



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 developmentⁱ as well as his/her ability to learn.

The chart belowⁱⁱ 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

Unlike preschoolers who may need naps, school-aged children usually get all of their sleep at night. Teens need more sleep than adults. In addition, adolescent body clocks shift to a later sleep-wake cycle, making it hard for most teens to either fall asleep or wake up as early as they once did, or as early as younger children and adults. This shift is due to changes in teen brains and bodies and is what makes it hard for many teens to fall asleep much before 11:00 p.m.ⁱⁱⁱ

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.^{iv}

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,^{iv} 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.

Sleep also is vital for your child's physical health. As one example, sleeping well supports the immune system, which helps fight infections, and thus sleep may decrease your child's risk of getting sick.^v

What Happens When My Child Doesn't Get Enough Sleep?

Sleep loss appears in younger age groups but is more common in teens.^{vi} 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.^{vii}

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.^{viii} 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.

Young people who do not get enough sleep may be overly active, misbehave, have problems paying attention, or suffer declines in school performance. Sleep deprivation is sometimes misdiagnosed as attention deficit hyperactivity disorder.ⁱⁱ Sleep-deprived young people may have difficulty getting along with others, may be angry and impulsive, or lack motivation. Shorter sleep durations in adolescents and later parental set bedtimes (after midnight) have been linked with depression and increased suicide ideation.^{ix} There also may be a link between sleep loss and risk-taking behavior.^x Sleep loss is of particular concern in teens as they are already inexperienced drivers. Research has linked decreased sleep (even 25 minutes less on school nights) to lower grades in adolescents.^{xi}

Sleep loss may lead to increased weight gain and obesity.^{xii} One study of teenagers showed that, for each hour of sleep lost, the odds of becoming obese increased.^{xiii} Sleep helps maintain the healthy balance of a number of hormones, including the ones that control appetite.^{xiv} Thus, loss of sleep may lead to increased appetite, overeating, and unhealthy weight gain.

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^{xv} and these numbers are considered conservative^{xvi} 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.^{xvii}

How Can You Help Your Child Develop Healthy Sleep Habits?

It is important for your child to understand that getting enough sleep is a vital part of a healthy lifestyle. Make sleep a top priority and help your child to set a schedule that allows enough time for sleep. Developing a relaxing bedtime routine may help. *Your Guide to Healthy Sleep* provides tips to build healthy sleep habits:

http://www.nhlbi.nih.gov/health/public/sleep/healthy_sleep.pdf. As always, if you have a question about your child's or teen's sleep, a good place to start is with his/her primary doctor.

Remember, even children who have established healthy sleep habits can be sleep deprived when schedules limit time for sleep or the time available conflicts with a child's natural sleep cycle.

For complete references, please visit: www.vasleepmedicine.org

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>

Footnotes for “Sleep Is Important To Your Child’s Health”

ⁱ Koulouglioti, C., Cole, R., and Kitzman, H. **Inadequate Sleep and Unintentional Injuries in Young Children.** *Public Health Nurs* 2008;25(2):106-14.

ⁱⁱ U.S. Department of Health and Human Services, National Institutes of Health, National Heart, Lung, and Blood Institute, **Your Guide To Healthy Sleep** (accessed on 12.6.2010):

http://www.nhlbi.nih.gov/health/public/sleep/healthy_sleep.pdf

ⁱⁱⁱ Owens, JA, et.al., **Impact of delaying school start time on adolescent sleep, mood, and behavior.** *Arch Pediatr Adolesc Med* 2010;164(7):608-14.

^{iv} Harvard Medical School Division of Sleep Medicine (accessed on 12.10.2010):

<http://healthysleep.med.harvard.edu/healthy/matters/benefits-of-sleep/learning-memory>.

^v Cohen, SD, et.al., **Sleep habits and susceptibility to the common cold.** *Arch Intern Med.* 2009. Jan 12;169(1):62-7.

^{vi} Smaldone, A., et.al., **Does Assessing Sleep Inadequacy Across Its Continuum Inform Associations With Child and Family Health?** *J Pediatr Health Care* 2009;23(6):394-404.

^{vii} National Sleep Foundation, Sleep in America Poll: Summary Findings, (accessed on 12.6.2010):

http://www.sleepfoundation.org/sites/default/files/2006_summary_of_findings.pdf

^{viii} Review article: Banks, S. and Dinges, D. F. **Behavioral and Physiological Consequences of Sleep Restriction.** *J Clin Sleep Med* 2007;3(5):519-528.

^{ix} Gangwisch, JE, et.al., **Earlier parental set bedtimes as a protective factor against depression and suicidal ideation.** *SLEEP* 2010;33(1):97-106.

^x Institute of Medicine, Committee on Sleep Medicine and Research, **Sleep Disorders and Sleep Deprivation: An Unmet Public Health Need**, Harvey R. Colten and Bruce M. Altevogt, editors, The National Academies Press, 2006.

^{xi} Wolfson, AR and Carskadon, MA. **Sleep schedules and daytime functioning in adolescents.** *Child Dev*, 1998; 69:875-87.

^{xii} Review article: Patel, SR and Hu, FB, **Short sleep duration and weight gain: A systematic review,** *Obesity*, 2008;16(3):643-653.

^{xiii} Gupta, NK, et.al., **Is obesity associated with poor sleep quality in adolescents?** *Am J Hum Biol.* 2002; 14:762-768.

^{xiv} Review article: Balkin, et.al., **Sleep Loss and Sleepiness: Current Issues.** *Chest.* 2008;134:653-60.

^{xv} National Highway Traffic Safety Administration, (accessed on 12.6.2010):

<http://www.nhtsa.gov/Driving+Safety/Distracted+Driving/Research+on+Drowsy+Driving>

^{xvi} Knipling, R.R, et.al., Current NHTSA Drowsy Driving R&D, (96-S2-W-14), Fifteenth International Technical Conference on the Enhanced Safety of Vehicles(EVS), Melbourne, Australia, 1996:May 13-17, 1-8.

^{xvii} National Sleep Foundation, (accessed on 12.8.2010): <http://drowsydriving.org/wp-content/uploads/2009/10/DDPW-Teens-Drowsy-Driving-Facts.pdf>