



Working in Hot Temperatures

Why is working in the heat bad for your health?

Human beings need to maintain a constant body temperature if they are to stay healthy. Working in high temperatures will induce heat stress when more heat is absorbed into the body than can be dissipated out. Heat illness such as prickly heat, fainting from heat exhaustion or heat cramps are visible signs that people are working in unbearable heat. In the most severe cases, the body's temperature control system breaks down altogether and body temperature rises rapidly. This is heat stroke, which can be fatal.

Symptoms that indicate heat stroke include:

staggering walk
mental confusion
hot skin
temperature rise (yet may feel chilled)
convulsions
unconsciousness
incoherence
deliriousness

Warning signs of heat exhaustion are:

clammy skin	rapid pulse
confusion	vomiting
light-headedness	weakness
fainting	short temper
slurred speech	fatigue
nausea	loss of concentration

Is there an upper temperature limit at which workers should stop work?

Section 19 of the *Work Health and Safety Act, 2011* states that a PCBU has a legal duty to ensure the health, safety and welfare at work of all employees. If workers are suffering from any of the above symptoms, then it is clear that your employer is not complying with the law. But the law does not state any precise temperature at which workers should stop work, or any specific actions, which must be taken by the employer at certain temperatures.



What helps to prevent heat stress?

It is obviously more difficult for the employer to control the environment for outdoor works, than for indoor work. However, if work has to be done outdoors then employers must be responsible in taking steps that are available to protect workers. These include:

- Providing canopies or awnings over sections of the site where work is currently being carried out, to shield workers from the ultra-violet rays of the sun, as well as from the direct heat of the sun.
- Providing regular rest breaks. A ten minute break every hour, in a cooler area, helps the body to cool off, especially where the work is hard, physical work. The length of the break should be increased if the temperatures rise very high. As a practical guideline, the following measures can be followed in most workplaces

- Allow the person to rest if they are suffering from heat exhaustion.
- If the person is suffering from heat stroke they should be cooled with water, cold compresses, and/ or rapid fanning.
- A person suffering from heat stroke should be taken to a medical facility for further cooling and monitoring of body functions
- Provision of cold (non-alcoholic) drinks. Frequent small drinks of cooled water will help replace the water lost to your body through sweat, before dehydration begins. This is better than infrequent large drinks. Again, the cold water supplies should be near each working position, to encourage frequent drinks.
- Alcoholic drinks should not be taken as replacement fluids. Alcohol stimulates the body to eliminate fluids, and will increase the risk of dehydration. For example, drinking one can of beer will result in losing more than that volume of urine.
- Salt tablets should **not** be taken - more water will be required by the body to help it get rid of the salt - this will increase the amount of work the kidneys must do and increase the risk of dehydration. Salt tablets also increase the risk of high blood pressure. Drinking water will not give you stomach cramps, as some people believe.

Temperature	Rest Period
30 to 32°	10 minutes
32 to 35°	15 minutes
More than 35°	At least 30 minutes

What action should be taken if someone has symptoms of heat stress?

- First take the sufferer to a cooler area (for example, an air-conditioned shed or vehicle).
- Give water to drink, if the person is conscious.

Remember: Heat stress is a medical emergency. Don't take chances!

- Build-up for new workers after holidays and types of work which increase heat hazard. This is a legal entitlement under the NSW Occupational Health & Safety Act 2000.
- Ensure that first aiders are trained in the recognition of heat symptoms and first aid treatment of heat stress.

- Then remove excess clothing (hard hat, boots, shirt). Ask workers exposed to high temperatures if they find conditions too hot or have any heat stress symptoms. Write a simple questionnaire based on your own knowledge, and the symptoms listed on this fact sheet.
- Ask management to measure and record the temperature regularly throughout the year, preferably with an automatic Wet-Bulb Globe Temperature Instrument, or at least with instruments that measure dry temperature and humidity. Safety Reps have a legal right to these results. Put all of your requests to management in writing.
- Persuade workers to put all incidents of high temperatures and symptoms suffered into the Accident Book.
- Compare these results with the results of the membership survey, your own monitoring results and the accident and sick/absence record. Do accidents happen more frequently during high temperature conditions? Is there more sick absence during these conditions?
- Demand that management bring in ventilation and heat control consultants to (re)design and install air conditioning or cool air providers, or insulation of radiant heat sources. Your union or the Workers Health Centre will be able to help you with these arrangements.
- Negotiate exposure reduction by frequent rests away from the source of heat and job rotation.
- Demand that the employer provide suitable clothing and footwear - clothing which increases body heat or prevents sweat evaporating is not suitable (for example nylon).
- Arrange for regular medical checks of employees, particularly of blood pressure.
- Demand information and training for all employees on the need for adequate water, recognition of heat symptoms, acclimatization to heat, exposure.

- If you are getting no response from management, consider calling in the WorkCover Inspector who may encourage your employer to take action. Retain copies of your records and written requests to management to show the inspector.

For further information and advice contact the Workers Health Centre

The Workers Health Centre provides a range of quality services in occupational health and safety including:

➤ Medical Screenings & Health Checks	➤ WHS Training
➤ Hearing Tests	➤ Rehabilitation & Return To Work
➤ Workplace Assessments	➤ Related Services In Psychology, Acupuncture And Massage Therapy

For further information and advice ring us on 02 9749 7666



WORKERS HEALTH CENTRE

People | Recovery | Work

Industrial Health and Research Foundation - ABN 50 804 045 194

PO Box 123, Granville NSW 2142. Ground Floor, 133 Parramatta Rd, Granville NSW 2142

Tel (02) 9749 7666 Fax (02) 9897 2488 Email admin@workershealth.com.au Website www.workershealth.com.au

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