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Poor visibility and fatigue during night shifts leads to higher risk of serious injury or death

Good workplace lighting saves lives

ADELINE TAN

Don't underestimate the importance of lighting in a workplace.

Insufficient lighting could result in serious injuries, or even death.

A worker fell to his death in 2013 when they were conducting painting works at night.

The area was not well lit, and the workers were not briefed on the safety regulations. On top of that, the workers were also not stopped from working while intoxicated.

There was a gap about 0.6m wide that was not lighted up.

He was found by his colleagues and died from multiple injuries.

The main contractor was fined $55,000 for failures to take adequate safety measures, such as setting up of spotlights and not informing workers of the risks involved and safety procedures needed.

RECOMMENDED

An average luminance of 100 to 120 lux is recommended at work areas, but a greater level of luminance may be necessary for more complex tasks.

The lighting at a void deck in the picture is around 32.4 lux, and the lighting in a multi-storey carpark in the picture is 179.9 lux.

In addition to lighting, employers should also adhere to safety guidelines, especially during works at night.

Mr Patrick Han, executive director of Workplace Safety and Health Council said: "For example, employers should provide reflective clothing for all site personnel and install adequate work area lighting, such as lighting towers. Before carrying out any works at night, all site personnel should be briefed on their assigned work areas and informed of any relevant hazards."

In addition, employers should also be aware of "workers' physical and mental state as they are working against their natural sleep cycle on the night shift, and provide more breaks and designated facility for resting when necessary".

Mr Han added: "Working at night can pose many problems, including poor visibility and fatigue, which may lead to serious consequences such as injury or death.

"Therefore, proper steps must be taken to ensure that risks are minimised, such as installing sufficient lighting and ensuring workers are physically fit and ready to perform tasks assigned."

Measurements were taken in different locations of the block. Readings from lux meters show that lighting levels were inadequate. PHOTOS: MINISTRY OF MANPOWER

Lighting level at the HDB flat void deck (32.4 lux).

Lighting level near the carpark (54.1 lux).

Lighting level in the multi-storey carpark (179.9 lux).

> *"Working at night can pose many problems, including poor visibility and fatigue, which may lead to serious consequences such as injury or death. Therefore, proper steps must be taken to ensure that risks are minimised, such as installing sufficient lighting and ensuring workers are physically fit and ready to perform tasks assigned."*
>
> — Mr Patrick Han, executive director of Workplace Safety and Health Council

For shift work, especially the night shift, employers are advised to take precautions as their employees' natural sleep cycle are disrupted.

Here are some suggestions for work scheduling:

- Schedule complex tasks to be performed only during the day
- Keep or limit night shift work to a minimum. An example is to limit shift work to essential jobs and tasks that must be completed at night
- Provide transportation after work for employees working long shifts or night shifts
- Avoid providing incentives to encourage employees to work excessive hours. Incentive-based programmes may encourage employees to work excessive hours and may cause employees to work despite feeling fatigued
- Have in place contingency plans if employees become fatigued — this would involve removing fatigued employees from work activities where there is a considerable risk to safety and/or health (e.g. operating heavy machinery or plant)
- Schedule critical safety work activities outside of the 2am to 6am window, and to a lesser degree, between 2pm and 4pm where low circadian rhythm (a dip in energy because of the urge to sleep) results in less optimal performance

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Spot unsafe practices around your neighbourhood? Want to let MOM know about an unsafe practice at your workplace?

Snap those photos on your mobile and send it to SNAP@MOM.

All contributions will be secret.

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