You're Getting Very Sleepy

More sleep would make most Americans happier, healthier and safer

Findings

Many people are surprised to learn that researchers have discovered a single treatment that improves memory, increases people's ability to concentrate, strengthens the immune system, and decreases people's risk of being killed in accidents. Sound to be good to be true? It gets even better. The treatment is completely free, even for people who have no health insurance. It also has no side effects. Finally, most people consider the treatment highly enjoyable. Would you try it?

You probably should. For most people, this treatment would consist of getting an extra 60-90 minutes of sleep each night. Both psychologists and psychiatrists have been arguing for years that one of the most significant and overlooked public health problems in the U.S. is that many American adults are chronically sleep deprived. That is, very few Americans regularly obtain the 8 or more hours of sleep that almost all adults need each night. The consequences of this chronic sleep deprivation can truly be disastrous. Laboratory experiments on the effects of sleep deprivation have shown that failing to get enough sleep dramatically impairs memory and concentration while increasing levels of stress hormones and disrupting the body's normal metabolism. Research outside the laboratory further suggests that long term sleep deprivation leads to greater susceptibility to motor vehicle accidents and may even lead to premature aging.

This is important because research shows that many people are carrying a heavy "sleep debt" that they have built up from weeks, months, or even years of inadequate sleep. In experiments on sleep debt, researchers pay healthy volunteers to stay in bed for at least 14 hours a day for a week or more. Most people given this opportunity sleep about 12 hours a day for several days, sometimes longer - and then they settle into sleeping 7-9 hours per night. As William Dement (1999) put it, "this means … that millions of us are living a less than optimal life and performing at a less than optimal level, impaired by an amount of sleep debt that we're not even aware we carry."

But is carrying a sleep debt really so harmful? Careful experiments by psychologist David Dinges and others have shown that the answer is yes. Dinges and colleagues recruit healthy young volunteers who live continuously in Dinges's sleep laboratory for 10-20 days. By randomly assigning people to receive different amounts and patterns of sleep over time, by controlling people's access to stimulants such as caffeine, and by constantly monitoring people's physiological states (to document the amount of sleep that people are actually getting), Dinges has learned that people who get less than 8 hours sleep per night show pronounced cognitive and physiological deficits, including memory impairments, a reduced ability to make decisions, and dramatic lapses in attention. As sleep deprivation continues over time, these deficits only grow worse. Consistently failing to get enough sleep is the biological equivalent of consistently spending more money than you make. Napping can help reduce a sleep debt, for example, but there are also long term benefits to maintaining consistent, predictable sleep patterns. In addition, whereas naps do improve cognitive functioning after periods of sleep deprivation, they do not do much to repair the negative mood that results from sleep loss (see Dinges et al., 1988).

Many people argue that they get by just fine on very little sleep. However, research shows that only a tiny fraction of people can truly function well on less than 8 hours sleep per night. Dinges estimates that, over the long haul, perhaps 1 person in a thousand can function effectively on six or fewer hours of sleep per night. Many people who operate on chronic sleep debts end up napping during the day or fighting through long periods of sleepiness in the afternoon. Moreover, people who chronically fail to get enough sleep may actually be cutting their lives short. A lack of sleep taxes the immune system, and may even lead to disease and premature aging. To make all of this worse, most people who are sleep deprived do not even realize it. If you get sleepy during long meetings or long drives, chances are you are chronically sleep deprived.

Significance

Estimates by the National Highway Traffic Safety Administration indicate that drowsy or fatigued driving leads to more than 100,000 motor vehicle crashes per year. Even small disruptions in sleep can wreak havoc on human safety and performance. For example, in a nation-wide study of motor vehicle accidents occurring between 1986 and 1995, psychologist Stanley Coren (1998) studied the effects of the single hour of lost sleep that many
Americans experience when they set their clocks forward every spring. The result? A 17% increase in traffic deaths on the Mondays following the time changes (compared with the Mondays before). Psychologists such as Gregory Hicks have observed similar findings. They focused specifically on alcohol-related traffic related fatalities and observed increases in the one-week window following changes to daylight savings time. It is harder to estimate the toll sleep deprivation takes on people's health, happiness, and productivity, but according to the National Sleep Foundation, the annual cost in lost worker productivity due to sleeplessness is about $18 billion dollars.

**Practical Application**

In light of the dramatic public health consequences of sleep deprivation and unhealthy sleep patterns, the National Sleep Foundation (NSF), in cooperation with many partner organizations, established National Sleep Awareness Week, promoted each spring during the week when people set their clocks forward for daylight savings time. In 2003, the NSF reported that about 600 sleep centers in North America sponsored educational activities in their own local communities during National Sleep Awareness Week. Many U.S. states now educate drivers not only about the dangers of driving while intoxicated but also about the dangers of "driving while drowsy."

**Cited Research and Additional Sources**


