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INSIGHT

Occupational Safety and Health Administration (OSHA) Regulation of Employee Exposure to Heat

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Employees who work outdoors, including those in industries such as construction and agriculture, may be exposed to extreme heat conditions. Similarly, certain indoor work situations—such as bakeries, warehouses, and steel mills—may also expose employees to unsafe heat levels. The lead federal agency that regulates worker safety and health, the Occupational Safety and Health Administration (OSHA), does not have any standards that specifically address outdoor or indoor heat exposure. However, on August 30, 2024, OSHA published a Notice of Proposed Rulemaking (NPRM) for a standard on "Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings."

Heat-Related Illnesses

The National Institute for Occupational Safety and Health (NIOSH) has identified several illnesses that are related to heat exposure, including heat stroke, which can result in permanent disability or death. Other heat-related illnesses include heat exhaustion, rhabdomyolysis, heat syncope, heat cramps, and heat rash. Research published in 2020 by the Centers for Disease Control and Prevention estimates that between 2004 and 2018 there were an average of 702 annual deaths in the United States due to heat exposure, with an average of 415 deaths in which heat exposure was the underlying cause and 287 deaths in which heat exposure was a contributing cause. (This includes employment-related and non-employment-related deaths.) In 2022, the Bureau of Labor Statistics' Census of Fatal Occupational Injuries reported 43 employment-related deaths due to environmental heat exposure and an average of 40 annual environmental heat exposure employment-related deaths between 2011 and 2022. Since 1972, NIOSH has recommended that OSHA promulgate a heat exposure standard. While Section 22 of the Occupational Safety and Health Act (OSH Act, 29 U.S.C. §671) authorizes NIOSH to develop recommended occupational safety and health standards, OSHA is not required by law to promulgate standards based on these recommendations.

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OSHA and Heat Exposure

OSHA does not currently have any specific heat exposure standards. On October 27, 2021, OSHA published an Advanced Notice of Proposed Rulemaking (ANPRM) for a potential standard on Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings. OSHA solicited public comments on the ANPRM through January 26, 2022, and received over 1,000 comments on the ANPRM.

In August 2024, OSHA published a NPRM for a standard on "Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings." Public comments on the NPRM are being accepted through December 30, 2024.

In 2011, OSHA launched a heat illness prevention campaign that includes guidance to employers and employees, a smartphone app that provides location-specific information on heat conditions and heat exposure prevention and first aid, and educational materials such as posters and pamphlets (an example of an OSHA heat illness prevention poster is provided in **Figure 1**) in English, Spanish, and other languages.

In the absence of a specific standard, OSHA may enforce Section 5(a) of the OSH Act (29 U.S.C. §654(a)), commonly referred to as the "general duty clause," which requires each employer to provide a workplace that is free of "recognized hazards" causing or likely to cause "death or serious physical harm" to its employees.

As an example of the use of the general duty clause to cite an employer for failing to protect employees from heat exposure, in March 2021, OSHA cited Valley Produce Harvesting and Hauling Company for a willful violation of the general duty clause by exposing sugar cane harvesting employees in Florida to "excessive heat, elevated temperature working conditions, direct sun radiation and thermal stress" while working outdoors in September 2020. OSHA assessed the maximum allowable civil monetary penalty of $136,532 for this violation, which was later reduced through an informal settlement with the employer to $81,919.20.

In April 2022, OSHA began a National Emphasis Program of enforcement of the general duty clause and compliance assistance to focus on indoor and outdoor heat exposure.

State Occupational Safety and Health Standards

Section 18 of the OSH Act (29 U.S.C. §667) authorizes states to establish their own occupational safety and health plans and preempt standards established and enforced by OSHA. OSHA must approve state plans if they are "at least as effective" as OSHA's standards and enforcement. Currently, 21 states and Puerto Rico have state plans that cover all employers, and six states and the U.S. Virgin Islands have state plans that cover only state and local government employers not covered by the OSH Act. Three states—California, Oregon, and Washington—have state occupational safety and health standards that cover outdoor heat exposure. Minnesota has a state standard that covers indoor heat exposure. Colorado does not have a state plan but does have a separate set of regulations that govern outdoor heat exposure in agriculture.

Legislation to Require OSHA to Promulgate a Heat Exposure Standard

In the 118th Congress, H.R. 4897 and S. 2501, both titled as the Asunción Valdivia Heat Illness and Fatality Prevention Act of 2024, would require OSHA to propose and promulgate a heat exposure standard. This standard would have to meet specific requirements outlined in the legislation. Both bills were named after Asunción Valdivia, a California farmworker who died from heat stroke in 2004.

Figure 1. OSHA Heat Illness Prevention Campaign Poster

Source: Occupational Safety and Health Administration, https://www.osha.gov/publications/bytopic/heat-illness-prevention.

Note: This poster is also available in Spanish and eight other languages.

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