

Binge drinking and night shift work linked to greater likelihood of COVID infection in nurses

May 29 2023



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Working the night shift or binge drinking may double the risk of COVID-19 infection, according to a study of nurses published in

Alcohol: Clinical and Experimental Research. Both alcohol misuse and night shift work have been shown to impact sleep and promote inflammation in the body, which has been linked to COVID disease severity. The findings from this study strongly suggest that alcohol and circadian misalignment contribute to the development of COVID disease in people exposed to the virus.

For the study, members of the American Nurses Association were asked to complete an [online survey](#) about [alcohol use](#), sleep patterns, chronotype, and experience with COVID infection. The study found that unhealthy alcohol use was associated with poor sleep quality and that nurses with high-risk alcohol use and [binge drinking](#) were more likely to work the [night shift](#). Night shift work and binge drinking were associated with an increased rate of COVID infection. Additionally, shift work, binge drinking, and high-risk alcohol use were associated with a later chronotype.

Chronotype, commonly understood as being a "night owl" or a "morning person," refers to the body's natural tendency to sleep or perform well at certain times of the day. Circadian misalignment is the mismatch between the body's natural sleep time and when sleep occurs, leading to poorer sleep quality. Previous studies have shown later chronotypes to be at greater risk for circadian misalignment and health factors associated with severe COVID, including cardiovascular disease, diabetes, and obesity. Later chronotypes who use alcohol have been shown to have poorer psychological well-being.

Of the 750 nurses included in the study, 25% met the criteria for alcohol misuse. Those nurses tended to be younger, were more likely to be white, and reported poorer sleep and greater stress, anger, or worry prior to sleeping. Five percent of survey respondents were binge drinkers, and almost all drank six or more drinks on a single occasion. Sixteen percent were "concerning non-binge" drinkers who displayed a mix of unhealthy

alcohol use behaviors. The Centers for Disease Control defines [alcohol misuse](#) as more than one drink per day on average or four or more drinks on one occasion in a month for women and men, more than two drinks per day, or drinking five or more drinks on one occasion.

Male and female nurses between ages 18 and 69 who worked day, evening, night, or rotating shifts in a hospital or outpatient setting were eligible for the study. The mean age of study participants was 39 years old. Ninety percent of study participants were female, 32% were white, and 55% were Filipino. The study was limited by a relatively low response rate and a low overall COVID-19 positivity rate among respondents and an assessment of self-reported [sleep patterns](#) to determine circadian misalignment. The authors recommend further study into the mechanisms of alcohol and [circadian misalignment](#) and suggest strategies to improve health outcomes in night shift workers.

More information: Garth R. Swanson et al, Binge drinking alcohol and circadian misalignment in night shift nurses is associated with decreased resiliency to COVID -19 infection, *Alcohol: Clinical and Experimental Research* (2023). [DOI: 10.1111/acer.15052](https://doi.org/10.1111/acer.15052)

Provided by Research Society on Alcoholism

Citation: Binge drinking and night shift work linked to greater likelihood of COVID infection in nurses (2023, May 29) retrieved 10 April 2024 from <https://medicalxpress.com/news/2023-05-binge-night-shift-linked-greater.html>

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