UMBC Environmental Safety and Health

UMBC Heat Safety Program

Quick Reference Guide

Heat stress has long been an identified workplace hazard for many occupations and workplace activities. Heat stress, if not prevented or managed effectively, can lead to heat-related illnesses that can be severe or life-threatening, such as heat stroke, heat exhaustion, heat rashes, and heat cramps.

The **UMBC Heat Safety Program** was established to assist in the management of heat stress and the prevention of heat-related illnesses when members of the UMBC community perform work-related activities.

The Heat Safety Program and its requirements will take effect when staff, students or faculty are assigned work in areas where conditions equal or exceed a heat index of 80 degrees Fahrenheit (80°F) and where work is performed for more than 15 consecutive minutes per hour. This applies to both indoor and outdoor activities.

What are Heat Related Illnesses?

As indicated by its name, heat illness conditions arise due to heat exposure, where excessive heat raises the body's core temperature. Prolonged exposure to abnormal levels of heat and humidity, without sufficient relief or fluid intake, can trigger a range of heat-related illnesses. Sweating becomes ineffective in cooling the body. Heat illness can range from mild to life-threatening, including several different conditions. Heat-related illnesses can impact employees' job performance and elevate their likelihood of experiencing accidents.

Heat Rash - Occurs when excessive perspiration becomes trapped beneath the skin, obstructing sweat glands.

Heat Cramps - Muscle cramps can develop when intense sweating causes the loss of electrolytes and fluids, typically during exercise in hot conditions.

Heat Exhaustion - This condition can occur following prolonged exposure to high temperatures without adequate fluid intake.

Heat Stroke - Results from a rapid rise in core body temperature due to elevated heat and humidity. Most serious heat-related illness.

Provisions for Employees

Managers and supervisors must ensure that affected employees have access to the following provisions on days where work will be conducted where the heat index is at or exceeds 80 degrees F.

- Access to plenty of potable (safe to drink), cool water.
- Access to shaded outdoor or conditioned indoor areas.
- Personal protective clothing such as clothing that is lightweight and breathable, cooling vests, or reflective clothing to reduce radiant heat load.

Work Practice Controls

The following work practice controls must be implemented to accommodate work in hot conditions:

- Acclimatization – gradually increasing heat exposure to a new or returning employee over a period of time.
- Work Scheduling – Scheduling work for cooler parts of the day whenever possible.
- Work/Rest Cycles – Modifying work/rest cycles to shorten heat exposure and allow for frequent short breaks in shaded or conditioned areas.
- Employee Observation – using the "buddy system" where employees frequently check on peers throughout the day to monitor for signs of heat-related illness.

Training

Departments must ensure that employees who will be exposed to heat stress receive appropriate training on how to identify heat-related hazards and protect themselves against the effects of heat stress and heat-related illness. Training is currently offered through the Webnet online learning platform under the course entitled "Heat-Related Illness Awareness".

New hires must receive training prior to starting any work activities in the heat and will be completed on an annual basis. Contact ESH if assistance is needed with assigning or completing the training.

Department Heat Stress Prevention and Management Plan

Department (and Shop/Unit where applicable) Supervisors will be required to complete a department or shop/unit-specific plan when the Heat Safety Program is activated. The purpose of the plan is to outline the specific measures that will be implemented to ensure the appropriate provisions, resources, and work practices are in place to prevent heat stress. The plan must be reviewed with all affected employees prior to beginning work. **A fillable template** is available from ESH for organizational use.

The plan will include measures such as:

- How sufficient amounts of cool, potable water will be provided.
- How employees will be given access to cool, shaded areas for rest and hydration.
- Work scheduling modifications, acclimatization schedules, and work/rest cycle implementation

High Heat Procedures

Additional procedural requirements take effect on High Heat Days, where the heat index is expected to exceed 90 degrees F. This includes more specific requirements for work and rest cycles as well as alternative cooling measures. For more information on high heat requirements, refer to the **Heat Safety Program written procedure.**

Heat-Related Medical Emergency

Contact Campus Police at 410-455-5555 (ext. 5-5555) or call 911* if someone is experiencing a medical emergency, or exhibits signs of severe heat illness, such as:

- Abnormal behavior
- Slurred speech
- Seizures
- Loss of consciousness

*If you are at an off-campus location, call 911.

More information on the different types of heat-related illnesses can be found on the **UMBC ESH – Heat Safety Webpage** or by referring to **Appendix B: Information on Heat-Related Illnesses and Medical Emergencies.**

For more information, please review the **UMBC Heat Safety Program** and review the references and resources listed below. Contact ESH for any questions at esh@umbc.edu.

References:

UMBC Heat Safety Program (Written Plan)

Heat Safety Program Appendix A: Department Heat Stress Management and Prevention Plan

Heat Safety Program Appendix B: Information on Heat-Related Illnesses and Medical Emergencies

Additional Resources:

UMBC ESH - Heat Safety Web Page

MOSH - Heat Stress

OSHA - Heat Exposure