

## Invited Commentary

# Good Sleep, Better Life—Enhancing Health and Safety With Optimal Sleep

Mark R. Rosekind, PhD; Rafael Pelayo, MD; Debra A. Babcock, MD

**Sleep loss, circadian disruption,** and sleep disorders affect mortality, morbidity, safety, performance, and mood.<sup>1</sup> Although sleep is essential for humans, there is a persistent societal misconception that sleeping too much means gaining weight because less energy is exerted when sleeping. Historically, individuals who slept a lot were often portrayed as being overweight and lazy, and in the modern work- and activity-obsessed culture, getting less sleep can be viewed as a badge of honor. The randomized clinical trial by Tasali et al<sup>2</sup> in this issue of *JAMA Internal Medicine* corrects the misconception that more sleep leads to weight gain and, in the process, enhances our understanding of how sleep affects energy intake and weight loss. The findings of this trial are especially important given the high community prevalence of obesity.

In the study, after a 2-week baseline period, participants were randomized to either an intervention with an individualized sleep hygiene session, which was intended to increase sleep duration to 8.5 hours, or to their usual sleep pattern (control group).<sup>2</sup> The investigators compared participants in the intervention period with those in the baseline period using various assessments of energy intake, energy expenditure, and body weight and composition. Compared with the control group, the intervention group significantly extended their total sleep time by approximately 1.2 hours per night and reduced their daily energy intake by 270 kcal, resulting in a negative energy balance and weight reduction (total energy expenditure did not differ between the 2 groups).<sup>2</sup> Essentially, the findings indicated that getting more sleep over 2 weeks resulted in weight loss in participants.

Sleep hygiene consists of straightforward, common-sense recommendations for better sleeping, including going to bed and waking up at the same time each day, including the weekends; sleeping in a darkened room with a comfortable temperature; avoiding caffeinated beverages close to bedtime; exercising during the day; and engaging in relaxing activities near bedtime. Although each of these strategies has not been proven to promote sleep in the general population,<sup>3</sup> a set of measures tailored to the individual (eg, having a person who plays video games until bedtime switch to reading a book) may promote better sleep.

Participants in the study had overweight and were sleep deprived at baseline, raising the question of whether the findings are generalizable to other groups. How sleep extension would work in people who are not already sleep deprived or those with normal weight cannot be determined from this study. Whether the outcomes would be sustained, enhanced, or diminished over time is also not known. None of the participants reached the 8.5 hours per night sleep objective over the 2 weeks. Perhaps if given more time to overcome their ingrained sleep habits, participants would have gotten more hours of sleep.

Beyond its direct implications for health, sleep also has a significant role in safety given that sleep-related incidents can lead to injury or death. In the US, drowsy driving can affect approximately 230 million drivers and other road users. Although it is generally acknowledged that official estimates underestimate the prevalence of drowsy driving crashes, drowsy driving may be involved in at least 21% of fatal crashes.<sup>4</sup> This estimate represents more than 8100 lives lost on US roadways in 2020.<sup>4</sup> The description of impaired driving often includes drunk, drugged, and distracted driving, and a fourth D needs to be added: drowsy. Although not everyone behind the wheel has been or is drinking, taking drugs, or using their smartphone, everyone needs to be awake and vigilant while operating a motor vehicle to be safe. Drowsy driving is a national health and safety crisis that has been created by the current sleep-deprived society.<sup>5</sup>

The consequences of sleep loss, circadian disruption, and sleep disorders extend far beyond drowsy driving. Our society depends on, and thrives with, 24-hour operation 7 days per week in almost every aspect of life: health care, transportation, manufacturing, delivery services, energy, security or military, information technology, and commerce, among many others. These operating environments engender sleep loss and circadian disruption, both of which are known to degrade aspects of human performance such as decision-making, memory, communication, reaction time, performance stability, attention, and situational awareness.<sup>1</sup>

Physicians have an opportunity with each patient to ask about sleep habits and to counsel patients on good sleep health, as was done in the study by Tasali et al.<sup>2</sup> By directly addressing the sleep loss, circadian disruption, and sleep disorders pervasive in the US society, health and safety can be enhanced.

## ARTICLE INFORMATION

**Author Affiliations:** Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland (Rosekind); National Transportation Safety Board, Washington, DC (Rosekind); National Highway Traffic Safety Administration, Washington, DC

(Rosekind); The Johns Hopkins Center for Injury Research and Policy, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland (Rosekind); Sleep Medicine Division, Stanford University School of Medicine, Stanford, California (Pelayo); Packard Children's Health Alliance, Stanford Children's Health, Stanford, California (Babcock).

**Corresponding Author:** Mark R. Rosekind, PhD, The Johns Hopkins Center for Injury Research and Policy, Johns Hopkins Bloomberg School of Public Health, 624 N Broadway, Hampton House, Room 544, Baltimore, MD 21205 (nhtsa15@gmail.com).

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