



SLEEP IS IMPORTANT TO YOUR CHILD'S HEALTH

Sleep affects how children feel and function. By helping your child to get the recommended amount of sleep, you can improve your child's health, psychological well-being, and safety. Sleep is key to your child's growth and development as well as his/her ability to learn.

The chart below provides general guidelines showing how your child's need for sleep changes with age. There may be individual differences between children:

Age	Daily Sleep Need
Preschool aged children	10-12 hours
School-aged children	At least 9 hours
Adolescents (Teens)	9 hours
Adults	7-8 hours

During adolescence, a biological change shifts the typical onset of sleepiness later at night. This delay can make it a challenge for teens to get enough sleep when they have to wake up early for school.

WHY IS SLEEP IMPORTANT? WHAT HAPPENS DURING SLEEP?

Adequate sleep is a central part of a healthy lifestyle. During sleep, your body and your brain actively work to support healthy brain and body function.

Sleep helps your child focus and remember what he or she has learned. Memory is improved with sleep. Sleeping seems to enhance learning as if it were extra practice, whether your child is learning an academic subject like algebra, new physical skills like playing a musical instrument, dance steps, plays in sports, or how to drive a car.

WHAT HAPPENS WHEN MY CHILD DOESN'T GET ENOUGH SLEEP?

Sleep loss appears in younger age groups but is more common in teens. One national study showed that teenagers, on average, obtain 1.5 hours less sleep each school night than the 9 hours they need to function best.

Even repeatedly losing an hour of sleep per night can be harmful to your child's function. This is because such nightly sleep loss accumulates (adds up) and produces a *sleep debt*. Performance and function decrease with each added night of sleep lost. Your child may tell you that they are used to a lack of sleep—this feeling has little to do with reality in terms of true daytime ability.

For complete references, please visit: <http://www.vasleepmedicine.com/resources/resources.html>

VASM'S INITIATIVE FOR LATER HIGH SCHOOL START TIMES

Sleep loss may have life and death consequences for your teen driver. Drowsy driving causes more than 100,000 crashes a year, resulting in 40,000 injuries and 1,550 deaths and these numbers are considered conservative for many reasons including under-reporting by police of sleep as a cause of crashes. More than half of all fall-asleep crashes involve young drivers between the ages of 16 and 25.

A study in the April 15 issue of the Journal of Clinical Sleep Medicine shows increased automobile crash rates among teen drivers who start school earlier in the morning.

Results indicate that in 2008 the weekday crash rate for 16- to 18-year-olds was about 41 percent higher in Virginia Beach, Va., where high school classes began at 7:20 - 7:25 a.m., than in adjacent Chesapeake, Va., where classes started at 8:40 - 8:45 a.m. There were 65.8 automobile crashes for every 1,000 teen drivers in Virginia Beach, and 46.6 crashes for every 1,000 teen drivers in Chesapeake. Similar results were found for 2007, when the weekday crash rate for Virginia Beach teens (71.2) was 28 percent higher than for Chesapeake teens (55.6). In a secondary analysis that evaluated only the traditional school months of September 2007 through June 2008, the weekday crash rate for teen drivers was 25 percent higher in Virginia Beach (80.0) than in Chesapeake (64.0). An investigation of traffic congestion in the neighboring cities did not reveal differences that might account for the teen crash findings.

"We were concerned that Virginia Beach teens might be sleep restricted due to their early rise times and that this could eventuate in an increased crash rate," said lead author Robert Vorona, MD, associate professor of internal medicine at Eastern Virginia Medical School in Norfolk, Va. "The study supported our hypothesis, but it is important to note that this study does not prove cause and effect. We are planning to perform subsequent studies to follow up on these results and to investigate other potential ramifications of early high school start times."

Vorona says that starting high school later in the morning may promote driver alertness by allowing teens to get more sleep at night.

"We believe that high schools should take a close look at having later start times to align with circadian rhythms in teens and to allow for longer sleep times," he said. "Too many teens in this country obtain insufficient sleep. Increasingly, the literature suggests that this may lead to problematic consequences including mood disorders, academic difficulties and behavioral issues."

Another study in the April issue of the Journal of Clinical Sleep Medicine suggests that delaying school start times by one hour could enhance students' cognitive performance by improving their attention level and increasing their rate of performance, as well as reducing their mistakes and impulsivity. The Israeli study of 14-year-old, eighth-grade students found that the teens slept about 55 minutes longer each night and performed better on tests that require attention when their school start time was delayed by one hour.

Later high school start times will be one of the main issues for the VASM in the upcoming year. Please visit our website, www.vasleepmedicine.com, for updates.

To learn more about sleep, you may wish to visit:

- The National Sleep Foundation, <http://www.sleepfoundation.org>
- The National Heart, Lung, and Blood Institute, http://www.nhlbi.nih.gov/public/sleep/healthy_sleep.pdf
- Healthy Sleep: *Understanding the third of our lives we so often take for granted*, <http://healthysleep.med.harvard.edu/healthy/about>