Getting Ahead of Heat Stress

Summer 2024 was the United States' fourth-hottest on record, and the hottest in history for many cities across the country. As global temperatures rise and heatwaves become more severe and frequent, the urgency for robust heat stress protections has never been greater.

Heatwaves are rapidly evolving into occupational hazards. From construction sites and oil rigs to mines and manufacturing floors, frontline workers are increasingly exposed to extreme temperatures that threaten their health and safety.

Federal regulation is moving slowly, but the need for action is immediate. Leaders must take proactive steps now to stay ahead of policy changes and protect their workforce.

Heat Risks are Escalating

Heat-related illnesses are not isolated or rare occurrences. According to the Bureau of Labor Statistics, 479 workers in the U.S. died from heat exposure between 2011 and 2022. What's more, there were 33,890 estimated work-related heat injuries and illnesses that resulted in time away from work from 2011-2020. And those are just the reported cases - many more go unreported, particularly in high-turnover or temporary labor settings.

What makes heat stress so dangerous is its stealth. Symptoms like fatigue, dizziness, and confusion can develop rapidly, especially when compounded by physical labor, inadequate hydration, or the insulating effects of PPE (more on this later). These symptoms are also not immediately recognizable to the untrained eye. In mining and oil & gas operations, for example, workers often operate in remote or confined spaces where recognizing and responding to heat stress symptoms can be delayed.

Newer workers are also particularly vulnerable. Those with limited experience in a physically demanding job are often not yet acclimatized to the heat - or best practices for dealing with it - putting them at significantly higher risk in their first few days. The same goes for employees returning to work after extended periods of time.

With climate data pointing to hotter and longer summers ahead, these risks are only set to increase. For leaders, this means heat stress can no longer be treated as a seasonal issue. It must become a year-round priority embedded into the very fabric of workplace safety.

Federal Regulations are Imminent

OSHA has proposed a **new national rule** for heat injury and illness prevention, a long-anticipated move that could establish baseline requirements for both indoor and outdoor work environments. But like many regulatory processes, it's progressing incrementally, subject to comments, political shifts, and administrative bottlenecks.

In the meantime, only a handful of states (California, Oregon, and Washington) have implemented their own heat safety standards. This leaves a significant portion of the U.S. workforce without consistent or enforceable protections from heat-related illness and injury. For industries with high heat exposure, this regulatory gap is a major risk.

That said, waiting for mandates is not a viable strategy. By the time this legislation is finalized, many organizations could already face rising incident rates, workforce disruption, and reputational damage. Proactive measures are therefore necessary to keep workers safe in the interim.

What Leaders Can Do Today

Even in the absence of a federal rule, leaders have a wide range of proven strategies to reduce heat risk and protect their teams. First and foremost, they should remove hazardous conditions whenever possible or place a barrier between workers and potential hazards. When combating heat stress, this looks like creating a cooler working environment overall, both indoors and outdoors. Leaders can accomplish this by:

- Installing air conditioning/fans

- Ensuring proper ventilation, especially near areas with higher temperatures

- Redirecting radiant heat with reflective shields

- Insulating hot surfaces

As for barriers between workers and potential hazards, PPE can be a double-edged sword. Many types of PPE can help prevent heat stress, like insulated gloves, suits, or infrared-reflecting face shields. Employers may even consider exploring thermally conditioned clothing options like garments with built-in air conditioners/compressed air sources, or specialized pockets for containers of ice or dry ice.

But there are certain types of PPE that can exacerbate heat stress symptoms. Specific respirators or water-resistant/impermeable clothing can trap the heat. Workers need to be aware of these risks and have extra resources available to stay cool.

Such resources might include the ability to take frequent breaks in shaded or cooler areas and access to ample hydration. Supervisors should encourage employees to drink water regularly to prevent dehydration and other heat stress symptoms. They may also schedule shorter work shifts to ensure no one overexerts themselves, or schedule physically intensive tasks during early morning or evening hours when temperatures are lower.

Heat Stress Training

Proactive heat stress prevention starts with education. A dedicated heat stress prevention plan is the cornerstone of preparedness. It should include protocols for identifying heat hazards, monitoring environmental conditions, and responding to incidents. Understanding the symptoms and causes of heat stress, as well as how to identify it when it occurs, is fundamental.

Comprehensive heat stress training should include topics such as:

- Risk factors

- The different kinds of heat-related illnesses and how to identify them

- How to administer first aid

- Proper hydration techniques

- Preventative measures like acclimation

- Procedures for contacting emergency medical services if needed

Employers should provide their workforce with accessible, ongoing training that's specific to their industry, organization, and role. Training solutions with lessons that cater to different learning styles and communicate vital information in easily digestible ways will prove the most effective here in regard to engagement and retention.

Building a Culture of Heat Stress Prevention

Policies and checklists are essential, but they're only effective when backed by a strong culture of safety. Leaders must foster environments where workers feel empowered to speak up if they're feeling overheated or noticing a peer who's experiencing symptoms.

Psychological safety is key: employees should know they won't be penalized for taking breaks, reporting symptoms, or calling out unsafe conditions. Leadership plays a vital role here. Modeling heat safety behavior, reinforcing training messages, and holding all levels of the organization accountable.

Additionally, peer-to-peer communication should be encouraged. Teams that look out for each other - checking in, sharing water, reporting concerns, etc. - are far more resilient in high-stress conditions.

Organizations should also establish systems for reporting, investigating, and learning from heat-related illnesses and near misses. This type of transparency helps identify trends and improve future prevention efforts.

Safety as a Competitive Advantage

Beyond ethics and compliance, strong heat stress prevention programs can deliver measurable business value. They reduce absenteeism, improve morale, and minimize turnover - all of which are especially important in industries facing labor shortages. Fewer injuries also mean fewer workers' comp claims, less downtime, and lower insurance premiums.

Moreover, proactive heat safety aligns with broader sustainability goals. Investors, regulators, and communities are increasingly holding companies accountable for worker welfare, especially in the face of a changing climate. Organizations that lead on this issue demonstrate operational maturity and social responsibility.

Extreme heat is a new and growing norm. While federal rules may eventually bring nationwide standards, EHS professionals don't have the luxury of time. Workers are facing these risks now, and the consequences of inaction can be devastating.

Safety leaders have a powerful opportunity to lead by example here by implementing robust heat stress prevention strategies today. Implementing accessible training based on industry's best practices and committing to the development of a safety-first culture empowers leaders to protect their workforce, strengthen their operations, and prepare their organizations for a hotter future.