



NATIONAL SAFETY COUNCIL

Position/Policy Statement

Educating the Public on Sleep Health through Worksite Wellness Programs

NSC Policy/Position:

The National Safety Council (NSC) supports sleep health education and sleep disorder screening through wellbeing programs.¹

Background

Getting regular, quality sleep is a vital physiological need for humans, required for health and productivity. The American Academy of Sleep Medicine² and National Sleep Foundation (NSF)³ both recommend that adults sleep seven or more hours on a regular basis “to promote optimal health.” However, a large-scale survey by the Centers for Disease Control and Prevention found that more than one-third of U.S. adults usually sleep less than seven hours daily, including 1 in 8 who report sleeping for five hours or less.⁴

A variety of factors – including work demands, family and social obligations, personal electronics usage, sleep disorders and other health issues – interfere with the ability of most adults to meet this sleep need on a regular basis. Sleep disorders are a common barrier to getting proper sleep. The Institute of Medicine estimates that 50 to 70 million people in the U.S. are living with a sleep disorder. Most are undiagnosed and untreated.⁵

Sleep loss can affect people on both a short- and long-term basis. Performance the following day can be affected by losing two hours of sleep.⁶ One study found that a group of participants

¹ In this document, both “wellness” and “wellbeing” programs will be referred to as “wellbeing.”

² Watson NF, Badr MS, Belenky G, et al. Recommended amount of sleep for a healthy adult: a joint consensus statement of the American Academy of Sleep Medicine and Sleep Research Society. *Sleep*. 2015;38(6):843–844.

³ Hirshkowitz M, Whiton K, Albert SM, Alessi C, Bruni O, et al. The National Sleep Foundation’s sleep time duration recommendations: methodology and results summary. *Sleep Health*. 2015;1(1):40–43.

⁴ Liu, Yong. "Prevalence of healthy sleep duration among adults—United States, 2014." *MMWR. Morbidity and mortality weekly report* 65 (2016).

⁵ Colten H, Altevogt B. Institute of Medicine (US): Committee on Sleep Medicine and Research. Sleep disorders and sleep deprivation: an unmet public health problem. Washington, DC: Institute of Medicine: National Academies Press; 2006.

⁶ Carskadon, M. A., & Roth, T. (1991). Sleep restriction. *Sleep, Sleepiness and Performance*, TH Monk (Ed). Chichester: Wiley, 155-167, 1991.

sleeping just six hours for 10 straight days performed at a similar level as another group of participants who had been awake for 24 hours.⁷

For employers, reduced alertness as a result of sleep deficiency or untreated sleep disorders contributes to:

- Missed days of work⁸
- Diminished performance and lower workplace productivity⁷
- Increased health care expenditures for illnesses and associated health conditions^{9,10}
- Workplace incidents and occupational injuries¹¹
- Motor vehicle crashes¹²

The RAND Corporation has estimated that, collectively, costs attributable to sleep deficiency in the U.S. exceeded \$410 billion dollars in 2015, equivalent to 2.28 percent of gross domestic product.¹³ The Institute of Medicine recognized the health and safety consequences of sleep deficiency and labeled the issue “an unmet public health problem.”

Employers have to deal with the high cost of sleep deficiency and untreated sleep disorders through absenteeism (\$1,685 per employee annually)¹⁴, decreased productivity (\$2,548 per employee annually)¹⁵ and increased healthcare costs (\$3,899 per employee annually)⁸. An employer with 700 employees can expect to pay \$1 million a year for its employees who are sleep deficient and suffering from untreated sleep disorders.¹⁶

Everyone should have a general knowledge of sleep health and understand the barriers to good sleep. Yet an NSF survey found that only 1 in 7 respondents were able to pass a 10 question Sleep IQ test.¹⁷ This, combined with studies that show people routinely engage in practices that interfere with the ability to sleep, particularly with regard to light, caffeine and alcohol use, personal electronics usage^{18,19} and the large percentage of sleep disorders that go undiagnosed and untreated, show a great need to educate the general public on sleep health.

⁷ Van Dongen, H., Maislin, G., Mullington, J. M., & Dinges, D. F. (2003). The cumulative cost of additional wakefulness: dose-response effects on neurobehavioral functions and sleep physiology from chronic sleep restriction and total sleep deprivation. *Sleep*, 26(2), 117-126.

⁸ Kessler RC, Berglund PA, Coulouvrat C, et al. Insomnia and the performance of US workers: results from the America insomnia survey. *Sleep*. Sep 2011;34(9):1161-1171.

⁹ Ozminkowski RJ, Wang S, Walsh JK. The direct and indirect costs of untreated insomnia in adults in the United States. *Sleep*. Mar 2007;30(3):263-273.

¹⁰ Kapur V, Blough DK, Sandblom RE, et al. The medical cost of undiagnosed sleep apnea. *Sleep*. Sep 15 1999;22(6):749-755

¹¹ Shahly V, Berglund PA, Coulouvrat C, et al. The associations of insomnia with costly workplace accidents and errors: results from the America Insomnia Survey. *Arch Gen Psychiatry*. Oct 1 2012;69(10):1054-1063.

¹² Czeisler, C. A., Wickwire, E. M., Barger, L. K., Dement, W. C., Gamble, K., Hartenbaum, N., ... & Tefft, B. (2016). Sleep-deprived motor vehicle operators are unfit to drive: a multidisciplinary expert consensus statement on drowsy driving. *Sleep Health: Journal of the National Sleep Foundation*, 2(2), 94-99.

¹³ Hafner M, Stepanek M, Taylor J. Why sleep matters—the economic costs of insufficient sleep: a cross-country comparative analysis. Santa Monica, CA: RAND Corporation; 2016.

¹⁴ Healthy Workforce. Business Pulse <http://www.cdcfoundation.org/businesspulse/healthy-workforce-infographic>.

¹⁵ . Kessler RC, Berglund PA, Coulouvrat C, et al. Insomnia and the performance of US workers: results from the America insomnia survey. *Sleep*. Sep 2011;34(9):1161-1171.

¹⁶ Obtained from National Safety Council Fatigue Cost Calculator. Available at www.nsc.org/tiredatwork

¹⁷ National Sleep Foundation (1998). 1998 National Sleep Foundation Omnibus Sleep in America Poll

¹⁸ Division of Sleep Medicine at Harvard Medical School. External Factors that Influence Sleep. <http://healthysleep.med.harvard.edu/healthy/science/how/external-factors>

¹⁹ National Sleep Foundation. Electronics in the Bedroom: Why it's Necessary to Turn off Before You Tuck in. <https://sleepfoundation.org/ask-the-expert/electronics-the-bedroom>

NSC supports sleep health education and training

The delivery of accurate and effective information about sleep and sleep disorders to the general population remains lacking.²⁰ Health promotion and safety programs offer one mechanism for education and sleep disorder screenings that can lead to better sleep and increased safety and productivity on the job. The addition of sleep health education to wellbeing programs could be an efficient way to deliver this necessary education and screening to millions of Americans. A sleep health program delivered to firefighters showed a 24 percent reduction in injuries and 46 percent fewer disability days.²¹

NSC believes that educating the public on sleep health, including healthy sleep practices, sleep disorders and sleep disorder screening, through wellbeing programs is essential to reduce the national sleep deficit and work toward eliminating preventable deaths.

This position statement reflects the opinions of the National Safety Council but not necessarily those of each member organization.

Adopted by the National Safety Council, 2018

²⁰ Altevogt, B. M., & Colten, H. R. (Eds.). (2006). *Sleep disorders and sleep deprivation: an unmet public health problem*. National Academies Press.

²¹ Sullivan, J. P., O'Brien, C. S., Barger, L. K., Rajaratnam, S. M., Czeisler, C. A., & Lockley, S. W. (2017). Randomized, prospective study of the impact of a sleep health program on firefighter injury and disability. *Sleep*, 40(1).