



**SAFE
WORK**
MANITOBA™

TIPS

OUTDOOR HEAT STRESS

Heat stress is the body's inability to control its internal temperature. It can result in serious illness or death.

The following conditions may put you at risk

- high temperature and humidity
- direct sun or heat, with little air movement
- level of physical activity/exertion
- level of worker's physical condition

Symptoms

- **Heat illness** - headache, dizziness, upset stomach or vomiting
- **Heat exhaustion** - tired or weak, moist skin, rapid, weak pulse
- **Heat stroke** - hot dry skin, rapid, strong pulse, mental confusion, unconsciousness, seizures or convulsions

Prevention

- Monitor yourself and co-workers.
- Take rest breaks and drink when you are thirsty.
- Wear lightweight, light-coloured, loose-fitting clothes.
- Work in the shade and away from other heat sources.
- Build up tolerance to high temperatures.

What to do

- Move the worker to a cool, shaded area.
- Loosen or remove heavy clothing.
- Provide cool drinking water.
- **Call 911 (or local emergency provider) immediately if you think someone is experiencing heat stroke.**

For more information

Visit safemanitoba.com or
Call 204-957-SAFE (7233) or
toll-free 1-855-957-SAFE (7233)



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Heat Stress Reference Chart

		RELATIVE HUMIDITY (%)																															
		100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%													
TEMPERATURE (°C)	49																			50	49												
	48																			49	48												
	47																		50	47	47												
	46																		49	46	46												
	45																		50	47	45	45											
	44																		49	46	44	44											
	43																		49	47	45	42	43										
	42																		50	48	46	43	41	42									
	41																		48	46	44	42	40	41									
	40																		49	47	45	43	41	39	40								
	39																		49	47	45	43	41	39	37	39							
	38																		49	47	45	44	42	40	38	36	38						
	37																		49	47	45	44	42	40	38	37	35	37					
	36																		50	49	47	45	44	42	40	39	37	35	37				
	35																		50	48	47	45	44	42	40	39	37	36	34	36			
	34																		49	48	46	45	43	42	40	39	37	36	34	33	35		
	33																		49	48	46	44	43	41	40	39	37	36	34	33	31	34	
	32																		50	49	47	45	44	42	40	39	37	36	34	33	31	33	
	31																		50	49	47	45	44	42	40	39	37	36	34	33	31	32	
	30																		50	48	46	44	43	41	40	39	37	36	34	33	31	30	31
29																		50	48	46	44	43	41	40	39	37	36	34	33	31	30	29	28
28																		50	48	46	44	43	41	40	39	37	36	34	33	31	30	29	28
27																		50	48	46	44	43	41	40	39	37	36	34	33	31	30	29	28
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21																		50	48	46	44	43	41	40	39	37	36	34	33	31	30	29	28
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%														

Humidex 1 general controls	ACTION RECOMMENDED	Humidex 2 specific controls
30 – 37	Warn for symptoms and extra water	36 – 42
38 – 39	Work with 15 minutes/hour relief	43 – 44
40 – 41	Work with 30 minutes/hour relief	45 – 46*
42 – 44	Work with 45 minutes/hour relief	47 – 49*
45+	Hazardous to continue physical activity	50+*

* Refer to the WSH Thermal Stress Guideline for humidex ranges above 45.

Humidex 1 or Humidex 2

There are two humidex guidelines to determine the appropriate actions required:

Humidex 1 - refers to unacclimatized workers doing moderate work, and ranges indicate the need for general heat stress controls.

Humidex 2 - refers to acclimatized workers doing moderate work, and ranges indicate the need for specific controls.

Humidex 1 general controls - include providing annual heat stress training, encouraging adequate fluid replacement, permitting self-limitation of exposure, encouraging employees to watch out for symptoms in co-workers, and adjusting expectations for workers coming back to work after an absence.

Humidex 2 specific controls - include (in addition to general controls) engineering controls to reduce physical job demands, shielding of radiant heat, increased air movement, reduction of heat and moisture emissions at the source, adjusting exposure times to allow sufficient recovery, and personal body-cooling equipment.