

## Working night shifts may widen your waistline

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(HealthDay)—Workers who regularly pull overnight shifts may be more



prone to pack on the pounds, a new analysis suggests.

The finding involved an in-depth look at 28 studies conducted between 1999 and 2016.

All the investigations explored the health impact of shift work, in which employees are regularly asked to either alternate between daytime and overnight schedules or to exclusively work overnight hours.

An estimated 700 million men and women around the world now follow that work pattern, representing about 20 percent of the global workforce, the researchers said.

And while the numbers varied by study, the new analysis determined that, on average, routinely working a night shift seems to boost the risk for becoming obese or overweight by 29 percent.

Although the review could not prove cause-and-effect, nutrition experts expressed little surprise at the finding.

Connie Diekman, director of university nutrition at Washington University in St. Louis, suggested that sleep disruption is without question the main culprit.

"As studies have demonstrated, and this study supports, the human body is programmed to sleep when it is dark, allowing hormones that impact hunger and satiety to reset for the next day," she explained.

"When people are awake when they should be sleeping, the hormones related to hunger and satiety appear to be thrown off, resulting in changes in eating, changes in metabolism and a tendency to eat more than we need," Diekman said.



That point was seconded by Penny Kris-Etherton, a professor of nutrition at Penn State University.

"Sleep deprivation is a major stressor that should be avoided as much as possible," she said, noting that by working night shifts, people are inevitably working against their natural biological clocks.

Neither Diekman nor Kris-Etherton were part of the current review team, which was led by M. Sun of the JC School of Public Health and Primary Care at The Chinese University of Hong Kong.

The investigators reported their findings in the Oct. 4 issue of *Obesity Reviews*.

According to the International Labour Organization, any schedule that requires working between midnight and 5 a.m. is considered night-shift work.

The review revealed that workers who are permanently assigned to overnight work are particularly prone to accumulating excess weight, compared with those who alternate between day and night shifts.

The report also suggested that the longer a worker engages in regular night-shift work, the higher the risk for gaining weight. In addition, abdominal obesity risk was specifically found to shoot up by 35 percent among those who routinely work nights.

That particular finding could ring <u>public health</u> alarm bells, given that abdominal fat has long been associated with metabolic syndrome. The syndrome includes high blood pressure, high cholesterol and high triglyceride levels, and it drives up the risk for developing heart disease, diabetes and stroke.



What's more, less than 3 percent of these workers adapted their sleep schedules to accommodate night-time work, suggesting that many were likely not getting a sufficient amount of sleep on a routine basis.

"This [has] an impact on the circadian rhythm," said Diekman, referring to everyone's natural 24-hour internal sleep clock.

According to the National Sleep Foundation, wakefulness naturally hits its lowest point between 2 a.m. and 4 a.m., at the center of a standard <u>night shift</u>.

Night shifts also challenge a worker's ability to access good food and exercise regularly, noted Kris-Etherton.

One solution, she said, is to "bring healthy foods and snacks to the workplace to eat."

Advanced planning is key, agreed Diekman. "Preparing dishes ahead of time is an easy way to have better options," she said.

"If your workplace does not offer good options or if you only have vending machines, think about better food choices that you could carry, and then how those choices can pair with what is available onsite," Diekman suggested.

"And, of course, remember that if you can get more movement into your workday it will help you with energy levels and possibly weight," Diekman added.

**More information:** Connie Diekman, M.Ed., R.D., director, university nutrition, Washington University, St. Louis, and past president, Academy of Nutrition and Dietetics; Penny Kris-Etherton, Ph.D., R.D., professor, nutrition, department of nutritional sciences, Penn State



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There's more on sleep deprivation at the <u>U.S. National Heart, Lung, and Blood Institute</u>.

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