

Improved worker safety linked to a good night's sleep

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Credit: Colorado State University

Employers seeking to improve workplace safety by reducing accidents and injuries might do well to help their employees get a good night's sleep.

That's according to Colorado State University researchers, who examined the relationship between employee sleep patterns and [workplace safety](#). The research was part of an Oregon Healthy

Workforce study that included surveys of construction workers at two Portland public works agencies. Within that dataset, CSU graduate student Rebecca Brossoit focused on workers' self-reported sleep quantity and quality, and subsequent reports of safety behavior and [workplace](#) injuries.

Brossoit is a Ph.D. student in Industrial-Organizational Psychology at CSU, and a trainee in Occupational Health Psychology through the Mountain and Plains Education and Research Center. The study, to appear in a forthcoming edition of *Journal of Occupational Health Psychology*, is co-authored by Tori Crain, assistant professor in CSU's Department of Psychology; Jordyn Leslie, former CSU undergraduate and current research assistant in Crain's lab; and collaborators at Oregon Health and Science University, Portland State University and University of Limerick.

'Cognitive failures'

It turns out the relationship between poor sleep quality and safety is tied to what the researchers call "workplace cognitive failures," or lapses in attention, memory or action at [work](#). They found that construction workers who reported more insomnia symptoms, on average, also experienced more of these cognitive failures at work. This, in turn, was related to reduced safety behaviors—both required and voluntary—and more minor injuries.

The cognitive failures could be: not remembering the correct work procedures, or whether work equipment has been turned off; unintentionally pressing a control switch on machines; or accidentally starting or stopping the wrong machine. It could also mean lapses in attention—daydreaming instead of listening to somebody," Brossoit said.

"Insomnia symptoms" that correlated with safety outcomes referred to

quality of sleep, defined by the person's ability to quickly fall asleep and stay asleep throughout the night. "Sleep sufficiency," defined as feeling well-rested upon awakening, was another measure of sleep quality. Not feeling well-rested was related to lower safety compliance, but the researchers couldn't connect that feeling to cognitive failures that workers with more insomnia symptoms experienced.

The researchers also looked at sleep quantity—the number of hours of sleep workers reported—but sleep quantity was not related to any safety outcomes examined. In other words, in this study sleep quality was more important than quantity for predicting workplace safety, Brossoit explained.

Business case

"Organizations, especially safety-sensitive ones like construction, should care about their employees' sleep, because it can impact the [safety](#) of the workplace, and put workers at risk," Brossoit said. There is also a financial risk that could be tied back to sleep, because unsafe behaviors might lead to more workers' compensation claims or lawsuits. "There's a business case for caring about sleep," Brossoit said.

Forthcoming work will look at sleep-related interventions; the intersection among work, sleep, and employees' lives outside of work; and the influence of a lack of [sleep](#) in other special populations, such as shift workers.

More information: Rebecca M. Brossoit et al. The effects of sleep on workplace cognitive failure and safety., *Journal of Occupational Health Psychology* (2018). [DOI: 10.1037/ocp0000139](https://doi.org/10.1037/ocp0000139)

Provided by Colorado State University

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