



Heat Stress **FACT** Sheet

Guidelines for Prevention of Thermal Stress

Q What is heat stress?

A Heat stress is the combined physiological effects of performing demanding physical work, body fluid loss through sweating, fatigue, environmental temperature on the body's cooling system, clothing, and certain pre-existing medical conditions. For outdoor workers, sunlight is another heat source; for indoor workers, radiant heat from equipment such as ovens, grills, dishwashing machines, autoclaves, hydroclaves, cart washers can provide additional heat and humidity sources.

Q What are the symptoms of heat stress?

A The symptoms may include feeling faint or fainting, heat rash, nausea, weak pulse, changes in blood pressures, hot red dry or cool moist skin, heat cramps, and changes in mental state such as confusion or irritability.

Q How can I protect myself from heat stress?

A Allowing the body to adjust to the temperature and humidity is one way to reduce the effects of heat stress. Staff who are more familiar with the physical demands of the job generally need less time to build heat tolerance (acclimatization) than staff new to the task. In general, it takes two weeks to fully adjust. Heavier, more physically demanding work should be performed during the coolest part of the day. You should keep hydrated by drinking plenty of cool water, as needed. Affected staff should take breaks in air-conditioned or shaded spaces and more frequent breaks may be needed (see Humidex Stress Response Plan). Avoid beverages with caffeine and eating large meals before working in hot environments.

Humidex is a measurement that takes into account relative humidity and temperature. Most workers will not experience heat stress at Humidex 25-29. Most healthy well-hydrated *acclimatized* workers will not experience heat stress at Humidex 32-35. Above Humidex 30, general heat stress controls are needed; and above Humidex 35, job-specific controls are required.

Humidex Stress Response Plan

Moderate physical work for un-acclimatized workers or heavy physical work for acclimatized workers	The Humidex Stress Response plan is based on workplace measurements , not weather station or media reports. Indoor temperatures are expected to vary from outdoor temperatures. The Humidex Response Plan assumes regular summer clothes such as light shirt and pants, underwear and socks and shoes. For workers who wear cotton overalls over their regular clothes, add 5° Humidex.	moderate physical work for acclimatized workers or light physical work for unacclimatized worker
25-29	<ul style="list-style-type: none"> Supply water to workers on an as-needed basis 	32-35
30-33	<ul style="list-style-type: none"> Post heat stress <i>alert</i> notice Encourage workers to drink extra water Start recording hourly temperature & relative humidity 	36-39
34-37	<ul style="list-style-type: none"> Post heat stress <i>warning</i> notice Notify workers that they need to drink extra water Ensure workers are trained to recognize symptoms 	40-42
38-39	<ul style="list-style-type: none"> Provide 15 minutes relief per hour Provide adequate cool (10-15°C) water Consume at least 1 cup (250 mL) of water every 20 minutes Staff with symptoms should seek medical attention 	43-44
40-42	<ul style="list-style-type: none"> Provide 30 minutes relief per hour in addition to provisions listed previously 	45-46
43-44	<ul style="list-style-type: none"> If feasible, provide 45 minutes relief per hour in addition to all provisions listed previously 	47-49
45 or over	<ul style="list-style-type: none"> Stop work until Humidex reaches 44 or less 	50 or over