



FREE GUIDE

Ways to Beat Heat Stress

By Jeff Martin

With a wave of weather alerts this summer for scorching temperatures and oppressive heat domes blanketing broad swaths of the country, there is increasing urgency for companies to protect their field service drivers and technicians from heat stroke and other heat-related illnesses.

Between 2011 and 2021, heat stress contributed to an average of nearly 40 work-related deaths a year, according to figures released in June 2023 by the U.S. Bureau of Labor Statistics. Experts in occupational safety believe the actual numbers may be much higher. A study published in February 2023 by the University of Connecticut found that 92% of injuries attributed to “exertion” by Occupational Safety and Health Administration (OSHA) between 2015 and 2020 were heat-related. Additionally, heat stress can lead to driver fatigue, a significant factor in collisions.



170,000

Estimated number of heat-related injuries and illnesses a year in the U.S.

Fortunately, there are ways to help workers beat the heat.

ACT EARLY

Most outdoor fatalities, 50% to 70%, occur in the first few days of working in warm or hot environments, according to OSHA. That's because the body needs a couple of weeks to gradually build a tolerance to the heat. OSHA recommends the “rule of 20” – adjust workload to 20% of the usual workload on the first day and gradually increase by 20% each additional day. Don't forget workers who return to work in the middle of a heat spell; they may not have had a chance to acclimate while they were away. For tips on helping workers acclimate to the heat, check out this brochure from the Centers for Disease Control and Prevention.

REMEMBER THE THREE KEYS TO COMBATTING HEAT STRESS

Hydration, nutrition, and rest are the three keys to successfully dealing with heat stress and minimizing illness

and injury among your workforce in the field. You can leverage those three keys in multiple stages of your plan, from awareness and preparedness to early acclimation.

PROTECT NEW WORKERS

Almost half of heat-related deaths occur on a worker's very first day on the job, and over 70 percent of heat-related deaths occur during a worker's first week, according to OSHA. Consider including a heat acclimatization module as part of onboarding for new workers who will be starting work in the field during a heat wave. OSHA has a guide for just this scenario.

PLAN AHEAD

If the forecast indicates a spike in temperature, putting a preventive plan in place to help workers cope could help reduce risk. If possible, shift the schedule for outside work to earlier or later in the day, with breaks slotted when temperatures are projected to be at their peaks. In addition to adjusting workloads, employers can order extra cases of water to hand out, along with electrolyte packets that can help balance fluids in the body. Other helpful items include vehicle window shades, portable fans, hats, and reusable water bottles.



Remind workers to be vigilant for signs of heat stress and what actions they can take to recover. Those signs can include non-obvious symptoms such as muscle cramps, irritability, and skin rashes, in addition to the more well-known symptoms like dizziness, nausea, and confusion.

¹ Morrissey, Margaret C., Zachary Yukio Kerr, Gabrielle J. Brewer, Faton Tishukaj, Douglas J. Casa, and Rebecca L. Stearns. 2023. "Analysis of Exertion-Related Injuries and Fatalities in Laborers in the United States" *International Journal of Environmental Research and Public Health* 20, no. 3: 2683. <https://doi.org/10.3390/ijerph20032683>



FACTOR IN HUMIDITY

When humidity is high, sweat evaporates at a slower rate, decreasing the body's ability to cool off. To take this into account, the National Weather Service uses tools like Heat Index (how temperature feels in a shady area) and Wet Bulb Globe Temperature (WBGT), which estimates the effect of temperature, relative humidity, wind speed, and solar radiation on humans. Though technically experimental, WBGT has been used for decades by marathon organizers and the military to plan their activities, so it may also be helpful with planning workloads.

CHECK IN OFTEN

Drivers and field technicians who are focused on their tasks may not be aware of symptoms as they develop. Fatigue can also sneak up and compromise alertness, which can lead to accidents and errors. Dispatchers and fleet managers can play a vital role by checking in with workers in the field more often on days when there is a heat advisory.

LEVERAGE TECHNOLOGY

With thousands of field technicians and drivers, it may not be possible to keep close tabs on every worker. Machine vision and artificial intelligence tools, such as Lytx's MV+AI technology, can help identify potential driver fatigue and automatically alert the driver to take proactive steps in the moment to prevent risky driving. These technologies can include cameras, sensors and vehicle tracking systems that monitor speed, braking, and steering habits of the driver and alert you to any potential risks on the road.

Bottom line: heat waves may be unavoidable, but heat stress illnesses and injuries are absolutely preventable.



About the Author

Jeff Martin is Vice President of Global Sales Strategy at Lytx. Jeff has decades of operational experience in architecting, directing, and continuously improving operations and safety programs. Jeff started at Waste Management in 1996 and held several positions, including Corporate Director of Operations and Director of Safety Operations. In his most recent post as the Vice President of Waste Management Safety Services LLC, Jeff was instrumental in the creation and success of the Mission to Zero (M2Z) program at WM, the nation's largest waste and environmental services company.

² Lytx MV+AI technology is a driver aid only. Drivers should never wait for a warning before taking measures to avoid an accident. Lytx MV+AI distraction detection and alerting technology is designed to respect driver privacy because it does not collect, store or use any biometric identifiers or biometric information (i.e., scans of facial geometry) to detect distracted driving behaviors. See <https://www.lytx.com/driver-information>.