

# Tool Box Talk

## WORKING IN HOT WEATHER

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The summer season can present unique hazards for those working outdoors in the hot weather. The combination of heat, humidity and physical labour can lead to a variety of heat-related illnesses. Proper protection and simple precautions can often prevent these types of illnesses and save lives.

### What are some of the hazards caused by working in hot weather?

There are several common heat-related illnesses, some more severe than others. It is important that all workers and employers are aware of the signs and symptoms of these illnesses and know when to seek medical aid.

- **Heat edema** is swelling which generally occurs among people who are not acclimatized to working in hot conditions. Swelling is often most noticeable in the ankles. Recovery occurs after a day or two in a cool environment.
- **Heat rashes** are tiny red spots on the skin which cause a prickling sensation during heat exposure. The spots are the result of inflammation caused when the ducts of sweat glands become plugged.
- **Heat cramps** are painful spasms of the muscles. The muscles used in doing the work are most susceptible. The spasms are caused by the failure of the body to replace its lost body salts and usually occur after heavy sweating.
- **Heat exhaustion** is caused by loss of body water and salt through excessive sweating. Signs and symptoms of heat exhaustion include: heavy sweating, weakness, dizziness, visual disturbances, intense thirst, nausea, headache, vomiting, diarrhea, muscle cramps, breathlessness, palpitations, tingling and numbness of the hands and feet. Recovery occurs after resting in a cool area and consuming cool salted drinks.
- **Heat syncope** is heat-induced giddiness and fainting induced by temporarily insufficient flow of blood to the brain while a person is standing. It is caused by the loss of body fluids through sweating, and by lowered blood pressure due to pooling of blood in the legs. Recovery is rapid after rest in a cool area.
- **Heat stroke and hyperthermia** (elevated body temperature) are the most serious types of heat illnesses and require *immediate medical attention*. Signs of heat stroke include body temperature often greater than 41°C, and complete or partial loss of consciousness. The signs of heat hyperthermia are similar except that the skin remains moist. Sweating is not a good symptom of heat stress as there are two types of heat stroke:
  - **Classical** is where there is little or no sweating (usually occurs in children, persons who are chronically ill, and the elderly); and
  - **Exertional** is where body temperature rises because of strenuous exercise or work and sweating is usually present.

### How can heat related illnesses be prevented?

Employers have a duty to take every reasonable precaution to ensure the workplace is safe for the worker. This duty includes taking effective measures to protect workers from heat stress disorders if it is not reasonably practicable to control indoor conditions adequately, or where work is done outdoors. Workers are also responsible for ensuring their own health, safety and well-being. Follow these simple tips to reduce your chances of a heat-related injury:

- **Drink water:** A person working in a hot environment loses water and salt through sweat. This loss should be compensated by water intake equal to the fluid loss. Plenty of cool drinking water should be available on the job site and workers should be encouraged to drink water every 15 to 20 minutes even if they do not feel thirsty.
- **Wear light, loose fitting clothing:** Wear light coloured, loose-fitting clothing that permits sweat evaporation but stops radiant heat. Tightly woven clothing that you cannot see through is best.
- **Protect yourself from the sun:** Use sunscreen with sun protection factor of at least 15 to block 93% of UV rays. Wearing UV-absorbent shades should block 99% of UVA and UVB rays. Also, wear a hat and use screens or umbrellas to create shaded areas.
- **Use fans or air conditioning:** Ventilation, localized air conditioning, and cooled observation booths are commonly used to provide cool work stations. Cooled observation booths allow workers to cool down after brief periods of intense heat exposure while still allowing them to monitor equipment.
- **Allow flexibility:** Make sure to take regular, frequent breaks and permit less physically demanding activities during peak temperature periods. Rest periods in a cooler area can easily prevent or reduce heat-related illnesses.

It's easy to get caught up in the job and forget about the importance of staying hydrated and taking regular breaks. Heat illnesses can occur quickly, and if the victim isn't treated, the situation can become life threatening. Watch out for signs of heat illness in yourself and your co-workers, and report any symptoms to your supervisor right away.

Screening Criteria for Heat Stress Exposure  
for 8 hour work days five days per week with conventional breaks

Allocation of Work	Acclimatized				Action Limit (Unacclimatized)			
	Light	Moderate	Heavy	Very Heavy	Light	Moderate	Heavy	Very Heavy
75-100%	31.0	28.0	--	--	28.0	25.0	--	--
50-75%	31.0	29.0	27.5	--	28.5	26.0	24.0	--
25-50%	32.0	30.0	29.0	28.0	29.5	27.0	25.5	24.5
0-25%	32.5	31.5	30.5	30.0	30.0	29.0	28.0	27.0



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