

The heat is on. Time to prepare and protect workers

Asia is grappling with sweltering temperatures and extreme heat events.

Singapore is no exception. Our nation experienced its fourth hottest year in 2023, and 2024 is set to be even warmer, according to the Meteorological Service Singapore.

While some of us are thankful for the comfort of cooled offices or sheltered indoor work environments, there are many people, including delivery riders and construction workers, who are exposed to the heat due to the nature of their work.

Workers facing chronic medical conditions like diabetes, hypertension and a history of heart problems are particularly vulnerable to heat injuries.

Apart from compromising worker safety and health, another aspect is the disruption to business operations.

Singapore's economic growth and development hinge on the well-being and productivity of its labour force, which is increasingly threatened by the debilitating impacts of excessive heat exposure.

With more frequent and intense dry spells amid rising temperatures brought about by climate change, it's important to help the workforce and workplace to cope. In fact, as we collectively confront the realities of a warming world, heat safety must be at the forefront of the national consciousness.

The cost of heat stress

Prolonged exposure to high temperatures isn't just a health issue that can result in heat stroke, coma and even death – it can have a significant economic impact too.

Project HeatSafe, a Singapore-based research initiative investigating how rising temperatures affect the health and productivity of people in South-east Asia, found that the productivity rate of construction workers in Singapore dropped by 24 per cent during periods of heat stress.

In 2018, heat strain caused an 11.3 per cent decline in average productivity across the country's four big economic sectors – services, construction, manufacturing and agriculture.

It's expected to further reduce labour productivity by up to 14 per cent in 2035, which could cost Singapore over \$2.22 billion in economic losses.

With increasing intensity and frequency of heat risks, how can we better protect our workers while optimising productivity?

Fostering a culture of heat safety

Establishing a deeply ingrained culture of heat safety, where precautions become second nature, significantly bolsters workplace resilience against heat waves driven by climate change.

Companies should take responsible and practical steps to ensure workers' safety by following the Workplace Safety and Health (WSH) guidelines on managing heat stress in the workplace.

This starts with strengthening the education and awareness of heat stress prevention measures at the workplace.

This ranges from enacting heat acclimatisation programmes – a gradual adaptation of the body that improves an individual's ability to tolerate heat stress – to providing adequate well-ventilated rest areas, regular rest breaks and conducting supervised hourly hydration.

Other preventive efforts include issuing workers with loose-fitting and light-coloured clothing better suited to hot conditions, and dispensing ice slurries for consumption to bolster heat tolerance.

Heat mitigation programmes and protocols for responding to early symptoms of heat exhaustion and heatstroke are critical and must include well-rehearsed drills.

Regular training on recognising, preventing and managing heat-related illnesses should also be provided to both employees and supervisors who are responsible for the supervision of workers under heat-exposed conditions.

On top of complying with the Ministry of Manpower's rule of mandatory hourly rest breaks for outdoor workers when the Wet Bulb Globe Temperature – a measure of the heat stress in direct sunlight – rises above 32 deg C, companies could remind their workers to be vigilant about heat exhaustion and act accordingly depending on individual workers' health conditions and threshold for heat.

To foster a culture of heat safety where recognising heat hazards becomes second nature, perhaps establishing a national heat safety awareness day would be useful to reinforce the message about the dangers of extreme heat, and promote safety measures.

Technology to manage heat stress

Technology has much to offer in improving worker safety in hot environments. Employers could consider investing in wearable sensors that monitor body temperatures, heart rates and other vital biometric indicators to help catch early signs of heat illness.

Additionally, investing in cooling personal protective equipment can make a substantial difference in preventing heat-related illnesses and maintaining productivity.

These come in the form of air-cooled, water-cooled, ice-cooled or cooling pack-loaded vests or garments that regulate core body temperature and combat heat stress. Alternatively, portable cooling devices including fans, misting systems or evaporative coolers can help create comfortable microclimates for workers.

Heat safety: A shared responsibility

Rising ambient temperatures brought about by climate change will undeniably affect our workforce.

It's important for workers to be aware of the risks of heat stress associated with their roles and ensure that they know the symptoms to look out for.

This responsibility cannot be solely shouldered by employers – government, employers and employees must all collaborate to effectively manage workplace heat stress.

As we collectively confront the realities of a warming world, heat safety must be at the forefront of the national consciousness and must be a continuous exercise.

Speak up if you notice a colleague exhibiting symptoms like excessive sweating, dizziness, nausea or confusion.

Report concerns about high temperatures, poor ventilation or inadequate breaks to your supervisor immediately.

The most helpful thing we can do to beat the heat is also the simplest: be vigilant and look out for one another.

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