

MHCC Heat and Illness Prevention Process (Part of Inclement Weather)

Introduction

<https://www.mhcc.edu/EmergencyInformation/>

MHCC recognizes the potential problems caused by high temperatures in the work environment. In order to protect the well-being of all employees and reduce the potential for heat-related illnesses, MHCC has developed the following heat illness prevention policy.

This policy requires the full cooperation of all employees, including management, supervisors and workers. In order to monitor and evaluate the potential for heat-related problems in the workplace, a heat-illness prevention program will be used to implement this policy.

Employees are asked to cooperate fully with this policy. All employees of MHCC will be trained to recognize the signs and symptoms of heat illness in themselves, as well as in other employees.

Employees experiencing symptoms of heat illness must inform Public Safety and/or their supervisor immediately to obtain proper medical attention. During days when heat illness procedures are in place, all employees will follow the procedures set out by MHCC. In most cases, extra water and extended break periods will be provided to workers.

In order to monitor the effectiveness of this policy, MHCC will perform an annual review. The heat-illness prevention policy and program will be evaluated and improved upon on a regular basis. Questions regarding this policy and the corresponding program should be directed to the MHCC Environmental Health and Safety department.

Roles and responsibilities

Employees:

- a. Need to note the signs of heat illness (see recognizing signs of heat illness)
- b. Notification of supervisor
- c. Following emergency plan

Employers:

- a. Employers are responsible for this policy, training on heat illness, and providing water and resources

Recognizing symptoms of heat illness and respond accordingly to emergency plan

Hot weather, especially when combined with strenuous physical labor, can cause body temperatures to rise to unsafe levels—leading to heat illnesses. Outdoor workers are especially vulnerable to heat-related illnesses because they spend the majority of the day outside in direct sunlight.

There are varieties of heat illnesses, including; ***heat rash, heat cramps, heat exhaustion and heatstroke***. Each of these illnesses vary in symptoms and severity, but ***commonly cause dizziness, weakness, nausea, blurry vision, confusion or loss of consciousness***.

Heat Rash

Heat rash is a red, bumpy rash characterized by severe itching. Heat rash is often caused by hot, humid environments and plugged sweat glands. It is one of the most common types of rashes and is often uncomfortable and painful.

Heat Cramps

Heat cramps are muscle spasms that usually affect the arms, legs or stomach. They are the most common type of heat-related illness.

Heat cramps are caused by heavy sweating, especially when water is not replaced quickly enough. Typically, symptoms do not occur until after work, at night or when relaxing. Although heat cramps can be quite painful, they usually do not result in permanent damage.

Heat Exhaustion

Occurs when the body's internal temperature regulating system is overworked, but has not completely shut down.

In cases of heat exhaustion, the surface blood vessels and capillaries, which are meant to enlarge to cool the blood, collapse from loss of body fluids and necessary minerals. This happens when individuals do not drink enough fluids to replace what they are sweating away.

Common symptoms of heat exhaustion can include the following:

- Headaches
- Heavy sweating
- Intense thirst
- Dizziness or fatigue
- Loss of coordination
- Nausea or vomiting
- Impaired judgment
- Lightheadedness
- Loss of appetite
- Hyperventilation
- Tingling in hands or feet
- Anxiety
- Cool and moist skin
- Weak and rapid pulse
- Low blood pressure

Heatstroke

Heatstroke is a life-threatening illness with a high death rate. It occurs when the body has depleted its supply of water and salt, and the affected individual's core body temperature rises to deadly levels.

A heatstroke victim may first suffer heat cramps and/or heat exhaustion before progressing into the heatstroke stage—but not always. It is important to note that heatstroke symptoms are similar to those of a heart attack. Therefore, it is very important to know how to recognize the signs and symptoms of heatstroke and to check for them any time an employee collapses while working in a hot environment.

Symptoms of heatstroke are the same as those for heat exhaustion but can also include any of the following:

- A high body temperature (at least 102 degrees Fahrenheit)
- A distinct absence of sweating
- Hot, red or flushed dry skin
- Rapid pulse
- Difficulty breathing
- Constricted pupils
- Headache
- Vomiting or confusion
- Bizarre behavior
- High blood pressure
- Fainting
- Seizures
- Excessive sweating
- Nausea

Advanced symptoms may include seizures, convulsions, collapse, loss of consciousness and a body temperature over 104 degrees Fahrenheit.

Chart for Childcare weather watch for all MHCC

Heat Index Chart (in Fahrenheit %)														
Relative Humidity (Percent)														
Temperature (F)	40	45	50	55	60	65	70	75	80	85	90	95	100	
	80	80	80	81	81	82	82	83	84	84	85	86	86	87
	84	83	84	85	86	88	89	90	92	94	96	98	100	103
	90	91	93	95	97	100	103	106	109	113	117	122	127	132
	94	97	100	102	106	110	114	119	124	129	135			
	100	109	114	118	124	129	136							
	104	119	124	131	137									
	110	136												

Comfortable for Outdoor Activities
 Caution
 Danger

Heat Index Protocol

80F is the beginning of weather watch and following the Heat Index

- a) Each manager is responsible to be aware of temperatures that their employees may be exposed to.
- b) Engage EHS for tools and options.
- c) To begin the assessment of the index, start with the chart...

Green on heat index

- a) Normal outdoor activities may occur with appropriate attire and precautions for sun exposure

Yellow on heat index

- a) Use caution and closely observe signs of being too hot or cold while outdoors
- b) Communication plan implemented
 - i. Groups (College/CDFS)
 - 1. Explain impacts to different college areas in communication
 - ii. Individuals working or playing outdoors (Manager/Teacher)
 - iii. Work or play in buddy system
- c) Mandatory 10-minute break for every 2 hours outdoors, in shade or sheltered area with moving air to ensure acclimatization to conditions.
- d) Provide adequate hydration or water, 32oz per hour recommended for adults
- e) System for reporting and following up on concerns
 - iv. Emergency Services – call on 911
 - v. MHCC Public Safety – Urgent safety/crime issues 503-491-7911
 - vi. Safety concerns or Injury reporting
 - 1. Notify manager for action and reporting
 - 2. Reporting through Safe Colleges <https://mhcc-or.safecollegesincident.com/#/login>

Red on heat index

- a) Recommend indoor activities or remote work were possible
- b) Limit outdoor activities to less than 2 hours for adults and older children

c) Those susceptible to heat (elderly, infants/toddlers, or those with medical conditions) should not be outdoors.

Links

- 1) Heat index with temp/humidity <https://www.osha.gov/heat/heat-index/using-heat-protect-workers>
- 2) Child Care Weather Watch <https://www.c-uphd.org/documents/wellness/weatherwatch.pdf>
- 3) <https://www.wrh.noaa.gov/map/?obs=true&wfo=pqr>

Communication Samples:

Heat advisory email:

The EHS team is recommending that today's activities be limited to the indoors and vehicles where air can be cooled and filtered.

As we continue our commitment to safety and the protection of our employees, as well as stay in alignment with the OR-OSHA for Heat Illness Prevention as well as Air Quality related to smoke, in particular those potentially exposed to the outdoor Environmental Factors, which could increase the development of heat related illness and air quality related health effects. Below is the calculated heat index for today, as well as helpful information for identification and prevention of heat related illness.

****HEAT ADVISORY****

Criteria for this Heat Advisory at MHCC is when the heat index is indicated to exceed 80 °F in the East Multnomah county region of Oregon. The heat index has to remain at or above criteria for a minimum of 2 hours. Heat advisories are issued by the office of Risk Management and Environmental Health and Safety, when our district is expected to reach criteria.

****A heat advisory means that people can be affected by heat if precautions are not taken****

Today's (MM/DD/YYYY) Heat index is forecast to be:

10:00am-11:00am: 80+ degrees F

11:00am-6:00pm: 90+ degrees F

Per: CDC/NIOSH Heat Index APP

<https://apps.apple.com/us/app/osha-niosh-heat-safety-tool/id1239425102>

Weather and Geographic Factors that Increase the Impact of Heat

- Direct sun on buildings or people.
- Wind (increases dehydration).
- Overnight minimum heat index - houses and buildings that do not have air conditioning will not cool down if the overnight minimum heat index remains above 75 - 80° and the area goes into a second hot day.
- Successive days of heat with high nighttime temperatures is the worst scenario - fatalities will occur. Impacts will begin to increase exponentially. Urbanization - more concrete, less green - impacts temperatures particularly at night.
- Early season heat - a heat index of 95° - 100° will affect people in May and June or with the first few occurrences, whereas later in the summer (August) it may take a heat index of 100° - 105° for the same effect. People modify their behavior after being affected by it and are less likely to be impacted again.

Human Factors that increase the Impact of Heat

- Alcoholic consumption.
- Certain medications.
- Certain medical conditions.
- Elderly or infants.
- Physical exertion Exposure to sun.

NOAA's heat alert procedures are based mainly on Heat Index Values. The Heat Index, sometimes referred to as the apparent temperature is given in degrees Fahrenheit. The Heat Index is a measure of how hot it really feels when relative humidity is factored in with the actual air temperature.

To find the Heat Index temperature, look at the Heat Index Chart below. As an example, if the air temperature is 96°F and the relative humidity is 65%, the heat index--how hot it feels--is 121°F. The National Weather Service will initiate alert procedures when the Heat Index is expected to exceed 105°-110°F (depending on local climate) for at least 2 consecutive days.

<https://www.weather.gov/bgm/heat>