

# HAZARD ALERT

Kentucky Occupational Safety and Health Surveillance-August 2024



## WORKING IN EXTREME HEAT AND HUMIDITY

### Recommendations for Employers:<sup>4,5</sup>

- Create and follow a plan to allow new and returning workers to acclimate to working in the heat. This should include shorter work periods with more frequent breaks, monitoring new workers for symptoms, and not allowing new workers to work alone. These increased precautions should last at least 1-2 weeks.
- Train supervisors and workers on how to identify and control heat hazards, recognize signs and symptoms, administer first aid, and to be ready to engage emergency medical services quickly.
- When possible, use methods to make the environment cooler with air conditioning, misting fans, increased ventilation, reflective shields, etc. Reduce manual workload with mechanization where possible.
- Modify work schedules with mandatory increased breaks in cooler areas, scheduling work at a cooler time of day, and rotating job functions to help minimize exertion or heat exposure.
- Provide cool water for workers to drink and remind workers to drink regularly, not just when thirsty. For longer jobs that exceed two hours, employers should provide electrolyte-containing beverages.
- Ensure workers are wearing light colored, loose fitting clothing that doesn't trap heat or moisture. Some types of personal protective equipment can increase the risk of heat-related illness.

### What is the hazard?

Heat is the leading cause of death among all weather-related phenomena in the United States. From 1992 to 2022 in the United States, 986 workers across all industries died from exposure to heat. Thirty-four percent of those fatalities were in the construction industry.<sup>1</sup> Nearly 3 out of 4 heat-related deaths occur during a worker's first week on the job.<sup>2</sup> From 2018 to 2022, 616 Kentucky workers visited the emergency department due to heat-related illnesses.<sup>3</sup>

### Signs and Symptoms of Heat-Related Illnesses

Heat Stroke	<ul style="list-style-type: none"> <li>• Slurred speech, confusion</li> <li>• Loss of consciousness</li> <li>• Hot, dry skin or profuse sweating</li> <li>• Very high body temperature</li> <li>• Seizures</li> </ul>
Heat Exhaustion	<ul style="list-style-type: none"> <li>• Headache, nausea, dizziness</li> <li>• Weakness, irritability</li> <li>• Thirst, decreased urine</li> <li>• Heavy sweating</li> <li>• Elevated body temperature</li> </ul>
Heat Syncope	<ul style="list-style-type: none"> <li>• Fainting (short duration)</li> <li>• Dizziness</li> <li>• Light-headedness when standing for long periods or changing position</li> </ul>
Heat Cramps	<ul style="list-style-type: none"> <li>• Muscle cramps, pain, or spasms in the abdomen, arms or legs</li> </ul>
Heat Rash	<ul style="list-style-type: none"> <li>• Red clusters of pimples or small blisters</li> </ul>
Rhabdomyolysis	<ul style="list-style-type: none"> <li>• Muscle pain/cramps</li> <li>• Weakness</li> <li>• Exercise intolerance</li> <li>• Abnormally dark urine</li> </ul>

# RESOURCES

Name of Resource	Resource Description	Resource Link
OSHA-NIOSH Heat Safety Tool	A mobile app to help plan work activities based on how hot it feels throughout the day. It also provides safety recommendations from OSHA and NIOSH.	<a href="https://www.cdc.gov/niosh/topics/heatstress/heatapp.html">https://www.cdc.gov/niosh/topics/heatstress/heatapp.html</a>
NIOSH Heat Stress	NIOSH webpage outlining heat-related illnesses and prevention recommendations.	<a href="https://www.cdc.gov/niosh/heatstress/about/index.html">https://www.cdc.gov/niosh/heatstress/about/index.html</a>
Hazard Alert: Extreme Heat Can be Deadly to Workers	OSHA Hazard Alert that outlines employer responsibilities for protecting worker from heat illness.	<a href="https://www.osha.gov/sites/default/files/publications/OSHA_HA-4279.pdf">https://www.osha.gov/sites/default/files/publications/OSHA_HA-4279.pdf</a>
Heat Hazards in Construction	Webpage from CPWR providing resources in English and Spanish for heat illness prevention in the construction industry.	<a href="https://www.cpwr.com/research/research-to-practice-r2p/r2p-library/other-resources-for-stakeholders/working-in-hot-weather/">https://www.cpwr.com/research/research-to-practice-r2p/r2p-library/other-resources-for-stakeholders/working-in-hot-weather/</a>

## SOURCES

1. A Closer Look: Heat-Related Workplace Deaths. United States Environmental Protection Agency. [https://www.epa.gov/climate-indicators/closer-look-heat-related-workplace-deaths#:~:text=From%201992%20to%202022%2C%20a,reported%20data%20\(Figure%201\).](https://www.epa.gov/climate-indicators/closer-look-heat-related-workplace-deaths#:~:text=From%201992%20to%202022%2C%20a,reported%20data%20(Figure%201).)
2. Protecting New Workers. Occupational Safety and Health Administration. <https://www.osha.gov/heat-exposure/protecting-new-workers>.
3. Kentucky Outpatient Services Database, Office of Health Data and Analytics, Cabinet for Health and Human Services
4. Heat Exposure Prevention. Occupational Safety and Health Administration. <https://www.osha.gov/heat-exposure/prevention>
5. Protecting New Workers. Occupational Safety and Health Administration. <https://www.osha.gov/heat-exposure/protecting-new-workers>.



## CONTACT KOSHS

**Kentucky Occupational Safety & Health Surveillance Program**

2365 Harrodsburg Road, Suite B475

Lexington, Kentucky 40504

(859) 323-4750 office

(859) 218-8924 fax

kyfaceprogram@uky.edu

Join our mailing list: <https://lp.constantcontactpages.com/su/R3mbvy7>



@KOSHSNews



@KOSHSNews

## Acknowledgments

Produced by the Kentucky Occupational Safety and Health Surveillance (KOSHS) Program of the Kentucky Injury Prevention and Research Center (KIPRC) as bona fide agent for the Kentucky Department for Public Health.

This work was supported by the National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC) of the U.S. Department of Health and Human Services (HHS), as part of cooperative agreement 5 U60OH008483 totaling \$1,601,266 with 0% financed with nongovernmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement by, NIOSH, CDC, HHS, or the U.S. government.



**Kentucky Public Health**  
Prevent. Promote. Protect.