Heat Illness Prevention

OSHA proposed a heat illness rule to establish a nationwide standard for addressing workplace heat hazards. If finalized, CONN-OSHA is expected to adopt the rule, which would require most employers to monitor workplace heat, develop Heat Illness Prevention Plans, and take measures to protect employees from heat hazards. An outline of the rule follows:

Who Does This Apply To?

The proposed standard would apply to all public employers conducting outdoor and indoor work.

Who Does This Not Apply To?

Currently, OSHA is proposing to exclude short-duration employee exposures to heat, emergency response activities, work at indoor sites kept below 80 degrees Fahrenheit, telework, and indoor sedentary work activities. If this exclusion remains, CIRMA expects employers will be required to provide temperature data for work areas and detailed job hazard analyses concerning heat in order for the exclusion to apply to them.

What Does the Rule Require?

The OSHA regulation establishes **two heat index thresholds** that require employers to take preventive measures to safeguard employees from heat.

1. **At 80 degrees Fahrenheit, employers would be required to:**
    - Provide cool drinking water
    - Provide break areas with cooling measures
    - Implement indoor work area controls
    - Implement acclimatization plans for new and returning employees
    - Provide paid rest breaks if needed to prevent overheating

2. **At 90 degrees Fahrenheit, employers would be required to:**
    - Monitor for signs of heat illness in accordance with their Heat Illness Prevention Plan
    - Mandatory 15-minute rest breaks every two hours
    - Monitoring employees working alone every few hours to observe for heat-related illness. It is recommended that the employer maintain a log in their Heat Illness Prevention Policy that details which at-risk employees were monitored and at what times. OSHA has not given specific guidance on how frequently the employee needs to be checked.
    - Issuing a hazard alert, reminding their employees of the importance of staying hydrated, which can be communicated however the employer sees fit
    - Placing warning signs at indoor work areas with ambient temperatures that regularly exceed 120 degrees Fahrenheit

Heat Illness Prevention Plan

Employers will be required under the new rule to develop and implement a written Heat Illness Prevention Plan. Employers with fewer than ten employees may communicate the plan verbally to employees, while employers with more than ten employees must have a written plan. The plan must be made available to each employee performing work at the site and in languages all employees and supervisors understand. The rule requires employers to seek input from non-managerial employees and their representatives when developing the plan. Employers will need to evaluate their heat safety plan annually.

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Heat Emergency and Response Plan

Employers will also need a Heat Emergency and Response Plan to ensure supervisors and employees are trained in first aid and in contacting emergency services for heat-related emergencies. This is typically part of the Heat Illness Plan, which provides guidance on how to provide basic first aid (depending on the work area), who to contact in the event of an emergency, and the emergency plan if someone suffers from heat stroke/heat illness.

Mandatory Training

Employers will need to provide initial and annual refresher training for supervisors, heat safety coordinators, and employees, as well as supplemental training after changes in exposure to heat hazards, policies and procedures, or the occurrence of heat illness. The training should include both general awareness of the incoming OSHA regulations concerning heat illness and specified training on the municipality's Heat Illness Prevention Policy.

Recordkeeping and Reporting

Currently, the OSHA rule requires employers to maintain written or electronic records of indoor monitoring data for a minimum of six months, maintain detailed records of heat-related incidents, and conduct regular audits to ensure compliance with the new rule. OSHA has not specified the frequency of indoor monitoring data (whether it would be daily, weekly, or otherwise).

Creation of a Heat Illness Prevention Plan

Consider the following elements when creating a Heat Illness Prevention Plan:

1. **Who will provide oversight on a daily basis?**
   Most likely, the first-line supervisor of the work area(s) would implement the Plan based on the temperature.
2. **Who are considered new employees under this rule?**
   Employers should keep in mind that new employees can include: Temporary employees, employees who have been on leave for more than two weeks, new hires, or employees who have not worked in the heat in the past two weeks (Example: employees who have been working in the fall/winter now beginning work during the spring/summer).
3. **How will the employer ensure that first aid is adequate and the protocol for summoning medical assistance in situations beyond first aid is effective?**
   The plan should include potential locations for water, shade, and cooling areas based on the work and the type of location. For example, an employee paving a road may keep cold water in their vehicle, while an employee working indoors may keep water in a break room.

What work practices should be used to reduce heat stress and acclimatize new employees?

1. **Work Practices -** Some work sites cannot be cooled sufficiently by engineering controls such as air conditioning or fans. At those locations, employers should modify administration controls when heat stress is too high to work safely.
   - Modify work schedules and activities for employees who are new to warm environments.
   - Schedule shorter shifts for new employees and existing employees who are not yet adapted to working in the heat. Gradually increase shift length over the first one - two weeks. This should follow the 20% rule: work 20% of the workday in temperatures of 80 degrees Fahrenheit or higher, and add another 20% each day until acclimatization is reached or 100% of the workday is reached, whichever comes first.
   - Require mandatory rest breaks in a cooler environment (such as a shady location or an air-conditioned building). The duration of the rest breaks should increase as heat stress rises.
   - Consider scheduling work at a cooler time of day, such as early morning or late afternoon.
   - Reduce physical demands as much as possible by planning work to minimize manual effort (e.g., delivering materials to the point of use).
   - Rotate job functions among employees to help minimize exertion and heat exposure.
   - Ensure that employees drink an adequate amount of water or electrolyte-containing fluids.

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- Employers should have an emergency plan that specifies what to do if a worker has signs of heat-related illness, and ensures that medical services are available if needed.
- Employees should watch out for each other for symptoms of heat-related illness and be prepared to administer appropriate first aid to anyone who is developing one.
- Administer appropriate first aid to any employee who is developing a heat-related illness.
- In some situations, employers may need to conduct physiological monitoring of employees.
- Implement a buddy system for new employees and in heat-stress environments.

2. **Personal Protective Equipment (PPE) -** If engineering and administrative controls are not sufficient in reducing the risk of heat illness, employers should use PPE as part of their Heat Illness Prevention Plan:
   - Reflective clothing
   - Infrared reflecting face shields
   - Cooling neck wraps
   - In extremely hot conditions, the following thermally conditioned clothing might be used:
   - A vest that receives cooled air from a vortex tube connected to an external compressed air source.
   - Jackets or vests with pockets for reusable ice packs or phase-change cooling packs.
   - Employees should be aware that using certain PPE (e.g., certain types of respirators, impermeable clothing, long pants, and head coverings) can increase the risk of heat-related illness.

How will the potential for heat illness/stress be measured?

Employers can use the National Weather Service Temperature Data and the OSHA Protocols in conjunction to help establish a process on what to do should temperatures exceed 80 degrees Fahrenheit or if there is a Heat Advisory Warning.

How will we determine if the total heat stress is hazardous?

You should consult the State's Heat Advisory Warnings and the National Weather Service to determine whether the heat is hazardous. They should also use the wet-bulb temperature for their area, which can be found on the National Weather Service website, to help make the determination, even if there is no advisory warning. If the municipality realizes that the mitigation measures it has in place are not effective, it should have a plan to protect employees from heat stress (e.g., stop work, increase breaks in shaded areas, increase the availability of water).

What are the symptoms of Heat Illness?

1. **Heat stroke** is a condition that requires immediate emergency medical attention. The individual may stop sweating, become confused or lethargic, and may experience seizures. Body temperature can rise above 106 degrees Fahrenheit. Call emergency responders immediately if heat stroke is suspected. While waiting, start cooling the person: move them to an air-conditioned or shaded area, remove unnecessary clothing, and do not leave them unattended. Prompt medical treatment is critical to prevent permanent brain and organ damage or death.
   - Confusion
   - Slurred speech
   - Unconsciousness
   - Seizures
   - Heavy sweating or hot, dry skin
   - Very high body temperature
   - Rapid heart rate

2. **Heat exhaustion** can be prevented by recognizing personal limits and staying hydrated in hot, humid conditions. Drink plenty of water to replace fluids lost through sweating, and avoid alcohol and caffeine. If an employee shows symptoms, act immediately. Stop the activity and move them to a cooler area. Cooling and rehydration with water or electrolyte drinks are essential. Do not allow the employee to resume work until fully recovered, as symptoms can quickly return. Without prompt intervention, heat exhaustion can escalate to heat stroke, a life-threatening condition. If symptoms do not improve, seek medical attention.
   - Fatigue
   - Irritability
   - Dizziness or lightheadedness
   - Heavy sweating

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- Thirst
- Nausea or vomiting
- Elevated body temperature or fast heart rate

3. **Heat cramps** are painful muscle spasms caused by heavy sweating and electrolyte loss during physical activity in hot environments. They most often affect the legs, arms, or abdomen and may occur during or after exertion.

   It is advised to stop activity, move to a cooler area, and drink water or electrolyte-replacing fluids. Gently stretch and massage the affected muscles. Do not resume strenuous activity until the cramps have completely gone away, as they can be an early sign of more serious heat-related illness.

   - Muscle spasms or pain
   - Usually in legs, arms, or trunk

4. **Heat syncope** is a temporary loss of consciousness (fainting) caused by reduced blood flow to the brain, often occurring in hot environments. It is commonly triggered by prolonged standing, sudden rise from a sitting or lying position, or inadequate hydration.

   If heat syncope occurs, have the individual sit or lie down in a cool, shaded area and elevate their legs to improve blood flow. Provide water once they are alert and monitor their condition. Medical attention may be needed if symptoms persist or worsen.

   - Fainting
   - Dizziness

5. **Heat rash** is the most common heat-related condition in hot work environments. If symptoms occur, move the employee to a cooler, less humid area when possible. Keep the affected skin dry and avoid ointments or creams that trap heat and moisture, as they can worsen the condition.

   - Clusters of red bumps on skin
   - Often appears on the neck, upper chest, and skin folds

6. **Rhabdomyolysis (muscle breakdown)** is a serious condition that can occur during intense physical activity in hot environments. As muscles break down, they release substances into the bloodstream that can damage the kidneys.

   - Muscle pain
   - Dark urine or reduced urine output
   - Weakness

Note: This information is provided for general educational purposes only and is not meant to replace medical advice or substitute for professional care. If you experience symptoms of heat-related illness, consult a qualified healthcare provider. In case of severe symptoms or a medical emergency, call emergency services immediately.

Resources

Heat Illness Prevention (OSHA)

- https://www.osha.gov/heat
- https://www.osha.gov/heat/more-resources

Sample Heat Illness Prevention Plan (DOL)

- https://portal.ct.gov/dol/-/media/dol/2022-new-design-system/about/divisions/conn-osha/heat-illness-prevention-plan-sample1pdf?rev=e5b8d4c70e1f48a2b8293ca8d2c353f3&hash=328BA0DFA2EE35702BDDC63F0C8BA07B

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