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CARE's WorkLife Solutions Monthly Wire

How Much Sleep Is Enough?

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This month's Wire is taken from one of the many articles found on our website. The article, "How Much Sleep is Enough," fits right in with our May Webinar topic, "Let's Sleep on It," which is attached. To access this article, log-on to www.caresworklifesolutions.com, click on the World Icon and enter your unique company password. (If you do not have a company password, contact CARE's WorkLife Solutions to request a temporary password.) Next, click on the Site Search tab on the right, enter "Sleep," and you will find this article as well as others relevant to that topic. You will also find several Audio presentations on sleep, as well as a link to the Online Seminar on "Let's Sleep on It."

How Much Sleep Is Enough?

Animal studies suggest that sleep is as vital as food for survival. Rats, for example, normally live 2-3 years, but they live only 5 weeks if they are deprived of REM sleep and only 2-3 weeks if they are deprived of all sleep stages—a timeframe similar to death due to starvation. But how much sleep do humans need? To help answer that question, scientists look at how much people sleep when unrestricted, the average amount of sleep among various age groups, and the amount of sleep that studies reveal is necessary to function at your best.

When healthy adults are given unlimited opportunity to sleep, they sleep on average between 8 and 8.5 hours a night. But sleep needs vary from person to person. Some people appear to need only about 7 hours to avoid problem sleepiness whereas others need 9 or more hours of sleep. Sleep needs also change throughout the lifecycle. Newborns sleep between 16 and 18 hours a day, and children in preschool sleep between 10 and 12 hours a day. School-aged children and adolescents need at least 9 hours of sleep a night.

The hormonal influences of puberty tend to shift adolescents' biological clocks. As a result, teenagers are more likely to go to bed later than younger children and adults, and they tend to want to sleep later in the morning. This sleep-wake rhythm is contrary to the early-morning start times of many high schools and helps explain why most teenagers get an average of only 7-7.5 hours of sleep a night.

As people get older, the pattern of sleep also changes—especially the amount of time spent in the deep sleep stages. Children spend more time than adults in these sleep stages. This explains why children can sleep through loud noises and why they might not wake up when they are moved from the car to their beds. During adolescence, a big drop occurs in the amount of time spent in deep sleep, which is replaced by lighter, stage 2 sleep. Between young adulthood and midlife, the percentage of deep sleep falls again—from less than 20% to less than 5%, one study suggests—and is replaced with lighter sleep (stages 1 and 2). From midlife through late life, people's sleep has more interruptions by wakefulness

during the night. This disruption causes older persons to lose more and more of stages 1 and 2 non-REM sleep as well as REM sleep.

Many older people complain of difficulty falling asleep, early morning awakenings, frequent and long awakenings during the night, daytime sleepiness, and a lack of refreshing sleep. Many sleep problems, however, are not a natural aspect of sleep in the elderly. Because older people are more likely to have many illnesses that can disrupt sleep, their sleep complaints often may be due, in part, to illnesses or the medications used to treat them. In fact, one study found that the prevalence of sleep problems is very low in healthy older adults. Other causes of some of older adults' sleep complaints are sleep apnea, restless legs syndrome, and other sleep disorders that become more common with age. Also, older people are more likely to have their sleep disrupted by the need to urinate during the night.

Some evidence shows that the biological clock shifts in older people, so they are more apt to go to sleep earlier at night and wake up earlier in the morning. No evidence indicates that older people can get by with less sleep than younger people. Poor sleep in older people is linked to excessive daytime sleepiness, attention and memory problems, depressed mood, and overuse of sleeping pills.

Despite variations in sleep quantity and quality, both related to age and between individuals, studies suggest that the optimal amount of sleep needed to perform adequately, avoid a sleep debt, and not have problem sleepiness during the day is about 7-8 hours for adults and 9 or more hours for school-aged children and adolescents. Similar amounts seem to be necessary to avoid further increasing the risk of developing obesity, diabetes, or cardiovascular disorders.

Quality of sleep is as important as quantity. People whose sleep is frequently interrupted or cut short may not get enough of both non-REM sleep and REM sleep. Both types of sleep appear to be crucial for learning and memory-and perhaps for all the other restorative benefits of healthy sleep, including the growth and repair of cells.

Many people try to make up for lost sleep during the week by sleeping more on the weekends. But if you have lost too much sleep, sleeping in on the weekend does not completely erase your sleep debt.

Certainly, sleeping more at the end of the week does not make up for the hampered performance you most likely had at the beginning of or during that week. Just one night of inadequate sleep can adversely affect your functioning and mood during at least the next day.

Daytime naps are another strategy some people use to make up for lost sleep during the night. Some evidence shows that short naps (up to an hour) can make up, at least partially, for the sleep missed on the previous night and improve alertness, mood, and work performance. But naps don't substitute for a good night's sleep. One study found that a daytime nap after a lack of sleep at night did not fully restore levels of blood sugar to the pattern seen with adequate nighttime sleep. If a nap lasts longer than 1 hour, you may have a hard time waking up fully. In addition, late afternoon naps can make falling asleep at night more difficult.

Source: Patlak, M. (2005, November). How much sleep is enough? In *Your guide to healthy sleep* (National Institutes of Health [NIH] Pub. No. 06-5271, pp. 25-27). Washington, DC: U.S. Department of Health and Human Services. Retrieved May 25, 2006, from <http://www.nhlbi.nih.gov>