

## Wearable Ways to Work in Extreme Heat

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Earth experienced its hottest months yet in summer 2023, and NASA scientists are expecting 2024 to be even hotter. Rising temperatures and high humidity aren't just uncomfortable for those outside during the summer months: They can cause serious health consequences, including death. While employers are working to find ways to combat the heat, the extreme variability in weather conditions continues to pose threats to employees.

Recently, company leaders have turned to new methods and technologies to help their teams stay safe while working both indoors and outdoors. A balance of methods and technology is necessary to keep everyone safe while they work. As summer continues, it is important to remember that the optimal time to review and update current heat-stress safety plans is in the spring – or better yet, year-round – in order to prioritize employee safety and determine both proactive and reactive measures needed to withstand the hottest months of the year.

### TRIED AND TRUE

While we are all navigating new ways of working safely in extreme temperatures, the tried-and-true measures are still extremely useful in preventing heat stress among employees. Employers can support their employees working outdoors by ensuring there are proper amenities available at all times, including shady areas, a water source, and electrolyte drinks.

Even indoors, employees are not immune to heat stress. In fact, indoor work brings a variety of unique – and perhaps



unexpected – conditions, such as outdated air-conditioning systems and warehouses enclosed with sun-attracting sheet metal. Employers should ensure there is proper ventilation within the building to avoid overheating. No matter the weather or setting, encouraging employees to take their breaks and rest is critical to keeping everyone healthy and safe.

### LEVERAGE INNOVATIVE TECH

There are many methods companies can implement immediately to address the risk of heat stroke, and investing in the right technology creates huge advancements in preparedness. Some companies have changed how they monitor hot conditions through the use of equivalent heat measurements, which include humidity in addition to temperature. High humidity can increase stress on the body as

it prevents sweat from evaporating from the skin.

Fortunately, the use of advanced technology to protect employees has also increased. These tools include real-time monitoring of heat conditions with advanced environmental sensors. This technology ranges from drones to satellites that detect temperature changes and provide updates on dangerously high temperatures.

One tool that may be overlooked is something many people already own – a wearable fitness device. Fitness devices have built-in sensors that track baseline health statistics and can alert the user when they are abnormal. For instance, the more often and consistently the tracker is worn, the more data can be gathered on typical heart rhythms. When these reach an atypical state, the user is alerted and can sit down, step out of the heat, and assess their state of health.

### **POWER OF PPE**

Outside of technology, advancements are being made in the PPE worn by professionals which allows for better adaptation when exposed to high temperatures. Lighter-weight fabrics are being incorporated into PPE as they have lower heat build-up, yet do not sacrifice protection in favor of breathability. New advancements in garment design, such as the use of aramids, can strengthen fabrics and ensure that durability is never compromised.

Evaporating cooling vests – which use similar technology to the cooling scarves that have been around for some time – have proven to be a key investment for many companies. By soaking the fabric in cold water at the beginning of each day, the vest slowly cools for one to two hours and keeps the wearer cool as well. Along similar lines, runners have been using hydration vests for years and they're finally making their way to the workforce. Physically wearing a water or electrolyte-filled vest can encourage employees to take more water breaks and stay hydrated throughout the day.

### **TRAINING MATTERS**

Keeping workers safe is an issue that expands beyond company leaders. The government is addressing these issues and exploring new regulations and processes. The Occupational Safety and Health Administration (OSHA) is researching new regulatory changes that, once adopted, will drive additional measures across the United States. Currently, an OSHA working

group is exploring a variety of updated training measures including new training plans specifically for heat conditions, both high and extreme heat, that would require risk and hazard assessments to be completed.

Refreshed trainings may also come on the scene and be required ahead of the summer months where temperatures tend to be at their highest. To prepare now for the rising temperatures, employers will benefit from investing in online trainings that can easily implement OSHA requirements as well as updated emergency response procedures.


It's essential that the training employees receive and have on hand is updated and adapted as the world changes. Training should encapsulate the latest science on heat stress, including the impact of preexisting conditions such as heart disease, asthma, chronic obstructive pulmonary disease, and dehydration. During emergency situations, online trainings also provide immediate access to pertinent information, especially in the event of heat stress where fast action is required.

### **PROACTIVE POWER**

Staying proactive and implementing refresher training can be vital in reminding workers of proper protocols in the event of an emergency. The type of training used can also increase the chance of employees retaining important information and remembering the protocols taught. For example, micro-learning courses stick in an employee's mind easier by breaking up larger information into smaller sections, and interactive courses help put learning into action.

Additionally, employers should be sure to offer training in multiple languages to ensure everyone has access to the same information. OSHA estimates that language barriers are a contributing factor in 25% of job-related accidents. Making all infographics and training videos available in multiple languages is vital in distributing information across the company and protecting the health and safety of all employees.

### **WORDS INTO ACTIONS**

The most important thing an employer can do to protect their employees is to be prepared. To ensure workplaces are safe and employees are healthy, employers must remain proactive and encourage healthy practices within the workplace. 



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### About the Author

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Clare Epstein is the general manager, commercial, at [Vector Solutions](#). She is an award winning leader with 20 years' experience growing organizations including a start-up specializing in software as a service. Clare obtained a bachelor's degree in urban studies from the University of Pennsylvania and has since also worked as a chief operating officer and vice president for other organizations.

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### About the Article

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