

Prevention of Heat Stroke at Work in a Hot Environment

In accordance with the Occupational Safety and Health Ordinance (Cap.509) and subsidiary legislation, employers must, so far as reasonably practicable, ensure the safety and health at work of their employees, including the provision of sufficient potable water at the workplace.

Summer days in Hong Kong are hot and humid. This leaflet lists some appropriate measures that should be taken by employers and employees to prevent heat stroke when working in a hot environment.

By adopting effective measures to control the occupational hazards in a hot environment, it not only can ensure the safety and health of workers, but also benefit the organization:

Reducing occupational injuries and adverse effects on workers' health

Enhancing work enthusiasm and decreasing absenteeism

Increasing work efficiency and productivity



Risk Factors

High Temperature

High Humidity

Risk factors for heat stroke include:

1. High temperature
2. High humidity (because it hinders sweat evaporation)
3. Poor ventilation
4. High radiant heat load, such as exposure to direct sunlight
5. Heavy manual activities
6. Wearing clothing that hinders sweat evaporation and heat dissipation



We should consider all the above factors and should not only rely on a single factor (such as temperature) in assessing the risk of heat stroke.

Which occupations have a higher risk of heat stroke?

Any workers who are required to work in a hot environment, no matter outdoors or indoors, may suffer from heat stroke if no appropriate preventive measures are taken. For example, construction workers or road repairing workers, laundry workers, catering workers in kitchens, porters, etc. Employees engaged in these occupations for the first time are more likely to have heat stroke because their bodies have not yet adapted to the hot working environment.

Symptoms of Heat Stroke

Common symptoms include:

- ☀ Thirst, fatigue, lethargy
- ☀ Nausea and headache
- ☀ Fainting and transient loss of consciousness
- ☀ Clammy skin and paleness
- ☀ Weak and rapid pulse, and even muscle cramps

A Safe and Healthy System of Work

Employer should formulate a safe and healthy system of work to safeguard employees against heat stroke. An effective system should include:

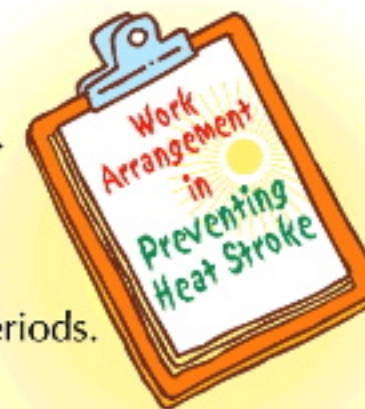
1. Work Environment

- ☀ Isolate heat generating facilities at the workplace and use insulating materials to minimize heat dissipation to other work areas;
- ☀ Increase air flow by using appropriate ventilation or air conditioning system as appropriate, especially in workplaces such as kitchens and containers;
- ☀ Avoid working under direct sunlight and set up temporary sunshade whenever possible.

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2. Work Arrangement

- ☀ Avoid working in the hot environment for prolonged periods of time. Take heed of weather report and all or most of the work should be rescheduled to:
 - Cooler periods in the daytime, such as early morning; and
 - Cooler places, such as covered or shaded area
- ☀ Minimize physical demand by using mechanical aids at work.
- ☀ Make arrangements for employees to rest in a cool or shady place during very hot periods.
- ☀ Allow employees to take regular breaks or rotate to other worksites within the shift to reduce their exposure to the hot environment.



3. Supply of cool potable water

- ☀ Provide cool potable water for employees at all times during work.
- ☀ Encourage employees to take plenty of water or other appropriate beverages to replenish the fluid and electrolytes lost through sweating.



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4. Suitable Clothing

- ☀ Light-coloured clothing minimizes heat absorption and enhances heat dissipation.
- ☀ Loose-fitting clothing enhances sweat evaporation, but clothing that is too loose may be entangled in the moving parts of machines.
- ☀ Clothing made of natural materials can enhance heat dissipation.
- ☀ The broad edge of helmet or wide-brimmed hat can avoid direct sunlight on the face, neck and back.

5. Employees' Health

- ☀ Special attention should be paid to any report of employees suffering from symptoms of heat stroke. Employees should be trained to observe their body responses. Whenever there are any symptoms of heat stroke, they should inform their supervisors and take appropriate actions immediately.
- ☀ Some employees may have difficulties in adapting to the hot working environment because of their health condition or the effects of drugs. Employers should take this into account and consider the recommendations of the employees' attending doctors when assigning work to these employees.

Enquiries

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Information on the services offered by the Labour Department and on major labour legislation can also be found on our website <http://www.labour.gov.hk>.

Complaints

If you have any complaints about unsafe workplaces and practices, please call the Labour Department's occupational safety and health complaint hotline at 2542 2172. All complaints will be treated in the strictest confidence.

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