



Presented by



THE **HEAT** IS ON

A LOOK AT WORKPLACE **HEAT STRESS** PREVENTION

ABOUT THE HEAT STRESS PREVENTION SURVEY

The Heat Stress Prevention Survey from Ergodyne and the *EHS Daily Advisor* was launched early January 2020 and gathered the insight of 452 environment, health, and safety (EHS) professionals about how their organizations manage employee exposure to heat stress. Our goals for the survey were broad, aiming to look beyond the prevalence of heat stress programs at various organizations. We hoped to discover how companies addressed the variable aspects of heat stress programs, such as dealing with indoor versus outdoor work, how they handle personal protective equipment (PPE), and how heat stress fits into the whole of their safety program.

Ergodyne and the *EHS Daily Advisor* research team would like to extend our gratitude to all the professionals who chose to participate in the survey, as well as our readers, for their help in deepening our understanding of the state of heat stress programs.

All percentages in this report have been rounded to the nearest whole percent. If you have any questions or comments about the Heat Stress Prevention Survey and this accompanying report, please e-mail media@simplifycompliance.com.

ABOUT ERGODYNE

Since 1983, Ergodyne has pioneered the development of products that Make the Workplace a Betterplace™.

What started with just one product has grown into a line of top-flight, battle-tested, Tenacious Work Gear®; all precision crafted to provide protection, promote prevention and manage the elements for workers on jobsites the world over.

Ergodyne's pioneering work in mitigating the risk of temperature stress on the job includes a constant flow of innovative temperature stress solutions and industry-leading education initiatives.

Learn more at www.ergodyne.com.

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HEAT EXPOSURE IN THE WORKPLACE

There are many factors that safety professionals need to consider when determining the potential impacts of heat stress on their workers. While some fall outside of an employer's control, such as personal risk factors, including diabetes, heart disease, or use of certain prescribed medications, many can be accounted for and addressed through workplace controls. To get a fuller understanding of the working conditions at our respondents' organizations, we posed some questions to determine if there is the potential for a heat stress incident to occur.

First, we asked whether workers were required to spend 30 minutes or more at a time in temperatures of 80°F/26°C or more. An overwhelming majority of survey participants (**86%**) reported that yes, working in the heat was a requirement at their facility or jobsite, while only **14%** said no.

We then followed up with those respondents who said yes to the previous question to find out if their workers were exposed to heat conditions in an indoor or outdoor work environment. They told us that the majority of their exposure came from work occurring:

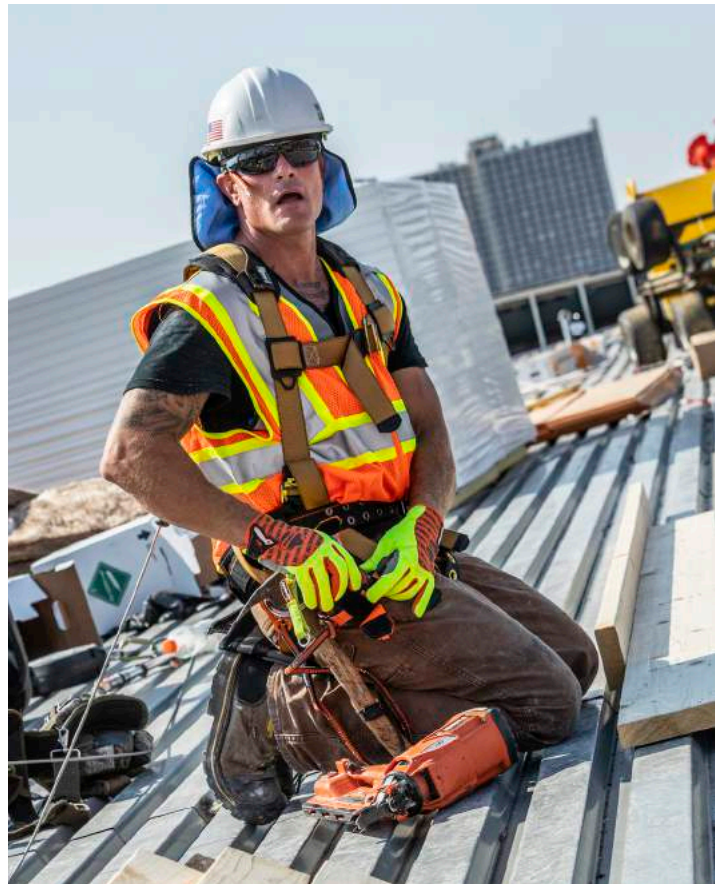
- Indoors: **19%**
- Outdoors: **33%**
- Both: **49%**

One of the most effective ways to mitigate heat stress, apart from avoiding heat exposure all together, is through the use of appropriate PPE. Only **31%** of survey participants said their employer supplies workers exposed to hot working conditions with cooling PPE, such as cooling towels or vests, while **69%** did not.

Following up on the previous question, we asked respondents why their employers provided no cooling PPE. The top reasons for not providing PPE were:

- General lack of knowledge on this PPE category: **36%**
- Challenges with employee adoption: **26%**
- Lack of buy-in from leadership: **24%**
- Cost: **18%**

Some survey-takers provided other responses. A handful of participants noted that the need for fire-resistant (FR)-rated PPE took precedence, while others noted their companies used other ways to deal with heat, such as providing cold beverages like water, Gatorade, or other electrolyte-replacement drinks; increasing the number of breaks throughout the day; and encouraging employees to purchase and wear their own cooling PPE.



HEAT EXPOSURE IN THE WORKPLACE



Another way employers can help mitigate potential heat stress incidents before they happen is to gradually acclimatize new workers according to a schedule. By slowly increasing the amount of time a new (or new to the task) employee is exposed to heat, the person's body can acclimate more easily than it would by starting with typical amounts of exposure. **Fifty-seven percent** of respondents said their organizations did not utilize or enforce heat acclimatization schedules for new workers. This compares with the **28%** whose companies did acclimatize new employees, while **16%** of survey-takers said they did not know about heat acclimatization schedules.

For more context, we asked survey respondents whether their organization experienced a heat-related incident in their workplace or at a jobsite over the last 5 years. The majority (**60%**) said their company experienced no heat-related incidents in that time frame. **One-quarter** of those in the survey said there was at least 1 incident at their workplace, while **15%** were not sure if an incident occurred or not.

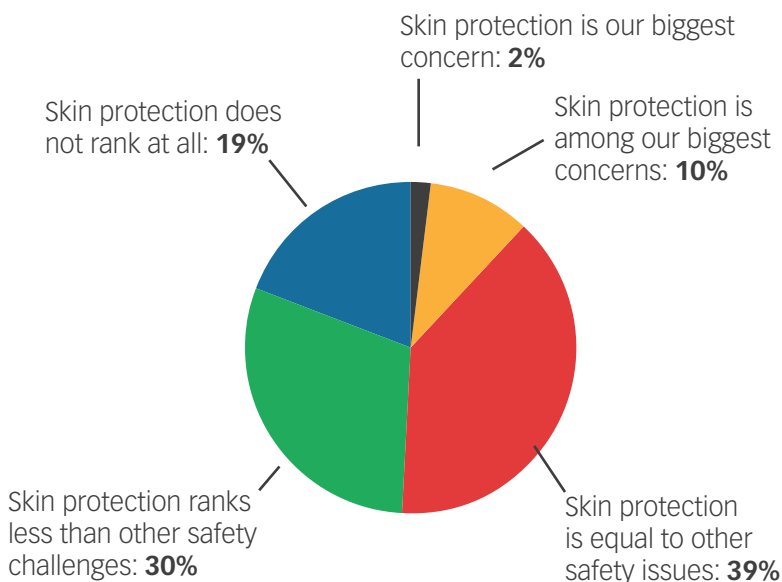
Of those who replied yes regarding heat-related incidents, the outcomes of those incidents resulted in:

-  Injury and/or illness: **64%**
-  Lost time: **31%**
-  Hospitalization: **30%**
-  Fatality: **6%**

SKIN PROTECTION AND EDUCATION

Concerns about heat stress prevention often go together with other safety concerns—most notably, protecting workers' skin from the impacts of exposure to ultraviolet (UV) radiation. To get a sense of how organizations view the importance of skin protection and/or skin cancer prevention, we asked respondents to tell us where their employers rank them on their list of worker safety challenges.

According to the answers survey-takers provided, it seems that most companies prioritize skin protection with equal weight or less than other safety concerns at their facilities or on jobsites:



One interesting anecdote in the data set is that there appears to be some correlation between the responses to the previous question and whether an organization provides its workers with skin protection and/or skin cancer prevention education. **Thirty-eight percent** of respondents to the survey said their employers educated workers about the dangers that heat—and more specifically UV radiation—poses to skin, while the majority (**62%**) stated there was no skin protection training or education at their organizations.



While these data do point to a potential relationship between education and the importance of skin protection in a given safety program, we do need to keep in mind that correlation does not equal causation. However, this would be a fruitful area for further research.



SKIN PROTECTION AND **EDUCATION**

Next, we wanted to understand how companies handle the practicalities of managing skin protection and skin cancer prevention on the job. While outdoor work poses obvious short- and long-term risks to the safety of workers' skin (in the form of UV radiation), some indoor work (such as welding) carries similar risks.

First, we asked those who specified that the majority of their work happens outdoors if they provide sunscreen for their employees. The responses show a mostly even split, with one exception:



Yes, and workers use it



Yes, but the workers do not use it



No, but workers would likely use it if provided



No, but workers would likely not use it if provided

For those who said their organizations work primarily in indoor environments, we asked the participants if any employees at their facilities performed welding as part of their typical duties. The survey group was evenly split, with **49%** stating that welding work occurred at their facilities and the remaining **51%** stating that their company did not incorporate welding into their day-to-day duties.

Welding is an especially critical task for safety professionals to pay attention to, given the multiple types of hazards that stem from the work. Beyond the risk of a welder overheating in a hot workspace, direct burns to exposed skin, or the

potential for clothing or uniforms to catch fire, arc welding creates a full spectrum of light, including harmful UV rays. This puts welders at an increased risk of developing skin cancer due to exposure risks.

With that level of exposure in mind, we asked our respondents if their companies provided anyone engaged in welding with sunscreen to help mitigate exposure to UV light. An overwhelming majority (**80%**) of those in the survey said their organizations did not provide sunscreen for welders, while only **20%** made sunscreen available.

HEAT STRESS PLANNING AND PREVENTION EFFORTS

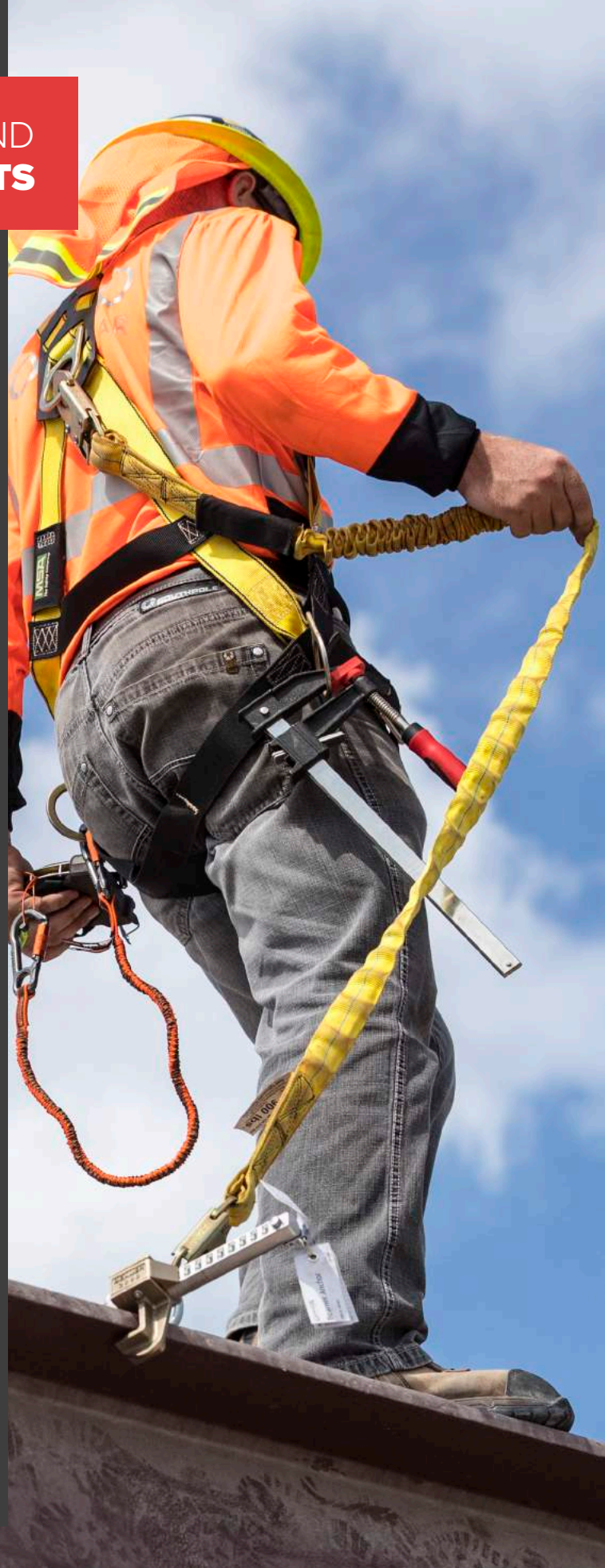
Providing workers with cooling vests, towels, sunscreen, and other forms of PPE, alongside training and education, is a key means of preventing heat stress incidents in the workplace or at a jobsite. This is, however, only one part of the equation. It's also important to develop strategies for addressing the conditions that could cause heat stress injuries before an incident happens.

We asked respondents whether their organizations currently implement a heat stress prevention plan, such as one that mandates water, rest, and shade breaks for workers in hot environments. Most of the survey population (**62%**) said their company has such a prevention plan in place, while the remaining **38%** said no such measures were utilized at their workplaces.

We then followed up with those who replied no, asking them for the reasons their organizations did not have a heat stress prevention plan in place. Their **top 4** reasons were that:

1. They trust workers to take care of themselves: **34%**
2. Heat stress is not viewed as a serious safety risk: **31%**
3. There is a lack of buy-in from leadership: **23%**
4. They don't know where to start: **14%**

Several respondents noted their companies did have heat stress programs in use, though they are informal and not written down. Others said they have one or more components of a heat stress prevention plan in place (mandatory rest, hydration, and shade breaks) formally or informally but not all. A handful of participants noted that although they trust that workers will take care of themselves, they do provide the components for them, such as hydration stations and tents or other forms of shade.





HEAT STRESS PLANNING AND PREVENTIONS EFFORTS

Next, we asked survey participants to tell us where heat stress prevention ranked on their list of worker safety challenges. **Fifty percent** of respondents told us that heat stress held equal weight with the other safety priorities at their company. Only **3%** said heat stress was their biggest safety concern, while **16%** ranked it among their top safety issues. **Twenty-four percent** told us that heat stress ranked less than other safety priorities. Lastly, **7%** said heat stress doesn't appear on their company's list of safety concerns.

To determine how their organizations handle training their workers about heat stress prevention, we asked respondents to tell us whether they agreed with any of the following statements regarding heat stress education:

More than half (**53%**) of survey-takers told us they agreed that employees at their company have a strong level of knowledge regarding heat-related illnesses and heat stress prevention. Another **one-third** of participants strongly agreed with this statement, while **12%** disagreed and **2%** strongly disagreed.

Thirty percent strongly agreed, and another **46%** agreed their company offers regular ongoing and complete training opportunities for new workers on heat-related illnesses and heat stress prevention. In contrast, **20%** disagreed and **5%** strongly disagreed, suggesting that their organizations do not provide enough (or any) ongoing training opportunities.

A total of **76%** of participants either strongly agreed (**35%**) or agreed (**41%**) that their company provides periodic refresher courses on heat-related illnesses and heat stress prevention for all workers, compared with **24%** who either disagreed (**18%**) or strongly disagreed (**5%**) with the statement.

Lastly, **79%** of respondents told us they either agree (**43%**) or strongly agree (**36%**) with the statement that their employer frequently discusses heat-related illnesses and heat stress prevention during toolbox talks or general safety training sessions. **Seventeen percent** disagreed and another **4%** strongly disagreed with the sentiment, suggesting there is some room for improvement regarding heat stress prevention training at their companies.

OSHA AND **HEAT STRESS**



The Occupational Safety and Health Administration (OSHA) does not currently have a federal heat illness prevention standard on the books. However, it has published guidelines for organizations to follow to help address potential heat stress incidents before they happen. An overwhelming majority (**77%**) of the safety professionals who responded to the survey said they were aware of these guidelines, while only **23%** were unfamiliar with them.

Of those who were aware of OSHA's guidelines, **43%** of participants said they had a high understanding of how the standard relates to their workplace. **Forty-seven percent** noted they had a moderate understanding of the guidelines in relation to their company, and **10%** had either a low or a zero understanding of OSHA's recommendations.

When asked if they would support OSHA in publishing a federal heat illness prevention standard, **two-thirds** of respondents said they would support the move. **Fifteen percent** said they would not support such an effort, and the remaining **18%** of participants told us they either had no opinion or didn't know enough about a proposed heat illness prevention standard to make a judgment.



WHO RESPONDED?

The safety professionals who participated in our Heat Stress Prevention Survey work in a variety of positions, with **46%** working as safety and/or EHS managers at their respective organizations. **Thirteen percent** serve as directors of safety, EHS, or HR. A further **13%** of respondents are staff-level employees, and **9%** are an HR or other manager. **Seven percent** of participants are frontline supervisors. The remainder of the response pool was made up of people with various job titles, including executives (vice president or higher), consultants, and contractors.

Twenty-one percent of respondents work at organizations that employ 1,000 or more employees, while **37%** reported from smaller companies with fewer than 100 employees. The remaining **41%** work at businesses that employ between 101 and 999 workers.

The top industry represented in the response pool was manufacturing, which consisted of **28%** of participants. Other industries with a strong presence in our annual survey included construction (**17%**), government (**9%**), oil and gas (**9%**), transportation (**4%**), and power generation and/or distribution (**3%**). A large section of the response pool (**14%**) specified other industries of which they are a part, including:

- Nonprofit
- Environmental services, remediation, or compliance
- Electrical contractor
- Painting
- Maritime/shipping



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*Source: Canadian Dermatology Association (CDA)

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