

OSHA Roundtable
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Heat Stress

Alan Fortin

**Compliance Safety and Health officer
Occupational Safety and Health Administration**

Disclaimer

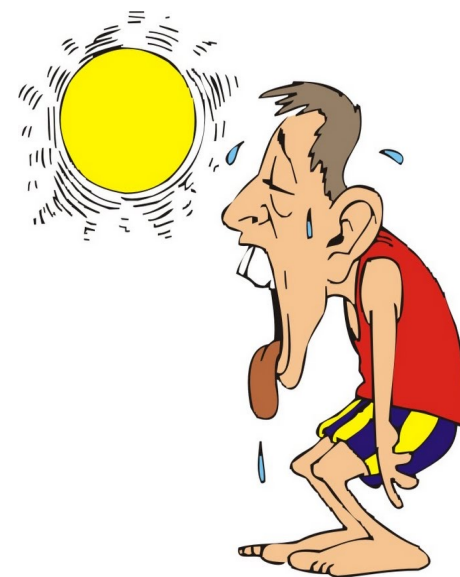
This information is intended to assist employers, workers, and others as they strive to improve workplace health and safety. While we attempt to thoroughly address specific topics, it is not possible to include discussion of everything necessary to ensure a healthy and safe working environment in a presentation of this nature. Thus, this information must be understood as a tool for addressing workplace hazards, rather than an exhaustive statement of an employer's legal obligations, which are defined by statute, regulations, and standards. Likewise, to the extent that this information references practices or procedures that may enhance health or safety, but which are not required by a statute, regulation, or standard, it cannot, and does not, create additional legal obligations. Finally, over time, OSHA may modify rules and interpretations in light of new technology, information, or circumstances; to keep apprised of such developments, or to review information on a wide range of occupational safety and health topics, you can visit OSHA's website at www.osha.gov.

Who is affected by heat?

- **Workers in indoor and outdoor environments**
- **Anyone working in a humid environment**
- **New workers, temporary workers, and workers returning after an extended period of time are at an increased risk.**

Heat Illness Breakdown

- According to the CDC in the US there is
 - An average of 702 heat related deaths.
 - An estimated 67,512 emergency department visits
 - An average of 9,235 hospitalizations.



What are some industries that are affected by heat?

- **Kitchens and bakeries**
- **Manufacturing buildings**
- **Warehouses**
- **Foundries**
- **Utility Rooms**
- **Laundry facilities**
- **Construction tabs**
- **Landscaping**

[osha.gov/heat](https://www.osha.gov/heat)

Factors that contribute to heat

- Heat processes (ovens, stoves, furnaces)
- Ventilation/ air flow
- Outdoor weather
- Levels of humidity
- Tasks
- Clothing and personal protective equipment
- Direct sunlight
- Surfaces worked on

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What are some ways to deal with heat?

- **Acclimatize employes**
- **Employers should provide access to cool potable water**
- **Take rest breaks as needed**
- **Teach employees to watch out for each other**
- **Train employees on heat illness symptoms**

Acclimatizing Employees

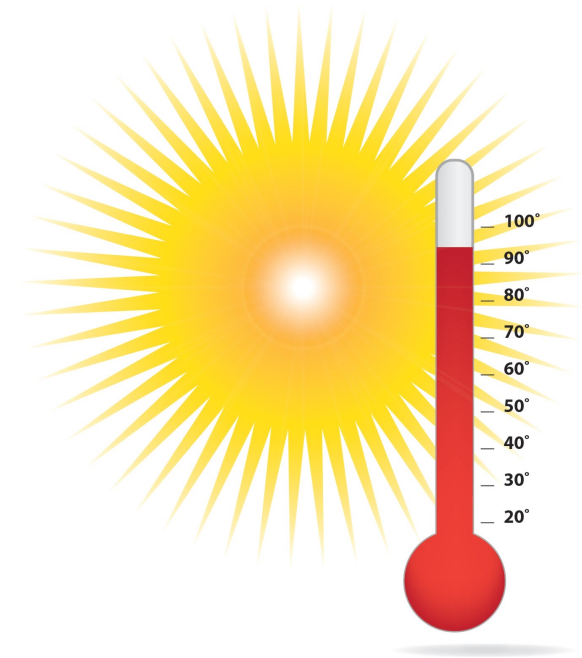
- **New workers or workers returning after long breaks**
 - **20% rule is suggested**
 - **First day 20% of shift at full intensity**
 - **Second day 40% of shift**

Heat illnesses

- **Heat stroke**
- **Heat exhaustion**
- **Heat cramps**
- **Heat syncope**
- **Heat rash**

How to protect workers

- **Engineering controls**
- **Administrative controls**
- **Personal protective equipment**
- **Training**



Engineering controls

- **Air conditioning**
- **Increased general ventilation**
- **Cooling fans**
- **Local exhaust ventilation**
- **Use reflective sheets to block radiant heat**
- **Insulate hot surfaces**
- **Stop leaking steam**
- **Provide shade for outdoor work sites**

Administrative controls

- **Acclimatize workers starting work**
- **Re-acclimatize workers after extended absences**
- **Schedule work earlier or later in day**
- **Use work rest schedules**
- **Limit strenuous work**
- **Use relief workers when needed**

Personal protective equipment

- Water cooled garments
- Air cooled garments
- Cooling vests
- Wetted over-garments
- Sun hats
- Light colored clothing
- Sunscreen



What are employers doing?

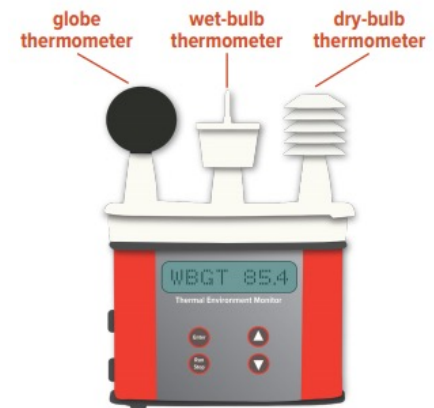
- **Providing additional cold water in bottles**
- **Providing additional beverages with electrolytes**
- **Providing employees with freeze pops**
- **Looking at upgrading ventilation or air flow in manufacturing facilities**

Training

- **Train employees on proper hydration**
- **Train employees on personal risk factors and heat**
- **Train employees on heat illnesses and symptoms**
- **Train employees on what to do for medical emergency**

How does OSHA measure heat?

- We use WBGT to calculate indoor and outdoor readings
 - Various other factors come into play
 - Type of clothing worn, how strenuous the task is, if the employee is sitting or standing



Example of WBGT Equipment

What is OSHA finding?



- FY2022 – 157 inspections
- Varied locations – not just the South
- Varied industries
- No training

Symptoms, Hospitalization or Death?

1. Temperature above 80

2. No Training

3. Outdoors; not acclimated

4. Symptomatic

5. Hospitalization -

6. Death – Most in Texas

80-90% of all inspections

Questions?

Resources

- <https://www.osha.gov/heat>
- <https://www.osha.gov/heat/employer-responsibility>
- <https://www.osha.gov/heat/more-resources>
- <https://www.cdc.gov/niosh/topics/heatstress/default.html#:~:text=Heat%20stres%20can%20result%20in,up%20safety%20glasses%2C%20and%20dizziness>
- Your local OSHA office



www.osha.gov

800-321-OSHA (6742)