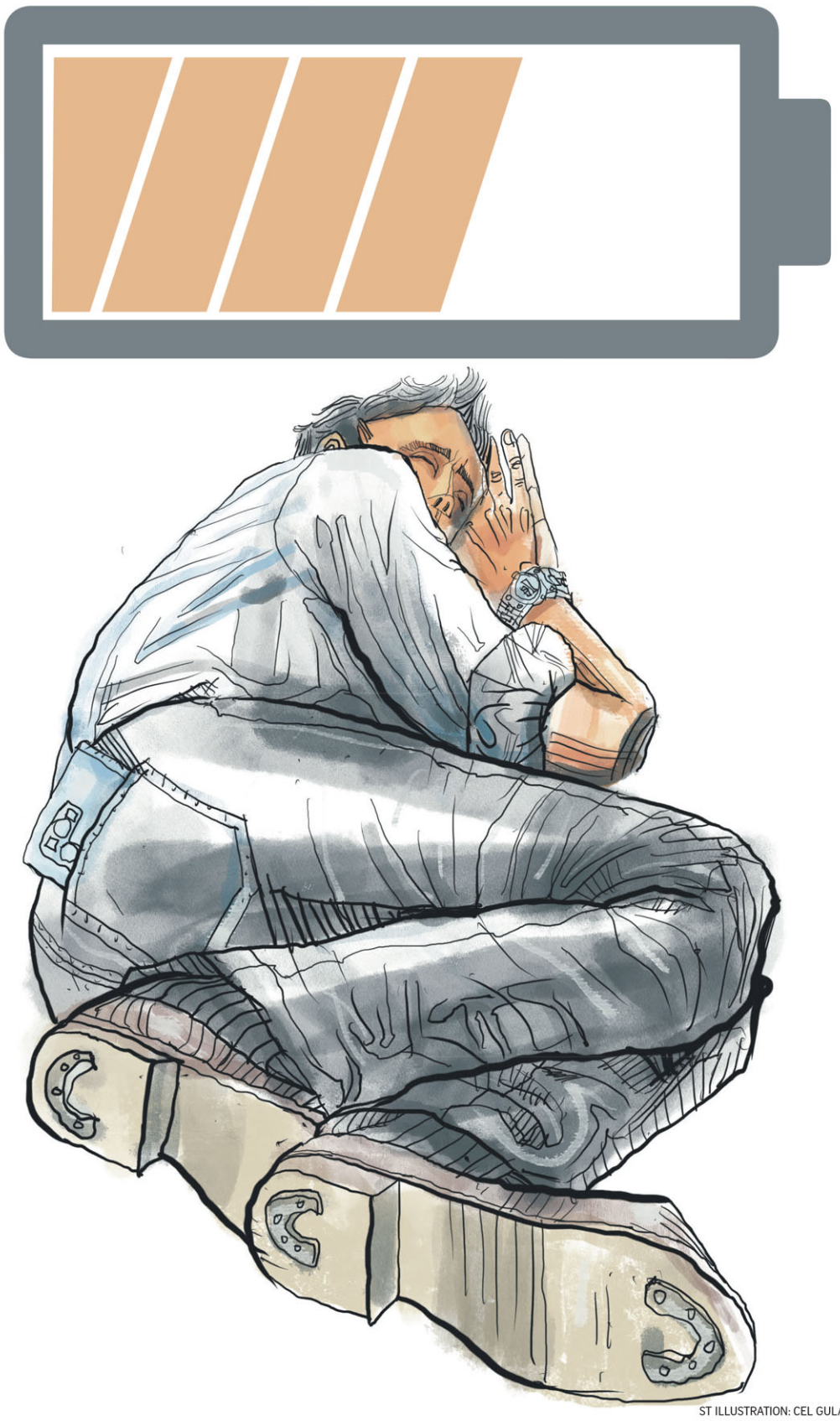
**Source:** *The Straits Times,* pB3
**Date:** 23 May 2024

Sleepless in Singapore

# *Nap time on the job helps shift workers to stay alert*

Sleepiness is a problem for night workers.

**Joshua Gooley**



ST ILLUSTRATION: CEL GULAPA

Our safety and public services are often left in the hands of those who work during the night. However, night workers face a major challenge – staying awake.

The mention of shift work conjures an image of a night worker slumped over in his chair sound asleep.

The truth behind the impression is that most night workers experience sleepiness on the job, and this can lead to falling asleep unintentionally. Lowering sleepiness during overnight shifts is important for improving employee performance and wellness, and for reducing mistakes and accidents.

Most night workers do not acclimatise to shift work, especially if they keep different sleeping hours on non-work days. Consequently, about one in four night workers experiences chronic insomnia and excessive sleepiness caused by their shift work.

The best solution to the problem of sleepiness in night workers may be to fight fire with fire: let them sleep during work hours.

## NIGHT WORK GOES AGAINST OUR BIOLOGY

Here in Singapore, about one in 10 of the labour force works during the night.

Sleep problems are especially common in night workers. Sleeping during the day and working at night goes against our biology. For this reason, daytime sleep is typically shorter and more fragmented compared with night sleep for the average person.

As a day-oriented species, humans have a daily rhythm of "sleep pressure" that is highest during the night. Night workers find it especially difficult to stay alert in the second half of their work shift, corresponding to between 3am and 7am. This biological pressure to sleep is further increased in night workers with a history of poor daytime sleep.

Night work is associated with impaired alertness, errors and accidents, and greater risk of falling asleep compared with day work. Workers may attempt to cope with their fatigue by taking caffeine or staying on their feet. However, the only remedy for lowering biological sleep pressure is to go to sleep.

A short intentional nap that mitigates sleepiness and enables shift workers to perform better in the later part of their shift is preferable to spending one's time in a state of grogginess.

## BENEFITS OF NAPPING

A short nap can boost alertness and performance in sleepy individuals. In recent years, companies in Singapore such as Google and Shopee have installed sleep pods for employees to take daytime naps. The rationale is that inadequate sleep leads to losses in productivity. Hence, encouraging naps may improve work quality.

Naps are usually taken in the afternoon, but they also work at other times of the day. Night workers frequently take naps in the late afternoon or evening before reporting to work. This can reduce the drop in alertness during the night shift.

Unfortunately, not all night workers have the opportunity to nap before work, due to social and family commitments. Additionally, napping can be difficult at the start of the work week when the biological drive to sleep during the daytime is relatively low.

Encouraging night workers to take planned naps during the night shift can help to solve two problems related to sleep. First, the nap can help to compensate for poor daytime sleep. Second, the nap can reduce the biological drive for sleep in the later part of the night shift.

Research studies have shown that a short nap in the early part of the night can improve self-rated sleepiness and objective measures of alertness later in the night. Importantly, naps produce greater benefits than rest breaks without sleep.

Some professions with long work hours already encourage their employees to take naps during the night shift to manage fatigue. In particular, on-duty naps are recommended as a strategy for lowering fatigue in healthcare workers, firefighters, and commercial airline pilots who work long overnight shifts.

**Research studies have shown that a short nap in the early part of the night can improve self-rated sleepiness and objective measures of alertness later in the night. Importantly, naps produce greater benefits than rest breaks without sleep.**

## HOW TO IMPLEMENT NAPS IN THE WORKPLACE

The way that naps are deployed will depend on the type of work and operational constraints. However, there are general guidelines for how to schedule naps during overnight shifts.

First, naps should be timed before heavy sleepiness starts to set in. This usually means taking a nap within the first half of a night shift. The idea is to minimise sleepiness in the second half of the shift when the biological drive to fall asleep is very high.

Second, naps should be long enough, but not too long. Naps that are longer provide improvements in alertness that are sustained for longer, but may also lead to higher levels of grogginess immediately after the nap. This is called "sleep inertia". However, naps lasting about 30 minutes have been shown to boost alertness in the later part of a shift without causing much sleep inertia.

Another key consideration is the sleeping environment. Workers who are permitted to sleep during their rest breaks are unlikely to get a refreshing nap unless there is a quiet area where they can lie down. This means having a dedicated room where employees can take a planned nap – this is already standard practice in most hospitals in Singapore where physicians and nurses work long-duty overnight shifts.

Sceptics of workplace naps will often point to other strategies for boosting alertness. There are indeed other ways of staying alert, but they have their limitations.

Night workers often rely on caffeine or nicotine to combat fatigue in the later part of their shift. Stimulants can provide some degree of relief but can make it more difficult to fall asleep after work.

Rest breaks without sleep are probably the most scalable approach for resetting a person's state of cognitive readiness. However, fatigue-related impairment can return within minutes of returning to night work. The problem is that rest breaks do not decrease the biological drive to fall asleep. Only sleep can do that.

## THE FUTURE OF NAPPING AT WORK

Looking forward, how can we get more employers to consider naps as a viable strategy for reducing fatigue and improving safety and productivity?

The first step is cultural acceptance. Despite evidence that naps work during night shifts, there is still an image problem. It just doesn't sit well with some people that a worker can draw a salary while sleeping, even if it is for a small fraction of their work shift.

By comparison, drawing a salary while taking rest breaks is widely accepted because of the perceived benefits for wellness and productivity. Yet a planned "nap break" during the night shift serves the same purpose.

The second step is convincing employers who are open to naps that the benefits are likely to outweigh the costs. Otherwise, employers are unlikely to take action.

The case for on-shift naps is most compelling in settings where attentional failure is a threat to safety or resources, such as emergency medical services and commercial transportation. In low-risk work settings, employers should also be made aware that naps can lead to greater post-nap gains in productivity compared with the status quo.

The last step involves measuring the impact of on-shift naps on worker performance and well-being. In the end, data is king. Much of the evidence in favour of naps is based on simulated shift work in the laboratory. It is time to take this knowledge into the workplace.

In the past century, we have come a long way in making sure that the safety and wellness of night workers are better protected. Minimising fatigue during night work remains a major goal in occupational health. An "open-nap policy" may get us closer to reaching it.

• Joshua Gooley is an associate professor in the Neuroscience and Behavioural Disorders Programme at Duke-NUS Medical School. This is the first in a limited Opinion series.