TECH TIPS

SAFETY'N ACTION

HEAT STRESS

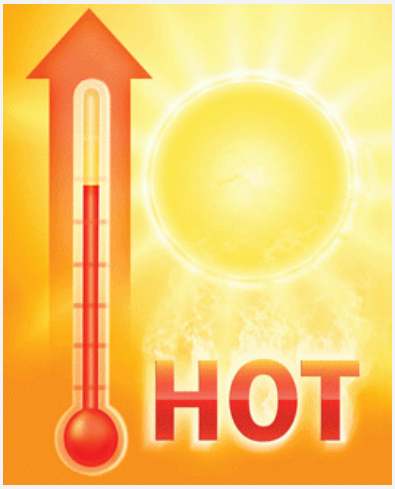
INTRODUCTION

In many jobs heat stress is an issue all year round (such as boiler rooms, bakeries, laundries, foundries and smelting operations), but this information is also applicable during the hot summer months where there may be an increased risk for some people.

In addition, age, weight, degree of physical fitness and acclimatisation, dehydration, metabolism, use of alcohol or medications, and a variety of medical conditions all affect a person's sensitivity to heat.

Heat stress occurs when the body's means of controlling its internal (core) temperature starts to fail. As well as air temperature, factors such as work rate, humidity and clothing worn while working may lead to heat stress.

Managers and workers must be aware of how to work safely in heat, the factors that can lead to heat stress, and how to reduce the risk of it occurring.



THE EFFECTS OF HEAT ON THE BODY

As the body's temperature rises, the nervous system goes to work to stimulate the eccrine glands to release sweat. Sweat is made up of water, sodium and other substances, and as it evaporates it helps cool the body down.

When the body is unable to cool itself by sweating, generally through a lack of body fluids (water and salts (sodium)), you may have enough body fluids for your body to carry out normal functions easily. If left unchecked, heat-induced illnesses, such as heat stress, heat exhaustion, and the more severe heat stroke, can occur.

WHAT IS SODIUM?

Sodium is an essential electrolyte that helps maintain the balance of water in and around your cells. Sodium is important for proper muscle and nerve function, and also helps to maintain stable blood pressure levels.

HEAT STRESS

Heat stress occurs when your body can no longer regulate your temperature and you become too hot. Heat stress can affect individuals in different ways, and some people are more susceptible to it than others.

Typical symptoms of heat stress include; an inability to concentrate, heat rash, severe thirst and fainting.

Heat stress naturally leads to two other heat-induced disorders - heat exhaustion and heat stroke.

HEAT EXHAUSTION

Heat exhaustion happens when someone sweats excessively and does not drink enough fluids and/or take in enough salt. Causes of heat exhaustion include exposure to high temperatures, particularly when combined with high humidity, and strenuous physical activity.

Typical symptoms of heat exhaustion include; fatigue, heavy sweating and a rapid pulse, giddiness, nausea, headache, slightly elevated body temperature and pale and clammy (moist) skin that may be flushed.

Without prompt treatment, heat exhaustion can lead to heat stroke – a life-threatening condition.

HEAT STROKE

With heat stroke, the body can no longer maintain its core temperature, sweating stops, and the body temperature rises. Heat stroke is a medical emergency that can lead to death.

Typical symptoms include; hot dry skin, confusion, convulsions and eventual loss of consciousness.

TIPS ON AVOIDING HEAT STRESS, AND OTHER HEAT-INDUCED DISORDERS

When temperatures climb, remember to:

- Wear loose-fitting, lightweight, light-coloured clothing and avoid sunburn.
- Seek a cooler workplace (work in the shade)
- Limit/reduce time spent in the heat (rotate workers/reschedule rosters).
- Apply cooling measures (introduce fans or ice towels).
- Drink plenty of fluids (before, during and after); especially when working in the sun (avoid caffeine and alcohol).
- Take extra precautions with certain medications (seek medical advice if necessary).
- Avoid hot spots (boilers, heat exchangers, dryers).
- Let your body acclimatise to the heat.

TRAINING

Management and workers should be trained to identify the risks of heat stress associated with their work, what symptoms to look out for, safe working practices to avoid or mitigate the effects and emergency procedures for dealing with heat stress.

MONITOR HEALTH

As with other risks that may affect the health and safety of workers, it may be necessary to monitor workers exposed to the risk of heat stress. Where necessary, you should seek advice from occupational health professionals with a good working knowledge of the risks associated with working in heat stress situations.

If you are working in the heat and you start to sweat, start to worry. If you are working in the heat and you stop sweating, really start to worry!