

Heat Safety in the Workplace

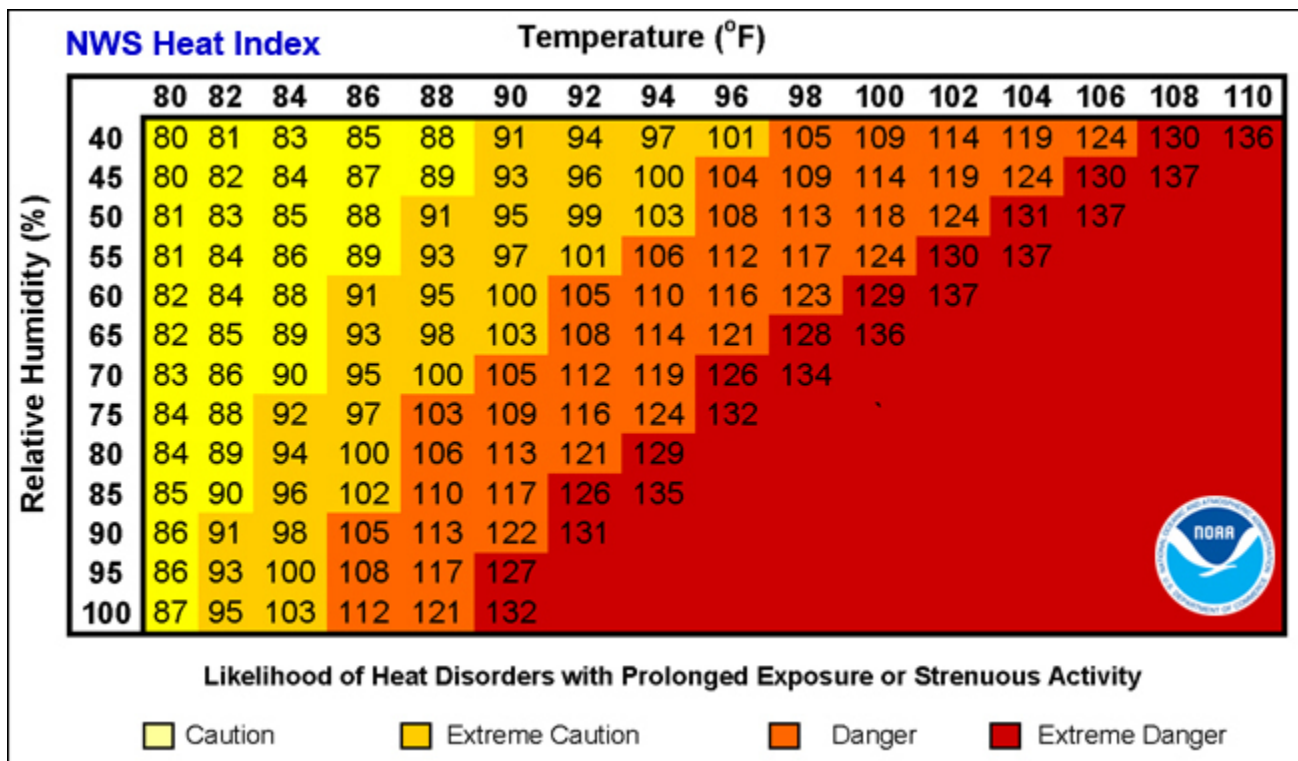
It is important to take precautions to avoid heat-related illness in unusually hot conditions when working outdoors or in unconditioned, indoor environments. Though the Occupational Safety and Health Administration (OSHA) does not have a heat stress regulation, employers are responsible for providing workplaces free of known safety hazards. This includes protecting workers from extreme heat.

Departments can take actions to minimize the effects of heat, including:

- Plan for safe work in hot environments;
- Provide employees with water and urge them to stay hydrated; and when outside, provide protections from direct sunlight when possible (e.g., canopies, hats, sunscreen, shade);
- Provide opportunities for employees to gradually increase workloads and take more frequent breaks as they acclimate;
- Plan for emergencies and train employees on prevention; and monitor employees for signs of illness.

The Heat Index is a measure of how hot it really feels when the [relative humidity](#) is factored in with the actual air temperature.

The chart below shows the National Weather Service (NWS) Heat Index.



Departments/units that conduct outside work during hot weather or in indoor locations with elevated temperatures should develop a heat illness prevention plan. Important elements to consider, including protective measures, can be found at the [OSHA Heat Website](#). Supervisors and employees should be trained on the meaning of the heat index, heat stress risk factors, signs and symptoms of heat stress, and be able to implement the illness prevention plan.

Heat index forecasts should be monitored daily by departments using:

- [The College Park forecast](#)
- The OSHA-NIOSH Heat Safety Tool App
(<https://www.cdc.gov/niosh/topics/heatstress/heatapp.html>)
- Real time heat monitoring data when available.

The chart below shows the four risk levels and recommended protective measures.

Heat Index	Risk Level	Protective Measures
Less than 91°F	Lower (Caution)	Basic heat safety and planning
91°F to 103°F	Moderate	Implement precautions and heighten awareness
103°F to 115°F	High	Additional precautions to protect workers
Greater than 115°F	Very High to Extreme	Triggers even more aggressive protective measures

OSHA identifies work duties that are prone to heat-related risk

- Outdoors: construction, especially roofing; landscaping; mail and package delivery.
- Indoors: kitchens; electrical/boiler rooms; warehousing; work near hot heat sources/equipment
(Reference: [Safety and Health Topics | Occupational Heat Exposure](#).)

Lower risk level

Supervisor/department: Monitor the heat index on a daily basis and assess the risk level for employees; implement basic health and safety planning to provide general awareness and reminders about the potential for heat stress and preventive measures; ensure that employees are trained on heat stress symptoms and prevention measures; contact health and safety professionals for heat stress training and other assistance with heat stress.

Employees: Follow all requirements and guidance by supervisor/department; attend training arranged by supervisor/department; wear light weight/light colored clothing; drink water or other cool fluids regularly and at first sign of thirst; consult with a health care provider about any personal or special risks of heat; report any heat-related symptoms to supervisor/department and seek medical attention, if needed.

Moderate risk level

Supervisor/department: Follow all measures in the low risk level; contact health and safety professionals to determine if job safety analysis should be performed to change/lessen physical activity, time spent working, or other prevention measures; increase preventive steps in anticipation of warmer temperatures including reminders about staying hydrated, taking breaks and watching for signs of heat-related illness; provide ample time for breaks and access to cool, shaded places to take them; ensure that cool water is always available.

Employees: Follow all measures in the lower risk level; take breaks as offered and suggested by supervisor/department.

High risk level

Supervisor/department: Follow all measures in the low and moderate risk levels; reduce the workloads and physical demands of employees; provide supplemental cooling, fans or cooling garments; reinforce heat stress causes, symptoms and prevention measures; ensure cool water is always available and locations for breaks have adequate cool air flow; consider providing cooling vests when air-conditioned space is not available for breaks; monitor employees regularly for heat stress symptoms and arrange for medical assistance as needed; flexible scheduling, alternative work site and duties are advised.

Employees: Follow all measures in the low and moderate risk levels.

Very high to Extreme risk level

The University will not place employees in work locations or assign work duties when a very high to extreme heat index risk level is known.

When the heat index is expected or known to reach 115 degrees Fahrenheit indicating a very high to extreme risk, departments implement their heat illness prevention plan to assign alternate work sites and/or work duties (e.g., indoor work in air conditioned space, training.)

Checklist for Heat Safety:

- Develop a heat illness prevention plan for work based on the heat index;
- Train your workers how to recognize and prevent heat-related illness;
- Track the worksite heat index daily when conditions warrant (or some similar language); communicate it and the required precautions to workers;
- Implement your plan; review and revise it throughout the summer.

Additional Resources and Information

Supervisors/departments and workers are encouraged to use the [OSHA-NIOSH Heat Safety Tool App | NIOSH](#) as a resource for planning outdoor activities.

Any process or job site that is likely to raise the worker's deep core temperature, often listed as higher than 100.4 degrees Fahrenheit, raises the risk of heat stress. Occupational risk factors for heat illness include strenuous physical activity especially in direct sunlight, lack of worker acclimatization, and wearing clothing that holds in body heat.

Heat dissipation happens naturally through sweating and increased blood flow to the skin. Some workers may be more susceptible to heat-related illness due to personal risk factors. Symptoms of heat-related illness include irritability, dizziness, weakness, nausea, and vomiting. In extreme cases, heat exhaustion or heat stroke may occur.

Health and Safety Professionals:

Environmental Safety, Sustainability & Risk, [Maureen Kotlas](#)

Department of Residential Facilities, [Susan Gilson](#)

Facilities Management, [Glynnis Bowman](#)

For information, training or monitoring for heat safety and heat stress, contact ESSR Occupational Safety and Health at P: 301.405.3690 / OSH@umd.edu

References:

[OSHA, Using the Heat Index to Protect Workers](#)

[OSHA, Acclimatizing Workers](#)

[OSHA, Protective Measures to Take at Each Risk Level](#)

[OSHA, Preparing for and Responding to Heat-Related Emergencies](#)

[National Weather Service \(NWS\) Heat Index Forecasts](#)