

Final Recommendations for Arizona Heat Illness Prevention

Written Heat Illness Prevention Plan

- All employers must develop, implement, and maintain a Heat Illness Prevention Plan. This plan must include responsibilities, procedures for providing water and shade, employees' rights to rest and hydration, acclimatization steps, and how effective training will be delivered. Template Heat Illness Prevention Plans will be available for download on ADOSH's website.

Water

Definition - Water must be potable, cool, and easily accessible so workers can hydrate regularly throughout the workday.

- **Accessibility** - Employees must have ready access to potable drinking water at no cost. Water must be located as close as practicable and reasonable to where employees are working.

When water is not plumbed or continuously supplied, employers must provide enough water at the start of the shift to meet a minimum of one quart per employee per hour for the entire shift or may begin with a smaller amount if effective procedures are in place to replenish water as needed throughout the shift.

- **Cool & Clean** - Water must be potable, free from dirt or contamination, cool (ideally 59°F), and it must be stored in coolers or containers that are cleaned and maintained regularly.
- **Hydration** - Employees should be encouraged to drink water frequently, while avoiding excessive intake. Workers may take brief "drink-in-place" hydration moments as needed, especially in high heat conditions. Encouragement to hydrate should be framed to promote safety without creating unintended liability or implying mandatory consumption levels.

Employers may provide urine-color hydration charts to help workers self-monitor hydration levels, without requiring any personal medical disclosure.

Shade

Definition - Shade is any natural or constructed structure that blocks direct sunlight that allows the body to cool down effectively.

- **Adequacy** - Adequate shade prevents shadows from being cast, does not trap heat, and may be created by natural or artificial means, including functioning air-conditioned buildings or vehicles. Shade must be large enough for those employees on break to sit in a natural posture and be open to the air on at least three sides (or mechanically ventilated).
- **Accessibility** - Employees must have access to shade that is located as close as practicable and reasonable to where employees are working.

Shade must be free of hazards.

- **Encouragement** - Workers should be encouraged to take cool-down rests in shaded areas, and water should be available to support hydration.

Rest Breaks

Definition - Rest breaks allow workers to cool down, recover, and prevent heat-related illness.

- **Location** - Rest should occur in shaded areas that meet the definition provided.
- **Intervals** - Employees should be allowed, without penalty, to take a preventative cool-down rest in the shade when they feel the need to do so to prevent overheating. Rest intervals should be adjusted based on temperature, humidity, workload, personal protective equipment (PPE), and acclimatization level.

New or unacclimatized workers may require longer or more frequent breaks.

- **Encouragement** - Employers should encourage and allow employees to take preventative cool-down rest periods as necessary. Employers should consider rest breaks based upon heat exposure, humidity, workload, PPE, and lack of air movement.

Acclimatization

Definition - The process where the body adapts to heat over several days, improving its ability to work safely in hot conditions.

- **Plan** – Employers must develop and implement an acclimatization plan and procedures in writing. Employers must choose between two options, either (A) or (B):
 - (A) NIOSH acclimatization plan option: Employers that choose not to develop their own acclimatization plan must follow the acclimatization plan developed by the Centers for Disease Control and Prevention and NIOSH.
 - (B) Employer-designed acclimatization plan option: Employers who develop their own acclimatization plan must integrate and implement the following factors into their plan:
 - Acclimated and unacclimated workers;
 - The effects of clothing and personal protective equipment on adding to the heat burden of workers;
 - Risk factors that put workers at a higher risk of heat-related illness;
 - Re-acclimatizing workers as necessary.

Training

- **Requirements** - Effective training must be provided to each supervisory and non-supervisory employee before the employee begins work that should reasonably be anticipated to result in exposure to the risk of heat illness. Training must be provided in a language that employees can understand.

Training must cover, at a minimum:

- Employer responsibilities and employee rights.
 - Employer's written procedures for heat illness prevention.
 - Risk factors for heat illness, as well as the added burden of heat load on the body caused by exertion, clothing, and personal protective equipment.
 - Available monitoring tools such as the NIOSH Heat Stress App and the National Weather Service HeatRisk Map.
 - The different types of heat illness, the common signs and symptoms of heat illness, and appropriate first aid and/or emergency responses to the different types of heat illness
 - The importance of frequent consumption of small quantities of water.
 - The concept, importance, and methods of acclimatization pursuant to the employer's written plan.
 - The importance of employees immediately reporting any signs or symptoms of heat illness—either in themselves or in co-workers—directly to the employer or through their supervisor.
- Employers must re-train employees and supervisors at least:
 - Annually prior to exposure; and
 - In the event of a serious heat-related illness resulting in hospitalization and / or fatality, the employer should determine the likely cause and scope of event and retrain the employee group that was exposed to the condition as appropriate for that event.
 - Training records must be maintained by the employer.

Exemptions (Focused Compliance)

The following workplaces and operations are exempt from the recommendations.

- Incidental heat exposures where an employee is not required to perform work activities in heat for more than 15 minutes in any sixty-minute period.
- All emergency operations that are directly involved in the protection of life or property, or the restoration of essential services, such as evacuation, rescue, medical, structural firefighting, law enforcement, utilities, and communications, when employees are engaged in those operations.
- Buildings and structures that have a mechanical ventilation system that keeps the heat index below 80 degrees Fahrenheit.

Workplace Heat Safety Task Force

Name	Industry	Role
Jason Sangster	Labor / Ironworkers	Member
Jesse Hoellerich	Labor / First Responders	Member
Maxwell Ulin	Labor / Hospitality	Member
Briona Parkinson	Labor / Public	Member
Fernando Quiroz	Labor / Agriculture	Member
Martha Reyes	Labor / Community Organization	Member
David Martin	Industry / AZGCA	Member
Grace Appelbe	Industry / AZ Chamber of Commerce	Member
Jason Lowry	Industry / Local First AZ	Member
Linda Kennedy	Private / Agriculture	Member
Brandon Clark	Private / Agriculture	Member
Mark Kendall	Private / Insurance	Member
Sidney Hawkins	Private / Construction	Member
Fernando Juarez	Private / Construction	Member
Paul Levin	Private / Construction	Member
Jake Byrne	Private / Roofing	Member
Phil Smithers	Public / Utility	Member
Joe Valenzuela	Private/Warehousing	Member
Abel Almanza	Expert / Agriculture	Member
Pat VanMaanen	Expert / Nursing	Member
Ladd Keith	Expert / UofA Heat Resilience	Member
Rick Murraray	Expert / AZCNSC	Member
JR Imes	Expert / AGSA	Member
Dr. Theresa Cullen	Expert / Physician	Member
Amber Pappas, <i>CSP</i>	Expert / Compliance	Facilitator