

**| PLEASE POST |**

Date: June 26, 2020
To: All Component 10 Members
Re: Heat Stress, Humidity, and COVID-19

Working in an intensely hot and humid summer can pose a risk of heat stress to workers, affecting their health and safety. It is important to recognize the signs and symptoms of heat stress, the compounding effect of humidity in the current pandemic environment, and to implement preventative measures.

What are the signs and symptoms of heat stress?

Working in high temperatures can be hazardous to your health. It can cause your core body temperature to rise above safe levels, making you susceptible to heat stress. When high heat and humidity combine with other factors such as exertion, excess clothing, dehydration, fatigue, consumption of alcohol and drugs, or poor health (obesity, advanced age, pre-existing medical conditions), it may lead to heat-related illness, disability, and even death. Workers should be able to recognize the signs and symptoms of heat stress in themselves and fellow workers.

Signs and symptoms of mild or moderate heat stress include:

- Sweaty palms
- Poor vision
- Sharp muscle cramps
- Feeling dizzy, lightheaded and/or faint
- More work errors
- Loss of concentration

Signs and symptoms of severe heat stress include:

- Loss of consciousness
- Heavy sweating
- Weakness
- Visual disturbances
- Intense thirst
- Nausea and/or vomiting
- Headache
- Diarrhea
- Breathlessness
- Palpitations
- Tingling and numbness of extremities

What role does humidity play in increasing the risk of heat stress?

The body attempts to maintain a constant core temperature of 37 degrees Celsius¹. As the ambient temperature increases excessively, your body is less effective at cooling itself. Excessive levels of humidity put the body at a risk of heat stress by impeding sweat evaporation from the skin. Sweat does not evaporate as readily due to the increase in moisture content in the air².

The Occupational Health Clinics for Ontario Workers Inc. developed a [Humidex-based heat stress response plan](#), where the humidex is calculated based on temperature and relative humidity. This plan is a simplified way of protecting workers from heat stress. Other factors could affect your susceptibility to heat stress and appropriate adjustments may be necessary. Ultimately, never ignore individual signs and symptoms of heat stress, regardless of the humidex.

The current COVID-19 pandemic could also increase the risk of heat stress. Ill-fitting personal protective equipment such as masks, vests, and clothing could create a microclimate around the skin by holding excess heat, moisture, and inhibiting sweat evaporation. This in turn can cause the core temperature to rise, subjecting you to a risk of heat stress. It is important to note that sweating does not reduce the body's core temperature, but that the evaporation of sweat is key.

Who is responsible for preventing heat stress?

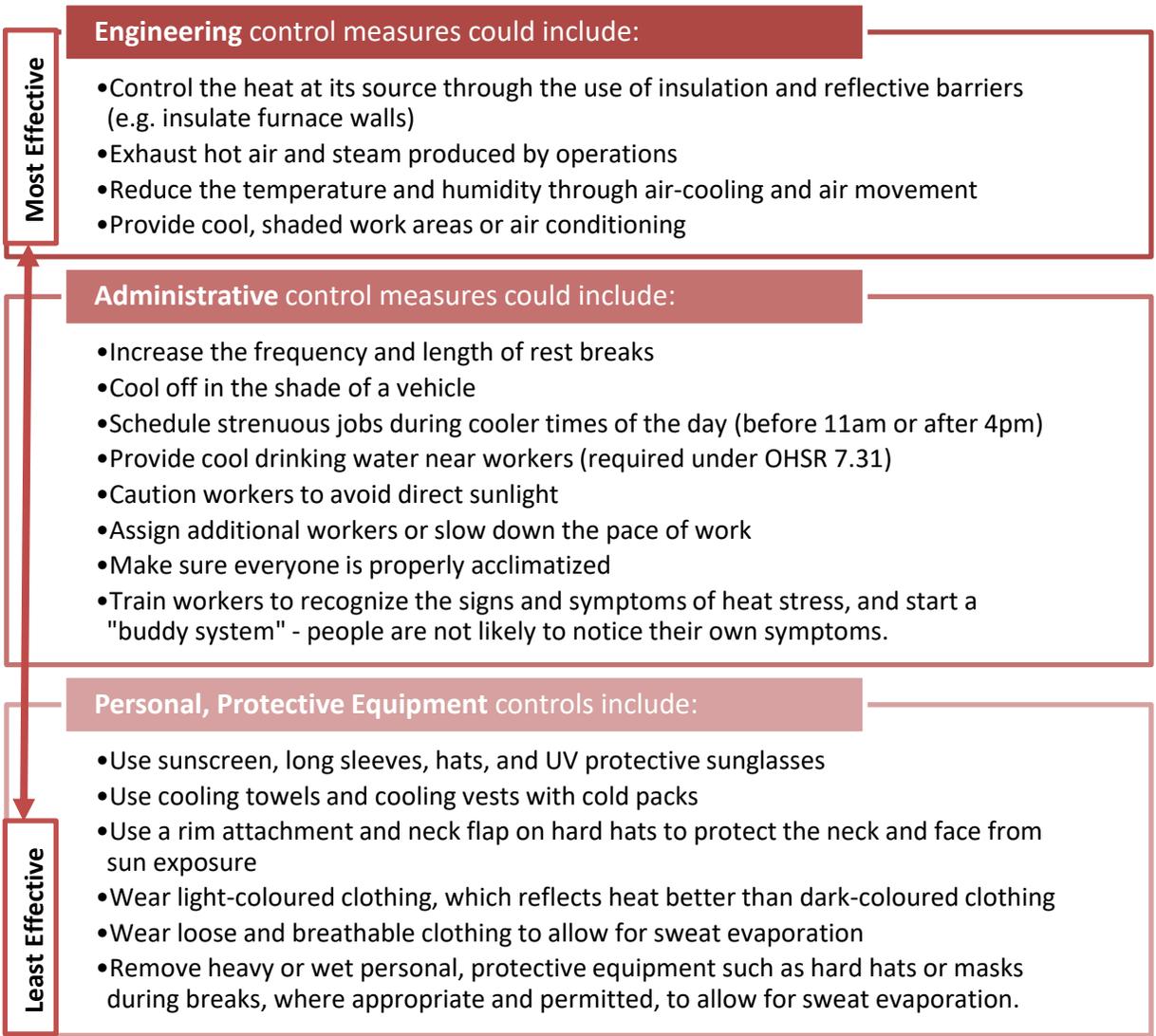
The *Workers Compensation Act (WCA)* Part 2, Division 4, Section 21 mandates that employers ensure the health and safety of all their workers and remedy any workplace conditions that are hazardous to the health and safety of their workers. This includes remedying the risk factors associated with heat stress. Furthermore, The *WCA* Part 2, Division 4, Section 22 and 23, stipulate that workers and supervisors also play a role in ensuring their own health and safety and the health and safety of workers under their supervision, respectively. Preventing heat stress should be a collaborative effort.

The Occupational Health and Safety Regulation (OHSR) Section 7.27 - 7.32 outlines Heat Exposure and the employer's requirements. The employer must have policies and written work procedures in place to address the risk of heat exposure. A heat stress assessment and exposure control plan can determine the potential for hazardous exposure of workers.

If hazardous exposure is identified, the employer must first look to eliminate the hazard. If the hazard cannot be eliminated, the employer must then mitigate the hazard using engineering, administrative, or personal protective equipment controls to reduce the exposure of workers.

^{1&2} Canadian Centre for Occupational Health & Safety. (2019, July 2). *OSH Answers Fact Sheets*. Retrieved from Humidex Rating and Work: OSH Answers Fact Sheets: https://www.ccohs.ca/oshanswers/phys_agents/humidex.html





Raise the issue of heat stress to your joint occupational health and safety committee (JOHSC). If you are a member of the JOHSC, add "heat exposure" to the agenda for your next committee meeting. In doing so, you and your employer have agreed upon steps the committee can take to conduct a heat stress assessment, an exposure control plan, and a plan to educate and train all workers about the hazards of excessive heat exposure.

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