Outdoor Work and Heat Stress

The purpose of this Safety Note is to highlight the risks associated with outdoor work during periods of hot weather and to offer suggestions to minimise exposure and reduce the risk of heat stress.

Background

Heat stress can arise from working in high air temperatures, and with exposure to high thermal radiation or high levels of humidity. During periods of hot weather extra care should be taken to ensure outdoor workers are able to manage their exposure. Both personal and environmental factors should be considered when assessing the risk to workers’ health in hot conditions.

Personal factors can include the level of physical activity, the type of clothing worn, duration of exposure, the general health of the worker and the individual’s level of acclimatisation.

Environmental factors include air temperature, the level of humidity, air movement and radiant heat. Heat stress occurs when an individual’s body temperature dangerously overheats due to prolonged exposure to hot or humid weather.

All workers and supervisors should be able to recognise the symptoms of heat stress should they arise.

Symptoms of Heat Stress can include: confusion, dark coloured urine, dizziness, fainting, fatigue, headache, heat rash, muscle or abdominal cramps, nausea, vomiting, diarrhea, pale skin, profuse sweating and rapid heartbeat.

Considerations for prevention

Preventing Heat Stress

Keeping workers cool and hydrated is just the first step in preventing heat stress. Suitable planning prior to the commencement of work is necessary to ensure the adoption of the relevant work practices and controls to minimize discomfort due to hot weather conditions and to reduce the risk of heat stress.

It is important for supervisors and workers who perform work outside to consult with each other in periods of high temperatures.

The following control measures should be considered by supervisors and workers:

- schedule heavy work or work in direct sunlight to cooler periods of the day.
- introduce rest breaks or give alternate duties in a cooler place.
- provide a cooler area for workers to retire to for rest breaks where to can remove protective clothing to cool off if necessary.
- provide opportunities for workers who are not used to working in hot conditions to acclimatise, for example job rotation and regular rest breaks.
- provide cooled water and encourage people to drink small amounts often.
- provide a canopy over work areas where possible.
- wear protective clothing, such as broad-brimmed hat, lightweight opaque clothing (trousers and long sleeves, preferably natural fibres).

Additional Information

For further information, contact your local Work Health and Safety Manager/Coordinator, or the UQ HSW Division.

Contact the HSW Division: Phone: +61 7 336-52365 Email: hsw@uq.edu.au
• provide and encourage the regular application of sunscreens with maximum SPF protection.
• encourage the wearing of sunglasses that comply with the Australian Standard, preferably with side shields.
• train workers to recognise the symptoms of heat stress and how to manage their exposure.

Treatment for Heat Related Illness

It is essential to notify your supervisor immediately if you experience any symptoms of heat stress related to your work at UQ.

Heat Stress: Immediate assistance should be provided if any worker experiences any of the following symptoms of heat stress; dizziness, fatigue, headache, nausea, breathlessness, clammy skin or difficulty remaining alert. Ensure all workers are aware of local emergency procedures and are able to identify the systems of heat stress.

Heatstroke – is a medical emergency and requires urgent attention. Heatstroke occurs when the core body temperature rises above 40.5 °C and the body’s internal systems start to shut down. Many organs in the body can suffer damage and to rectify it, the person’s body temperature must be reduced quickly. Most people will have profound central nervous system changes such as delirium, coma and seizures. The person may stagger, appear confused, have a fit or collapse and become unconscious. The symptoms of heatstroke may be the same as for heat exhaustion, but the skin may be dry with no sweating and the person’s mental condition worsens.

Resources

More information on heat stress, its symptoms and how to minimise the risks associated with working in hot environments is available here:

- Safe Work Australia – managing the risks of working in heat
- WorkCover QLD Workplace Hazards: Heat Stress
- Managing the work environment and facilities Code of Practice 2011

Additional Information

For further information, contact your local Work Health and Safety Manager/Coordinator, or the UQ HSW Division.

Contact the HSW Division: Phone: +61 7 336-52365   Email: hsw@uq.edu.au