

Study maps the types of physical activity associated with better sleep

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Credit: Vera Kratochvil/public domain

Physical activities, such as walking, as well as aerobics/calisthenics,

biking, gardening, golfing, running, weight-lifting, and yoga/Pilates are associated with better sleep habits, compared to no activity, according to a new study from researchers at the Perelman School of Medicine at the University of Pennsylvania. In contrast, the study shows that other types of physical activity - such as household and childcare—work are associated with increased cases of poor sleep habits. The full results of the study (Abstract #0246) will be presented during the poster session on Monday, June 8, at SLEEP 2015, the 29th annual meeting of the Associated Professional Sleep Societies LLC, June 6-10, in Seattle, WA.

Physical activity is already well associated with [healthy sleep](#), but the new study, led by Michael Grandner, PhD, instructor in Psychiatry and member of the Center for Sleep and Circadian Neurobiology at Penn, yields insight into whether specific types of physical activities may impact [sleep quality](#).

Using data on sleep and physical activities of 429,110 adults from the 2013 Behavioral Risk Factor Surveillance System, the Penn researchers measured whether each of 10 types of activities was associated with typical amount of sleep, relative to both no activity and to walking. Survey respondents were asked what type of physical activity they spent the most time doing in the past month, and also asked how much sleep they got in a typical 24-hour period. Since previous studies showed that people who get less than 7 hours are at greater risk for poor health and functioning, the study evaluated whether people who reported specific activities were more likely to also report sufficient sleep.

Compared to those who reported that they did not get physical activity in the past month, all types of activity except for household/childcare were associated with a lower likelihood of insufficient sleep. To assess whether these effects are just a result of any activity, results were compared to those who reported walking as their main source of activity. Compared to just walking, aerobics/calisthenics, biking, gardening, golf,

running, weight-lifting and yoga/Pilates were each associated with fewer cases of insufficient sleep, and household/childcare activity was associated with higher cases of insufficient sleep. These results were adjusted for age, sex, education level, and body mass index.

"Although previous research has shown that lack of exercise is associated with poor sleep, the results of this study were surprising," said Grandner. "Not only does this study show that those who get exercise simply by walking are more likely to have better [sleep habits](#), but these effects are even stronger for more purposeful activities, such as running and yoga, and even gardening and golf. It was also interesting that people who receive most of their activity from housework and childcare were more likely to experience insufficient sleep - we know that home and work demands are some of the main reasons people lose sleep."

"These results are consistent with the growing scientific literature on the role of sleep in human performance," said Grandner. "Lab studies show that lack of sleep is associated with poor physical and mental performance, and this study shows us that this is consistent with real-world data as well. Since these results are correlational, more studies are needed to help us understand whether certain kinds of [physical activity](#) can actually improve or worsen sleep, and how [sleep](#) habits help or hurt a person's ability to engage in specific types of activity."

Provided by University of Pennsylvania School of Medicine

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