longer is easier for the adolescent, the desire to sleep longer is unavoidable. This becomes problematic when the total amount of sleep is reduced, as is often the case during the school year. In addition, studies have shown that children and adolescents from low income or racial and ethnic minorities are at a greater risk for sleep disorders due to overcrowding, excessive noise, and concerns for their own or their family safety (Owens, 2014).

In Healthy People 2020 (2014), a new core indicator has been developed entitled *Sleep Health* which calls for a reduction in

- adolescent sleep loss;
- unhealthy sleep behaviors (irregular sleep/wake patterns, overuse of electronic media in the bedroom, and the consumption of excessive caffeine); and
- the potential consequences of inadequate sleep (depression and suicidal ideation, obesity, auto accidents attributed to drowsiness, and poor academic performance) (Owens, 2014).

NASN and SPN highlight a contributing – and modifiable – factor to promoting an increase in sleep obtained by teenagers is to delay the start of school day for middle and high school students. NASN and SPN acknowledge the challenges of alterations in after-school sports and activities, along with adjustments to parental/guardian schedules and other modifiable factors such as the need for families to

- self-regulate sleep habits;
- set bedtime limits;
- set limits on social networking; and
- discuss the use of electronic media in the bedroom.

SPN and NASN stand ready to collaborate with administrators, teachers, parents, school boards and communities to address this public health issue by

- Working with parents to understand developmental changes in sleep/wake patterns during adolescence.
- Educating parents on the importance of setting bedtime limits.
- Identifying adolescents at risk.
- Working with teachers and parents to monitor academic course loads and extracurricular activities.
- Identifying strategies to promote optimal sleep.
- Limiting the use of caffeine and other stimulants.
- Limiting the use of electronic media and social networking.

Adolescence is a time when sleep patterns change and biological clocks alter, often leading to poor quality and insufficient sleep. Their ability to concentrate, problem-solve and assimilate new information is impaired. SPN and NASN encourage all parties involved to consider implementing later school start times for teens.

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Adopted: January 2014 Proposed

Suggested citation: National Association of School Nurses and Society of Pediatric Nurses. (2014). *Consensus Statement: Early school start times*. Silver Spring, MD: Author.

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