

Working in the heat

Heat is a year round job hazard in workplaces like foundries, bakeries/kitchens, laundries, and smelters. Heat is also a hazard for outdoor workers, especially in the summer.

How does your body deal with heat?

The body works best within a narrow range of body temperature, 36-37.5 degrees Celsius. An increase in body temperature of more than 1 degree means the body is having trouble dealing with heat in the environment.

The body exchanges heat with hot objects like the sun and hot metal as well as hot air. The body gets rid of heat by sweating. When the moisture in the air (humidity) is high, the body has difficulty sweating.

The harder you work, the more heat you produce which must then be lost.

How hot is too hot?

There is no simple answer. The amount of heat in the environment depends on:

- air temperature
- humidity
- air movement
- the presence of hot objects

Dehydration, tiredness, being overweight, age (over 40 and young children), poor physical condition, and recent intake of alcohol can reduce your ability to withstand heat.

It is also important to take into account the physical activity required to do the work, the work/rest schedule, and how used you are to working in the heat (acclimatization).

How does too much heat affect your health?

When the body cannot get rid of as much heat as is required to maintain a normal

body temperature the following conditions can occur:

Heat Rash: Also called “prickly heat”, this rash occurs when the sweat glands become plugged after much sweating over a long period of time. This reduces your ability to sweat and lose heat.

Heat Cramps: Cramps, which are sometimes severe, can occur in the muscles used for work like legs, arms and abdomen. This may result from the loss of salt and/or potassium during sweating.

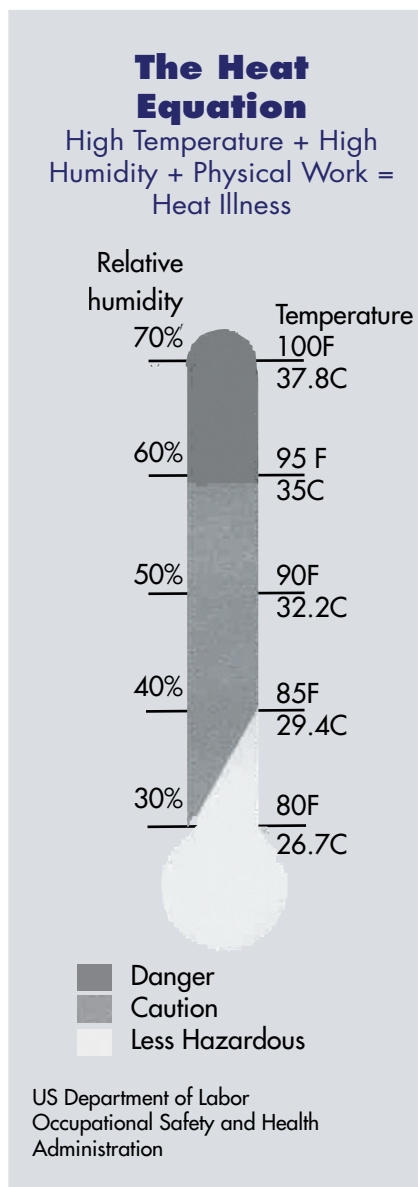
Heat Exhaustion: Weakness, dizziness, fainting, headache, breathlessness, nausea and vomiting are symptoms of heat exhaustion. The skin may be pale and is very moist because sweating can be intense. Victims of heat exhaustion often do not notice the symptoms. Everyone needs to know and watch for the signs so you can help your co-workers.

What can you do for Heat Rash, Cramps, and Exhaustion?

- move to a cool area
- encourage rest
- give cool liquids to drink
- place a cool, wet cloth on their forehead and neck

Heat Stroke

This condition is life-threatening. It requires immediate medical attention and hospitalization. In this case, sweating stops and the



skin is hot and dry. Confusion, convulsions, unconsciousness and death can occur. After recovery from Heat Stroke, you may continue to have problems dealing with the heat.

What can you do for Heat Stroke?

- Call 911 for anyone unconscious (take conscious victims to a doctor as soon as possible) Do not give anything by mouth to anyone who is in and out of consciousness.
- Move to a cooler area
- Soak the victim's clothing with cool water
- Fan to promote cooling

Other heat-related problems

- safety concerns with slippery, sweaty hands and fogging of safety glasses
- decrease in mental alertness and performance
- burns to skin exposed to hot objects like the sun and metal.

What can your employer do?

Employers are legally responsible to provide a safe and healthy work environment for all their employees. The most effective ways are

- Insulate hot surfaces or cover the surface with a bright metal shield to reflect the heat back to the source
- Lower temperature
- Increase air movement
- Use a de-humidifier, get rid of open hot water baths and fix leaky steam valves
- Mechanize or automate tasks to reduce heavy work activity

The following can also be done, but not as a substitute for the above:

- *Provide enough time for workers to become acclimatized before a full workload is expected. It usually takes 5-7 days to become acclimatized. After a week off a worker needs to be re-acclimatized.*
- Reduce work pace and/or add crew members
- Increase the number and length of breaks
- Provide air-conditioned areas and/or canopies for shade
- Provide unlimited amounts of cool water close to the work site and encourage workers to drink
- Schedule the hardest work at cooler times of the day (before 10:00 a.m. and after 4:00 p.m.)
- Provide heat reflective clothing when appropriate
- Train everyone on the signs and treatment of heat related problems.

What can you do?

- Drink a glass of water or fruit juice every half hour, even if you are not thirsty
- Avoid eating hot, heavy meals
- Salt and potassium are lost through sweating. If you sweat a lot while you work, add a little extra salt to your food and eat foods high in potassium such as oranges, bananas and potatoes. *Salt tablets are not recommended.*
- Slow your work pace at the hottest times of the day (10:00 a.m. - 4:00 p.m.)
- Wear light coloured, loose

clothing if your job permits

- Wear long sleeved shirts, long pants and brimmed hats to protect your skin from the sun. Use sunscreens with a sun protective factor (SPF) of greater than 15 and reapply often (at least every two hours while in the sun). Do not use lotions that combine sunscreen with a mosquito repellent, (Deet). Apply them separately as Deet should be reapplied less frequently.
- Wear sunglasses that block Ultraviolet (UV) rays
- Know the signs of heat related problems and what to do.

If you work in a hot environment and are concerned that it may affect your health, talk to your supervisor and/or your health and safety representative.

For more information

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