# Melatonin supplements may reduce cancer risk for night shift workers



Researchers from North Carolina and British Columbia have found that taking melatonin supplements may offer significant health benefits for night shift workers, potentially reducing their risk of cancer. This investigation was published on Monday in the journal Occupational & Environmental Medicine and is noted to be the first trial of its kind to assess the impact of melatonin on oxidative DNA damage among individuals who frequently work irregular hours.

Melatonin is a widely used over-the-counter sleep aid that many people take to enhance their quality of sleep. However, its usage is not without risk, as it can cause side effects such as headache, dizziness, and nausea. Additionally, it may interfere with other medications, notably increasing bleeding risks for those on blood thinners. Medical professionals advise caution, particularly concerning children, as it has been linked to emergency room visits among younger patients.

According to the study, a significant proportion of U.S. adults—over 27%—used melatonin as a sleep aid as of a 2022 Sleep Foundation survey. The researchers aimed to investigate how melatonin supplementation might counteract the low natural levels of the hormone experienced by night shift workers. The production of melatonin is influenced by exposure to daylight, and those working at night typically produce less of it, impacting their body's ability to repair DNA damage.

For this month-long study, researchers recruited more than 40 participants, aged 18 to 50, who were instructed to take three milligrams of melatonin daily before their daytime sleep periods. A control group received a placebo pill. The participants wore medical-grade devices on their wrists and provided urine samples to measure levels of a compound known as 8-OH-dG, which indicates DNA repair activity.

The results revealed that individuals taking melatonin exhibited an 80% increase in the levels of 8-OH-dG in their urine after daytime sleep compared to those who took the placebo. The study authors noted that these findings were in line with their previous observational research, which showed that night shift workers had lower excretion of 8-OH-dG when melatonin levels were low during work hours and higher levels during off days when melatonin production was boosted.

While the findings suggest that melatonin could be a viable supplemental strategy to mitigate cancer risk among those who work night shifts, the authors emphasised the need for further extensive trials to explore varied dosages and long-term efficacy. They highlighted that sustained melatonin use would be essential for long-term night shift workers to potentially reap cancer prevention benefits.

Concerns surrounding night shift work and its health implications have been highlighted by the International Agency for Research on Cancer, which classified it as "probably carcinogenic to humans." There are established correlations between night shift work and increased risks of several cancers, including those of the breast, prostate, colon, and rectum. Additionally, the National Toxicology Program has stated that there is strong evidence to suggest that persistent circadian disruption from night shift work can lead to cancer.

Currently, over 10 million adults in the United States are employed in night shift positions, according to data from the Centers for Disease Control and Prevention. As research continues to evolve, it may further illuminate the complex relationship between work schedules, health outcomes, and the potential protective roles of supplements like melatonin.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

* <https://www.sleepfoundation.org/shift-work-disorder/treatment> - This URL supports the claim that melatonin supplements can help night shift workers by promoting sleep during the day, although it notes that melatonin does not necessarily improve alertness during work shifts. It also mentions the relatively low risk of side effects associated with melatonin supplements.
* <https://www.timeshifter.com/shift-work/melatonin-for-shift-work-type-dose-timing> - This URL explains how melatonin can help shift workers by shifting their circadian clock and improving sleep quality, emphasizing the importance of using the right type and dose of melatonin at the correct time.
* <https://www.cdc.gov/niosh/topics/shiftwork/default.html> - This URL would provide information on the health implications of night shift work, including data on the number of adults employed in night shift positions in the United States, although it is not directly available in the search results.
* <https://www.iarc.who.int/news-events/iarc-classifies-night-shift-work-as-probably-carcinogenic-to-humans/> - This URL supports the classification of night shift work as 'probably carcinogenic to humans' by the International Agency for Research on Cancer, highlighting concerns about its health implications.
* <https://www.niehs.nih.gov/health/topics/agents/circadian-disruption/index.cfm> - This URL would discuss the health effects of circadian disruption, including the potential link to cancer, although it is not directly available in the search results.