



# SAFETYScope

## What is Heat Stress?

Working or playing where it is hot puts stress on your body's cooling system. When heat is combined with other stresses such as hard physical work, loss of fluids, fatigue or some pre-existing medical conditions, it may lead to heat-related illness, disability and even death.

This can happen to anybody – even the young and fit. In Ontario, heat stress is usually a concern during the summer. This is especially true early in the summer, when people are not used to the heat.

Heat exposure may occur in many workplaces. Significant sources of heat can be found in workplaces such as foundries, smelters, chemical plants, bakeries and commercial kitchens. For outdoor workers, direct sunlight is usually the main source of heat. In mines, especially deep mines, geothermal gradients and equipment contribute to heat exposure. Humidity in workplaces also contributes to heat stress.

### Legal Requirements

Employers have a duty under clause 25(2)(h) of the Occupational Health and Safety Act to take every precaution reasonable in the circumstances for the protection of a worker. This includes developing hot environment policies and procedures to protect workers in environments that are hot because of hot processes and/or weather.

For compliance purposes, the Ministry of Labour recommends the Threshold Limit Values (TLVs) for Heat Stress and Heat Strain published by the American Conference of Governmental Industrial Hygienists (ACGIH). These values are based on preventing workers' core body temperatures from rising above 38°C.

### How We Cope With Heat

Your body is always generating heat and passing it into the environment. The harder your body works, the more heat it has to lose. When the environment is hot and/or humid or has a source of radiant heat (for example, a furnace or the sun), your body must work harder to get rid of heat.

If the air is moving (for example, from fans) and it is cooler than your body, it is easier for your body to pass heat into the environment.

Workers on medication or with pre-existing medical conditions may be more susceptible to heat stress as some medication and/or medical conditions may impair the body's response to heat. Such workers should speak to their personal physicians to see if their medication(s) and/or health condition(s) affect their ability to work in hot environments.

### Resources

- For more information on Heat Stress Related Disorders and Controls that could be put in place to manage these hazards go to [www.labour.gov.on.ca/english/hs/pubs/gl\\_heat.php](http://www.labour.gov.on.ca/english/hs/pubs/gl_heat.php).
- A free poster can be downloaded from [www.wsib.on.ca/files/Content/PreventionHSPoster/HeatStressPoster.pdf](http://www.wsib.on.ca/files/Content/PreventionHSPoster/HeatStressPoster.pdf)
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