

SAGE Practice Expository Essay

Write a 3 paragraph article for your school newspaper that explains what students at your school can do to get more sleep. Your explanation must be based on ideas, concepts, and information that can be determined through analysis of the passage set.

Manage your time (45 minutes) carefully so that you can:

- *Plan your essay*
 - *Write your essay*
 - *Revise and edit your essay*
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“Implications of Insufficient Sleep”

by Louella Amos

Chronic sleep debt in adolescents negatively affects various aspects of their lives. Difficulty waking up in the morning results in tardiness or absence from school. Poor attendance and inattentiveness in class adversely affect grades. Adequate sleep is also essential for memory consolidation and learning enhancement. Researchers found that high school students with self-reported earlier bedtimes and longer, more regular sleep had higher grades (A's and B's) compared with students with later bedtimes and shorter or more irregular sleep (C's, D's, and F's). They also found more depressed mood in adolescents who slept fewer than 6 hours, 45 minutes, on school nights compared with those who slept 8 hours, 15 minutes, or more on school nights.

Sleep deprivation not only adversely affects grades but also decision-making skills, executive function, and behavioral inhibition. In an emotionally labile age group such as adolescents, this presents a potentially dangerous public health problem, particularly with regard to substance abuse and drowsy driving. Most college students do not sleep enough, use alcohol as sleep aids, and take stimulants to improve daytime alertness; 16% of these same students have fallen asleep while driving.

“A Look at Adolescent Sleep Needs”

by Lynn D’Andrea

Teenagers generally require 8.5 to 9.5 hours of sleep per night. The National Sleep Foundation (NSF) 2006 Sleep in America Poll revealed that adolescents report sleeping 7.6 hours on school nights, even though they feel that they need an average of 8.2 hours of sleep for optimal daytime function.

More than 50% of teenagers feel sleepy during the day. Only approximately 20% of all surveyed adolescents (6th- to 12th-graders) report an adequate amount of nightly sleep (=9 hours per night); among high school students (9th- to 12th-graders), the percentage decreases to 9%, suggesting that sleep deprivation is more common in older adolescents. Interestingly, 90% of parents believe that their adolescent gets enough sleep on most school nights.

Light Exposure and Melatonin

Light is the main environmental stimulus that synchronizes the intrinsic human sleep-wake cycle to the 24-hour day. Melatonin, a hormone secreted by the pineal gland, induces evening drowsiness and also maintains the

inherent sleep-wake cycle. Light blocks the secretion of melatonin; therefore, light exposure at bedtime can delay sleep initiation.

Technology and Light Exposure

Based on the 2006 NSF poll, most adolescents (97%) have an electronic device in their bedrooms. Seventy-six percent of adolescents report watching television within an hour of bedtime. One study found that among adolescents aged 12 to 18 years, 82% watched television and 55% used their computers after 9 PM.⁸ Other nighttime activities include watching DVDs, cell phone use, and playing video/computer games. It has been hypothesized that adolescents experience an exaggerated response to the circadian phase-delaying effects of nighttime light exposure; therefore, light stimulation associated with use of electronics close to bedtime may exacerbate their natural night owl tendency.

“Effects of Caffeine on Sleep”

by CJ Calamaro

Caffeine consumption is highly prevalent among adolescents. The 2006 NSF poll found that 31% of adolescents who reported drinking 2 or more caffeinated beverages per day were more likely not to sleep enough on school nights compared with those who drink 1 or fewer. Of 191 middle school students, average caffeine consumption was 52.7 mg per day, and 19% of students consumed more than 100 mg per day. Students may be unaware of the caffeine content of many commonly consumed beverages and over-the-counter medications (Table 1). Increased caffeine consumption in this cohort correlated with a later bedtime, more disrupted sleep, and daytime sleepiness. In healthy adults, the elimination half-life of caffeine is 5 hours; therefore, caffeine lingers in the body well after consumption and can affect sleep.

Table 1 Caffeine content chart

Product	Serving size	Caffeine content, mg
Coca-Cola	12 oz	35
Diet Coke	12 oz	47
Pepsi	12 oz	38
Diet Pepsi	12 oz	36
Dr. Pepper	12 oz	42
Mountain Dew	12 oz	54
Coffee	8 oz	133
Cappuccino	6 oz	35
Starbucks coffee, grande	16 oz	320
Einstein Brothers coffee	16 oz	300
Dunkin Donuts coffee	16 oz	206
Tea, brewed	8 oz	53
Iced tea, Snapple	16 oz	42
Chocolate milk	8 oz	5
Dark chocolate	1 oz	20
Hershey's Kisses	9 pieces	9
Dexatrim	1 tablet	200
Excedrin, extra strength	2 tablets	130
No Doz, max strength	1 tablet	200
Red Bull	8.3 oz	80
Enviga	12 oz	100
Monster Energy	16 oz	160
Spike Shooter	8.4 oz	300
Five-Hour Energy Drink	1.93 oz	207

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