SAFETY ALERT

WHS-ALERT-010-2020

Date: 9 December 2020

Area of Concern: All Staff and Students

Working in Elevated Temperatures – Heat Related Illness

Elevated temperatures are expected to occur this summer, in addition there is also an expectation of a series of heatwaves.

What are some common effects of working in heat?
Working in heat can be hazardous and can cause harm to workers. The human body needs to maintain a body temperature of approximately 37 degrees celsius. If the body has to work too hard to keep cool or starts to overheat, a worker begins to suffer from heat-related illness. This is a general term to describe a range of progressive heat related conditions including dehydration, fainting, heat rash, heat cramps, heat exhaustion, and heat stroke.

Preventing Heat-Related Illnesses
The most important factor is to assess the work to be undertaken and control the risks to those involved.

This would include:

- Identify the tasks that would present a risk of increased heat stress;
- Identify the risk associated with the work:
    - Environmental conditions;
    - How strenuous the task is;
    - Clothing or personal protective equipment that may trap heat;
    - Characteristic of the work force including acclimatisation;
    - Access to shade and water.
- Heat stress tools can be used, these tools however are not an indication if the work can proceed or not proceed. The tools provide an indication of the level of risk, suggesting that control is required. The higher the risk the more controls that should be used to reduce the potential for heat stress to occur.
    - An example can be found at:

https://fswqap.worksafe.qld.gov.au/etools/etool/heat-stress-basic-calculator-test/

The WHS Regulation does not state a precise temperature at which workers should stop work because risk of heat-related illnesses depends on a number of factors.

Controls

Implement the controls to reduce the potential for heat-related illnesses to occur. This could include:

- Hydration as a key factor for controlling risk. In high risk cases the inclusion of hydration testing may be used. Dark or reduced urine output can indicate dehydration, so ensure you observe your urine output when working in extreme heat. The NSW Health Urine Colour Chart can help workers determine if they are becoming dehydrated;
- Acclimatization to the type of work and conditions;
- Arranging work for the cooler hours of the day (cooler season). Including:
  - Strenuous manual tasks;
  - Work in ceiling cavities or on a roof.
- Arrange frequent breaks;
- Hold breaks in cool environments where possible;
- Use air-conditioned vehicles (minimum 10 minutes to assist in dropping your core temperature);
- Eat regular meals and snacks to help replace salt and electrolytes lost through sweating;
- Ingestion of crushed ice / slushies as the conversion of ingested ice to liquid uses body heat to lower temperature. This drops your core temperature not just your skin temperature. Easy solution is to use a blender;
- Avoid the consumption of caffeine and do not consume alcohol;
- Provide shade when in the direct sun;
- Portable air conditioning units;
- Fans to increase airflow;
- Lighter clothing to allow heat to escape;
- Staff working together to monitor each other. All workers need to be able to recognise the signs of heat-related illnesses.

Indoor work environments (such as a shed or ceiling cavity) can increase the risk of workers being exposed to heat-related illness.

Symptoms and Treatment for Heat Related Illnesses

Most common:

Dehydration:

- Symptoms:
  - Mild to severe thirst;
  - Dry lips and tongue;
  - Slowed mental function and lowered performance;
  - Reduced or dark urine.

- First aid for dehydration:
    - Drink water;
    - Remove unneeded clothing;
    - Move to the shade or cool environment;
    - Monitor the person has recovered.

Most Serious:

Heat Stroke:

- Symptoms:
    - Person stops sweating;
    - Cramps;
    - Rapid pulse;
    - Headache, and or dizziness and visual disturbances;
    - Nausea and/or vomiting;
    - Disorientation or impaired judgement;
    - Collapse, seizures and or unconsciousness;
    - Cardiac arrest;
- First Aid (source anzcor-guideline-9-3-4-hyperthermia-september-2020.pdf) :
    - Call 000;
    - Commence Cardio Pulmonary Resuscitation if required;
    - Move the worker to a cool place with circulating air. Preferably an air-conditioned space, at a minimum move to shade;
    - Remove unnecessary clothing, including PPE;
    - Immerse (i.e. whole-body from the neck down) in cold water (a bath if possible, as cold as possible) for 15 minutes. This is the most effective method of cooling. If this is not available, a combination of the following methods should be used:
        - Wet the person with cold or cool water, under a shower if safe, or with a hose or other water source;
        - Apply ice packs (groin, armpits, facial cheeks, palms and soles);
        - Repeatedly moisten the skin with a moist cloth or atomizer spray;
        - Fan continuously.
    - If the worker is fully conscious and able to swallow, sit them up to facilitate drinking and provide cool or cold water.

For a complete list of heat-related illnesses and for further information on preventing heat-related illness refer to:

https://www.safeworkaustralia.gov.au/system/files/documents/2001/working_in_heat_factsheet.pdf

https://www.worksafe.qld.gov.au/safety-and-prevention/hazards/hazardous-exposures/heat-stress

file:///C:/Users/jc130248/Downloads/anzcor-guideline-9-3-4-hyperthermia-september-2020.pdf