

Health and Safety

WORKING IN HOT WEATHER - INFORMATION AND SAFETY TIPS



Hot weather brings the risk of experiencing heat-related disorders ranging from heat rash to more serious health disorders

including fainting, heat exhaustion and heat stroke. The human body copes in hot environments to maintain internal temperature equilibrium by:

- Sweating (to cool the body by evaporation)
- Increasing blood flow to the extremities and
- Increasing breathing rate.

Although these place stress on the body, sweating combined with inadequate fluid replacement is the biggest culprit when it comes to suffering serious, adverse health effects. Sweating can lead to dehydration and subsequent

complications. At high humidity levels, the body's ability to cool itself through sweat evaporation is reduced, and this increases the risk of overheating and becoming dehydrated. Learn the symptoms of heat stress, treatment protocol and prevention measures so you can protect yourself and others around you (see the attached table#1).

Workers generally at highest risk of suffering a heat-related disorder are those who:

- Work outdoors and/or in close proximity to significant heat sources such as furnaces, ovens or hot asphalt.
- Perform strenuous work as this contributes to the body's overall heat burden.
- Don't take regular breaks in cooler areas (e.g. shady or air-conditioned area).
- Don't consume enough fluids.
- Are susceptible because of a medical condition.
- Ignore symptoms of heat stress.

HEAT STRESS AND INDOOR WORKERS

For indoor office-type workers, the risk of heat stress is usually minimal because of the relatively low physical effort required to perform tasks; the absence of significant heat sources; cooling provided by fans or building air-conditioning systems and the availability of water. However, higher than normal outside heat and humidity levels often strain the effectiveness of building air-conditioning systems and, under such conditions, indoor temperatures can become uncomfortable, but this generally does not pose a significant risk to healthy individuals.

Humidex Rating

A widely used measure to provide heat stress awareness for the general population is Environment Canada's "Humidex" rating. The Humidex is a subjective rating of how hot the temperature "feels" based on various combinations of temperature and relative humidity. The general ratings are summarized in the chart on page 4.

Note: Humidex ratings heard on the radio or printed in the paper refer to the outdoor conditions. Using the Humidex rating for indoor conditions requires measuring the temperature and relative humidity indoors to determine the Humidex.

COPING WITH HOT WEATHER

Here are some tips to help you cope with hot, humid weather and protect yourself from heat stress:

- Wear light coloured and lightweight clothing.
- Keep hydrated by drinking plenty of cool fluids (preferably water). Drink at least one cup every 20 minutes - even if you aren't thirsty!
- Take rest breaks in cool or shady areas.
- If you must work outside, try to avoid working in the peak temperatures.
- Schedule work for cooler periods of the day (early morning or evening).
- Reduce the amount of physical effort required to perform strenuous tasks.
- Seek medical attention if you feel dizzy or light headed.
- Watch for signs of heat stress in co-workers.
- Never ignore signs of heat stress.
- Contact your supervisor if you have concerns regarding working in the heat.

HEAT STRESS LINKS

[Click here to view the Ministry of Labour's Heat Stress Guideline](#)

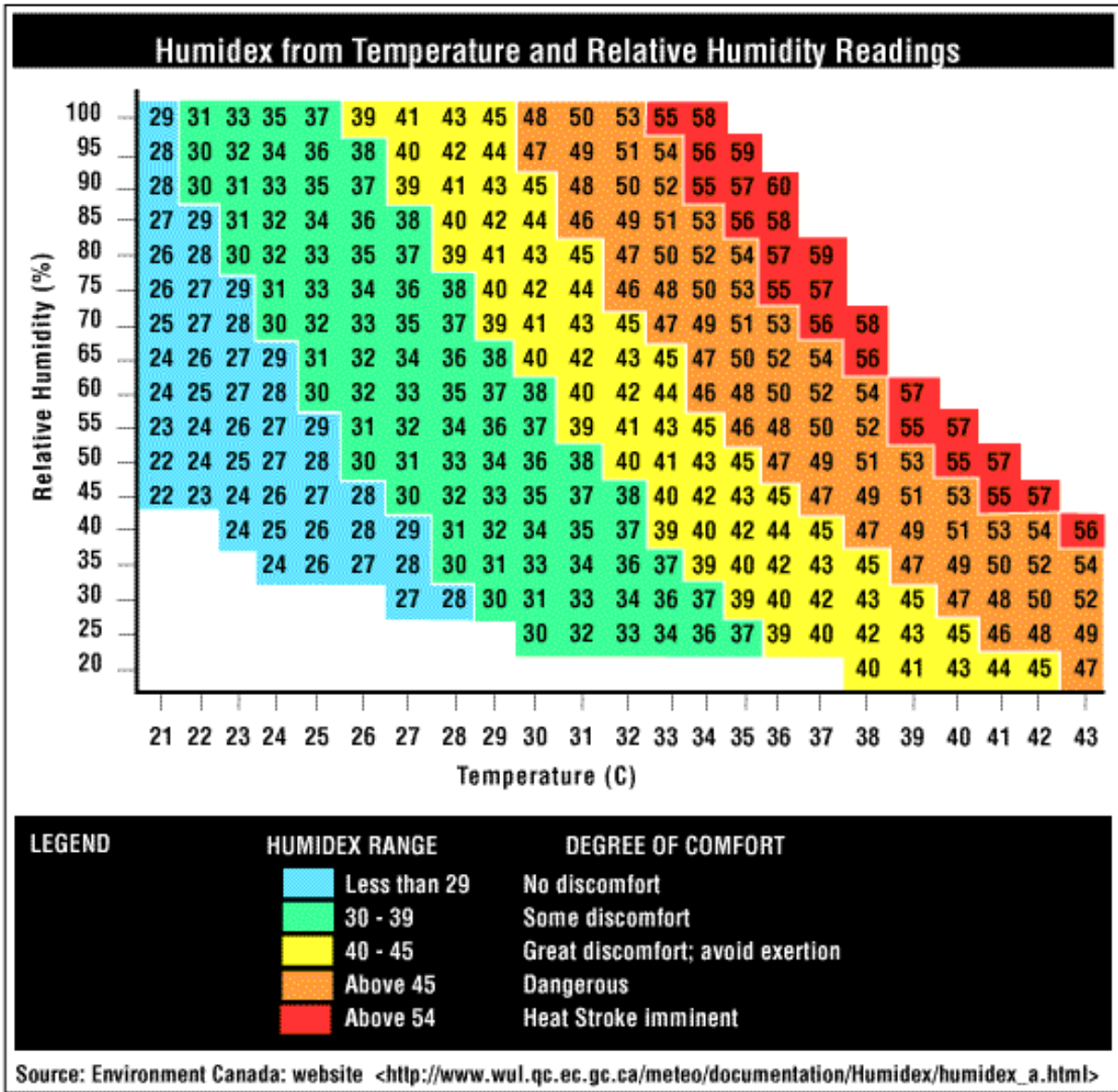
[Click here to view CCOHS Information on Humidex and Heat Stress](#)

Table #1
HEAT STRESS SYMPTOMS, TREATMENT AND PREVENTION¹

	Cause	Symptoms	Treatment	Prevention
Heat Rash	Hot humid environment; plugged sweat glands.	Red bumpy rash with severe itching.	Change into dry clothes and avoid hot environments. Rinse skin with cool water.	Wash regularly to keep skin clean and dry.
Sunburn	Too much exposure to the sun.	Red, painful, or blistering and peeling skin.	If the skin blisters, seek medical aid. Use skin lotions (avoid topical anaesthetics) and work in the shade.	Work in the shade; cover skin with clothing; apply skin lotions with a sun protection factor of at least 15. People with fair skin should be especially cautious.
Heat Cramps	Heavy sweating drains a person's body of salt, which cannot be replaced just by drinking water.	Painful cramps in arms, legs or stomach which occur suddenly at work or later at home. Heat cramps are serious because they can be a warning of other more dangerous heat-induced illnesses.	Move to a cool area; loosen clothing and drink cool salted water (1 tsp. salt per gallon of water) or commercial fluid replacement beverage. If the cramps are severe or don't go away, seek medical aid.	Reduce activity levels and/or heat exposure. Drink fluids regularly. Workers should check on each other to help spot the symptoms that often precede heat stroke.
Fainting	Fluid loss and inadequate water intake.	Sudden fainting after at least two hours of work; cool moist skin; weak pulse.	GET MEDICAL ATTENTION. Assess need for CPR. Move to a cool area; loosen clothing; make person lie down; and if the person is conscious, offer sips of cool water. Fainting may also be due to other illnesses.	Reduce activity levels and/or heat exposure. Drink fluids regularly. Workers should check on each other to help spot the symptoms that often precede heat stroke.
Heat Exhaustion	Fluid loss and inadequate salt and water intake causes a person's body's cooling system to start to break down.	Heavy sweating; cool moist skin; body temperature over 38°C; weak pulse; normal or low blood pressure; person is tired and weak, and has nausea and vomiting; is very thirsty; or is panting or breathing rapidly; vision may be blurred.	GET MEDICAL AID. This condition can lead to heat stroke, which can kill. Move the person to a cool shaded area; loosen or remove excess clothing; provide cool water to drink; fan and spray with cool water.	Reduce activity levels and/or heat exposure. Drink fluids regularly. Workers should check on each other to help spot the symptoms that often precede heat stroke.

¹ Ministry of Labour Heat Stress Health and Safety Guideline

Table #2
HUMIDEX RATINGS



Please contact the Occupational Health and Safety Department at extension 2225 or 2246 if you have any questions regarding working in the heat. Remember to always...

Think Safe! Be Safe!