

Shift workers: Evidence for sleep-inducing and alertness drugs is weak

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Shift workers are taking drugs to help them stay awake or get to sleep despite weak evidence for their benefit, according to a new *Cochrane* review. The authors of the review found only small numbers of trials testing over-the-counter and prescription drugs used by shift workers, and the results suggest that for some people they might do more harm than good.

In most developed countries, at least 10% of the workforce is involved in some form of shift work. European statistics suggest that as many as three quarters of the population have 'non-standard' working hours. Disturbances to normal sleeping and waking patterns increase the risk of accidents and affect shift workers' health. It is therefore important to avoid shift work where possible and improve shift work schedules to help shift workers achieve more normal sleeping and waking patterns. In jobs where shift work cannot be avoided, such as health care, the police force or the military, drugs can potentially offer short-term benefits.

The review included 15 trials involving a total of 718 people. In nine trials, the over-the-counter hormone drug melatonin helped shift workers sleep for around 24 minutes longer during the night or day, compared to placebos. However, it did not help them get to sleep any quicker. Data from only one trial of the hypnotic drug zopiclone was available. The [drug](#) was no more effective than placebos for helping shift workers sleep during the day.

The remaining trials focused on caffeine and two drugs, modafinil and

armodafinil, that are prescribed for sleepiness during night shifts. In one trial, caffeine reduced sleepiness during night shifts, when workers also napped before shifts. Modafinil and armodafinil, used by shift workers in one and two trials respectively, increased alertness and reduced sleepiness. However, they also caused headaches, nausea and a rise in blood pressure in a substantial number of people. Due to the limited benefits and frequent side effects, neither of these drugs is approved for [shift workers](#) in Europe.

"For lots of people who do shift work, it would be really useful if they could take a pill that would help them go to sleep or stay awake at the right time," said lead author of the review, Juha Liira, who is based at the Finnish Institute of Occupational Health in Helsinki, Finland. "But from what we have seen in our review, there isn't good evidence that these drugs can be considered for more than temporary use and some may have quite serious side effects."

Most of the data reported in the review was from small, low quality trials. In addition, trials tended to be carried out in specific settings, such as health care or oil rigs, so their results may be less relevant for workers in other types of roles.

"It's curious that there's such a clear gap in the research," said Liira. "It may well be that studying the effects of these drugs or others drugs in properly designed [trials](#) would be seen as unethical because workers should not need drugs to get along with their work. So the studies just haven't been done or if they have, our review has not been able to identify relevant data."

Provided by Wiley

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