

**NATIONAL EMPHASIS PROGRAM -
OUTDOOR AND INDOOR HEAT-RELATED
HAZARDS (CPL 03-00-024) – REFRESHER
AND UPDATE**

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AGENDA

- Heat Hazards Background
- Brief Overview of Original NEP (2022)
- 2026 Revised NEP – Overview and Goal
- Significant Changes and Updates
- Targeted Industries
- Inspection Procedures and Compliance Guidance
- Heat Illness Prevention Strategies
- Resources and Employer Recommendations
- Conclusion and Q&A

BACKGROUND – HEAT-RELATED HAZARDS

- Heat illnesses range from heat cramps and exhaustion to potentially fatal heat stroke.
- 2015–2019 average: 35 fatalities per year and ~2,700 cases with days away from work (under reporting is common).
- Hazards occur with physical activity, PPE, humidity, or radiant heat sources — even at moderate temperatures.
- Ongoing risk in high-exposure industries, both indoors and outdoors.

BRIEF OVERVIEW – ORIGINAL NEP (2022)

- First issued April 8, 2022; extended until April 8, 2026.
- First national focus on both indoor and outdoor heat hazards.
- Targeted high-risk industries using earlier data.
- Emphasized enforcement, outreach, and prevention.

2026 REVISED NEP – OVERVIEW

- Issued: April 10, 2026
- Duration: No more than 5 years
- Goal: Reduce or eliminate worker exposures to heat-related hazards in general industry, construction, maritime, and agriculture through targeted enforcement, outreach, and compliance assistance.
- Applies OSHA-wide
- May involve coordinating efforts with other regulatory agencies, such as the Department of Labor Wage and Hour Division (WHD)

SIGNIFICANT CHANGES IN THE 2026 NEP

- Updated target industries using 2022–2025 BLS and OSHA data (Appendix A).
- 46 industries removed, **22 new added**, 33 retained → Total: 55 industries.
- Removed outdated background information and revised inspection goal.
- Reorganized and Added: Appendix I (Evaluation of a Heat Program) and Appendix J (Citation Guidance).
- 90-day outreach period for the 22 newly added industries.

2026 TARGETED INDUSTRIES – OVERVIEW

- 55 high-hazard industries selected based on current incidence rates, severe cases, and enforcement history.
- Three tables in Appendix A.
- New industries (†) receive 90-day outreach before programmed inspections.

TABLE 1 – NON-CONSTRUCTION INDUSTRIES (LISTGEN MAIN)

Key Sectors

- Agriculture & Food
- Manufacturing & Materials
- Transportation, Retail & Services

Full detailed list in Appendix A →

https://www.osha.gov/sites/default/files/enforcement/directives/CPL_03-00-024_0.pdf

TABLE 3 – NON-CONSTRUCTION (LISTGEN ADDITIONAL):

Key Sectors

- Agriculture & Power (Greenhouse †, Electric Power †)
- Transportation (Motor Vehicle Dealers †, Inland Water †)
- Services (Telecom †, Engineering †, Family Services †, Restaurants †)

Full list in Appendix A →

https://www.osha.gov/sites/default/files/enforcement/directives/CPL_03-00-024_0.pdf

TABLE 2 – CONSTRUCTION INDUSTRIES:

Main Sectors

- Residential & Nonresidential Building
- Utility Systems & Highways/Bridges
- Foundation, Exterior & Equipment Contractors
- Building Finishing & Specialty Trade Contractors

Construction Targeted Industries use C-Target for active sites.

Full list in Appendix A →

https://www.osha.gov/sites/default/files/enforcement/directives/CPL_03-00-024_0.pdf

2026 HEAT NEP – HIGH HAZARD TARGETED INDUSTRIES SUMMARY

Center Content:

Total: 55 Industries

- Non-Construction (ListGen + Additional)
- Construction (Active Sites)

New industries (†) have 90-day outreach.

Full list in Appendix A →

https://www.osha.gov/sites/default/files/enforcement/directives/CPL_03-00-024_0.pdf

PROGRAM PROCEDURES

- Unprogrammed inspections: Complaints, hospitalizations, observed hazards.
- **Programmed inspections:** NWS issues a heat advisory or warning.
- Compliance Officers evaluate employer heat programs using new Appendix I.
- Citations under General Duty Clause 5(a)(1) per new Appendix J.
- **Worksite Assistance** on all inspections when Heat Index $\geq 80^{\circ}\text{F}$ (heat priority day)

WORKSITE ASSISTANCE IN REVISED NEP (EXCERPTS BELOW)

- During inspections opened for other purposes - occurring on heat priority days - the Compliance Officer will assess the potential for serious heat-related illnesses and injuries where such hazards may exist in indoor or outdoor work areas **or provide worksite assistance**.
- Compliance Officers may provide **worksite assistance** where heat-related hazards are unrelated to an apparent violation.
- During an OSHA inspection, Compliance Officers may provide assistance to an employer while on-site and afterward prior to issuance of any citations. When this assistance is unrelated to evidence gathering or to feasible abatement for hazards being investigated, it is referred to as **Worksite Assistance**.

INSPECTION AND CITATION GUIDANCE

- New Appendix I: Structured evaluation of a Heat Program.
- New Appendix J: Clear citation guidance.
- Emphasis on engineering controls, administrative controls, acclimatization, training, water, shade, and rest breaks.
- 90-day outreach for new industries prioritizes compliance assistance.

HEAT ILLNESS PREVENTION STRATEGIES

- Provide cool water, shade, and frequent rest breaks.
- Implement acclimatization for new or returning workers.
- Train workers and supervisors on symptom recognition and response.
- Monitor conditions daily using the OSHA-NIOSH Heat Safety Tool App.

RESOURCES

- Revised NEP Full Directive: https://www.osha.gov/sites/default/files/enforcement/directives/CPL_03-00-024_0.pdf
- Directive Landing Page: <https://www.osha.gov/enforcement/directives/cpl-03-00-024-0>
- OSHA Heat Page: <https://www.osha.gov/heat>
- OSHA-NIOSH Heat Safety Tool App (iOS & Android)



OSHA-NIOSH Heat Safety Tool

EMPLOYER RECOMMENDATIONS

- Verify if your NAICS code is among the 55 targeted industries.
- Develop, implement, and maintain a written heat illness prevention program.
- Train all employees and supervisors regularly.
- Utilize free OSHA On-Site Consultation services for assistance.

CONCLUSION

- The 2026 revised NEP sharpens focus on the highest-risk industries while strengthening prevention tools.
- Heat-related illnesses and fatalities are preventable.
- Proactive compliance protects workers and demonstrates due diligence.
- Full Directive:
https://www.osha.gov/sites/default/files/enforcement/directives/CPL_03-00-024_0.pdf

Heat Stress Overview

Jenny Houlroyd, CIH, DrPH – Georgia Tech



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Negative Impacts of Heat Stress on Productivity



Remembering the Why

Positive Impacts of Heat Stress Prevention Strategies on Productivity

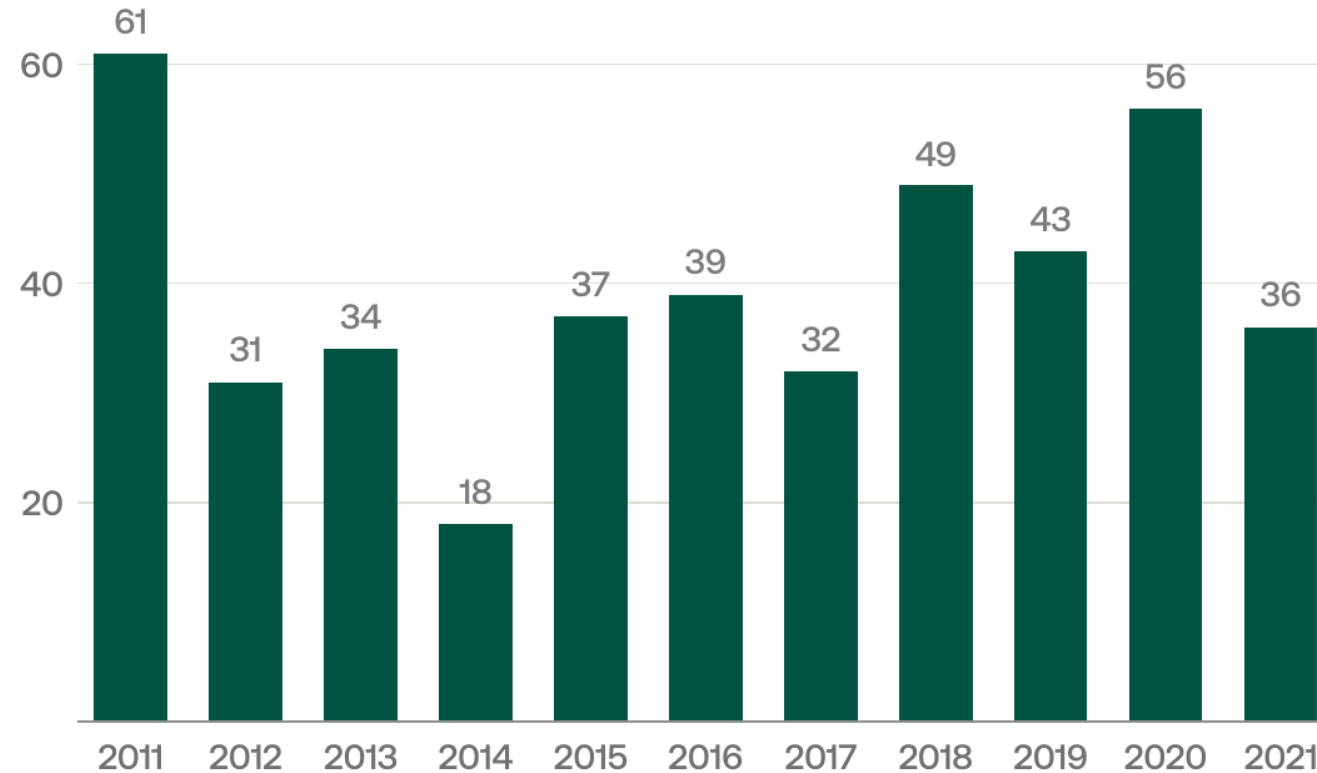
Workers picked **63% more** crop when provided a heat stress prevention strategy (use of mechanical cart) compared to the "business as usual". ^[6]

Studies estimated that when workers were performing work under the shade, there were **6- and 10-fold increases** in productivity. ^[7,8]

Morabito et al. (2020) reported that moving a working shift 2 hours earlier to avoid heat stress **reduced costs by 33%**. ^[7]

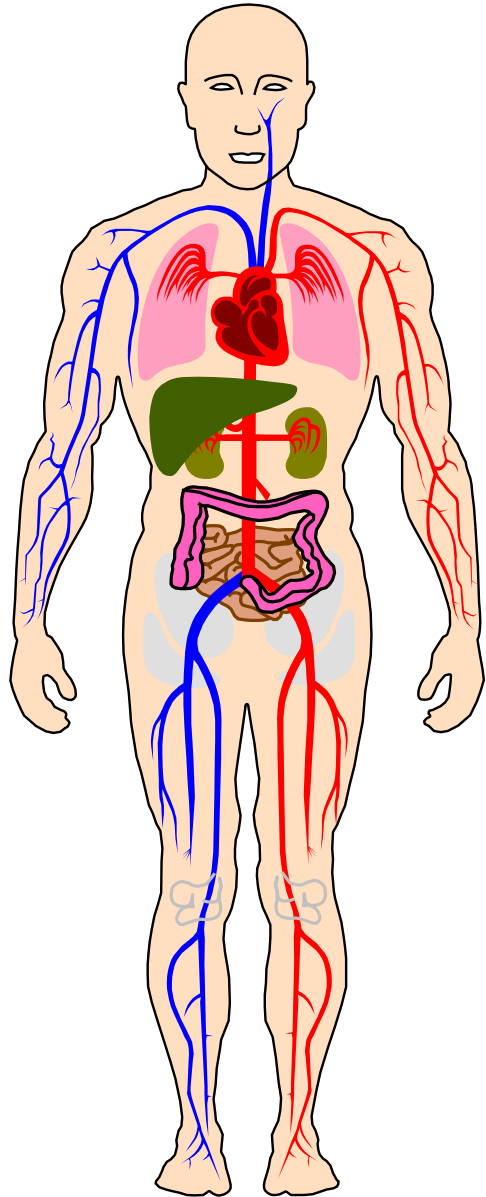
From 2011 to 2021, there was an average of 40 worker deaths due to extreme heat each year.

Work-related deaths from exposure to environmental heat, 2011–2021



Source: Bureau of Labor Statistics

How The Body Cools Down



- Blood is pumped from the core to blood vessels just under the skin
 - lose heat by convection
- Sweat more
 - lose heat through evaporation
 - BUT: the sweat mechanism can fail
- Heart pumps faster in an attempt to cool body

Factors That Affect Body's Ability to Cool

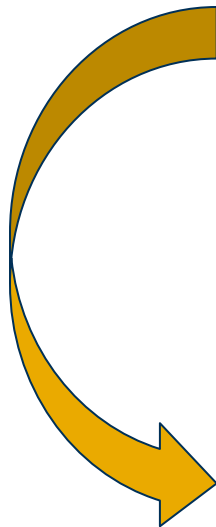
- Age
- Weight
- Physical Fitness
- Adjusting to the hot environment
- Other Health Conditions
- Use of Alcohol/Drugs/Caffeine
- Clothing/PPE
- Medications



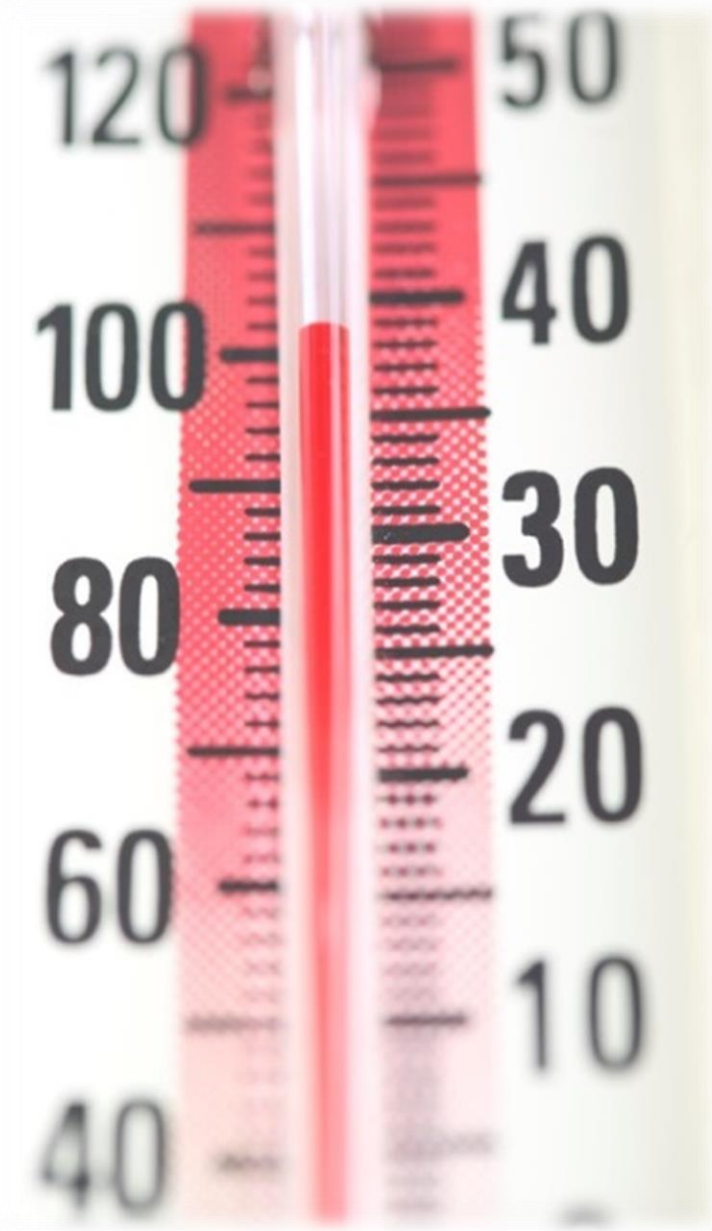
Diuretics
Blood-pressure medications
Antihistamines
Anti-cholinergics (for COPD)
Psychiatric conditions

Factors for Controlling Heat Exposure

- Water
- Rest
- Shade
- Knowledge of Symptoms
- Acclimatization
 - Tolerance to heat
 - Requires gradual increase in workload
 - New employees
 - Temporary employees
 - Absent employees returning to work
 - ALL employees during a heat wave



ANYONE gone for more than a week



Controlling and Managing Exposures to Heat

- Engineering
- Administrative/Work Practices
 - Acclimatization
 - Rest/Work Cycle-NIOSH
 - Cool water (50 to 59 degrees)
 - Heavy work during morning hours
 - Cool-down Area
 - Knowing your crew
- Personal Protective Equipment (PPE)

Symptoms of Heat Illness

Heat rash: Red blotches and extreme itchiness in areas persistently damp with sweat and a prickling sensation on the skin when sweating occurs.

Heat cramps: Painful cramps of the abdominal muscles, arms, or legs.

Heat syncope: Weakness, fatigue, or fainting after exercising in heat.

Heat exhaustion: Profuse sweating, fatigue, headache, dizziness, loss of appetite, nausea, vomiting, chills, weakness, excessive thirst, muscle aches and cramps, vision problems, flushing, agitation or irritability, and sometimes unconsciousness.

Heat stroke: High body temperature (often it's 104°F-105°F or higher) and rising, nausea and vomiting; seizures; disorientation or delirium; hot, dry skin; unconsciousness; coma; shortness of breath; decreased urination; or blood in urine or stool.



Heat Exhaustion Treatment

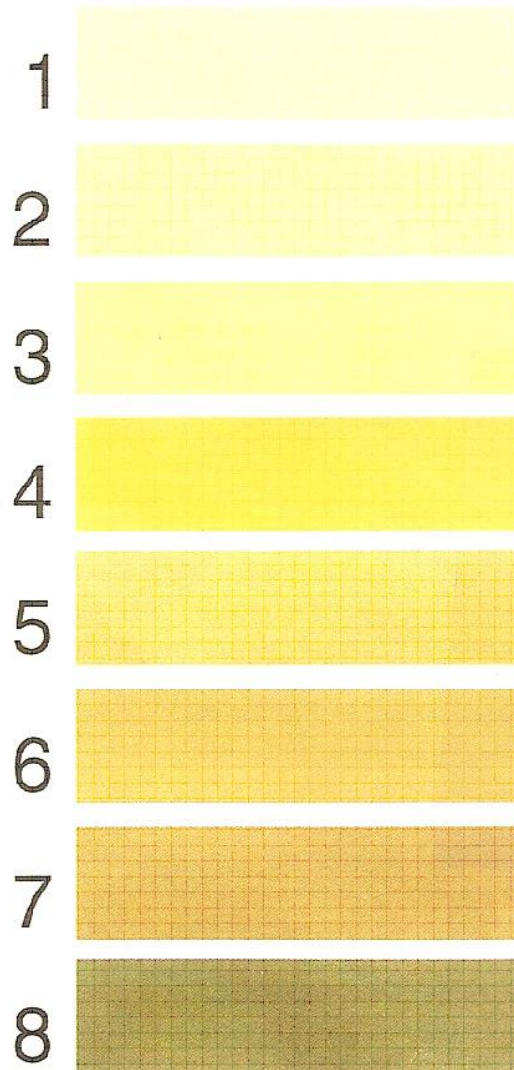
- **Rest in a cool place.** Getting into an air-conditioned building is best, but at the very least, find a shady spot or sit in front of a fan. Rest on your back with your legs elevated higher than your heart level.
- **Drink cool fluids.** Stick to water or sports drinks. Don't drink any alcoholic beverages, which can contribute to dehydration.
- **Try cooling measures.** If possible, take a cool shower, soak in a cool bath, or put towels soaked in cool water on your skin. If you're outdoors and not near shelter, soaking in a cool pond or stream can help bring your temperature down.
- **Loosen clothing.** Remove any unnecessary clothing and make sure your clothes are lightweight and nonbinding.

Heat Stroke Treatment

- **Immerse you in cold water.** A bath of cold or ice water has been proved to be the most effective way of quickly lowering your core body temperature. The quicker you can receive cold water immersion, the less risk of death and organ damage.
- **Use evaporation cooling techniques.** If cold water immersion is unavailable, health care workers may try to lower your body temperature using an evaporation method. Cool water is misted on your body while warm air is fanned over you, causing the water to evaporate and cool your skin.
- **Pack you with ice and cooling blankets.** Another method is to wrap you in a special cooling blanket and apply ice packs to your groin, neck, back and armpits to lower your temperature.
- **Give you medications to stop your shivering.** If treatments to lower your body temperature make you shiver, your doctor may give you a muscle relaxant, such as a benzodiazepine. Shivering increases your body temperature, making treatment less effective.

Hydration Chart

ARE YOU HYDRATED?
RATE YOURSELF 1-8



The Urine Color Chart shown here will assess your hydration status (level of dehydration) in extreme environments. To use this chart, match the color of your urine sample to a color on the chart. If the urine sample matches #1, #2, or #3 on the chart, you are well hydrated. If your urine color is #7 or darker, you are dehydrated and should consume fluids.

The scientific validation of this color chart may be found in the *International Journal of Sport Nutrition*, Volume 4, 1994, pages 265-279¹⁹⁴ and Volume 8, 1998, pages 345-355.¹⁹⁵ Adapted by permission from Larry Armstrong, 2000, *Performing In Extreme Environments*, (Champaign, IL: Human Kinetics).¹⁹⁶

Heat Assessment at your Facility



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Preplanning exposure assessments

- National Weather Heat Index Chart
 - Measures apparent temperature: what the temperature feels like to the human body.
 - Human body feels warmer in humid conditions



National Weather Service Heat Index Chart

Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	138
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure and/or Strenuous Activity

 Caution
 Extreme Caution
 Danger
 Extreme Danger



Preplanning exposure assessments

- OSHA NIOSH Heat Safety App
 - A visual indicator of the current heat index and associated risk levels specific to your current geographical locations
 - Precautionary recommendations specific to heat index-associated risk levels
 - An interactive, hourly forecast of heat index values, risk levels, and recommendations for planning outdoor work activities
 - Location, temperature, and humidity controls, which you can edit to calculate for different conditions
 - Signs and symptoms and first aid for heat-related illnesses



Heat Assessments-Wearable Technology

- Heat Bands
 - Measure core body temperature and heart rate
 - Notify manager when dangerous levels are exceeded for employees
 - Employees can alert manager on band if assistance is needed
 - Data logging capabilities
- Smart watches
 - I.E. apple watch
 - Can measure heart rate levels
 - No core temperature readings



Thermometers

- Wet Globe Bulb Thermometers
 - Estimates effect of; Temperature, Relative humidity wind speed, and solar radiation
 - Utilizes three different thermometers



Example of WBGT Equipment

Benefits of heat assessment technology

- Indoor work — A weather report cannot gauge conditions inside a building.
- Direct sunlight — Weather services measure temperature and Heat Index in the shade. Work in the sun may be considerably hotter. Direct sunlight can increase Heat Index by up to 13.5°F (7.5°C).
- Heat sources — Weather reports cannot account for the heat generated by fires, hot tar or other materials, ovens, or other hot equipment, or heat-absorbing surfaces such as roads and roof surfaces.
- Wind blockage — Some worksites may be hotter than surrounding areas because of structures that block air movement. Examples include trenches and bowl-shaped athletic stadiums.
- Reflective material — Water, metal, or other materials can reflect sunlight onto workers.

Heat Assessment at the facility

- First step is to determine the workload
 - Light: Sitting or standing with minimal arm and leg work.
 - Moderate: Continuous modest intensity, such as light pushing/pulling or normal walking.
 - Heavy: Intense upper body work such as carrying loads or sawing.
 - Very heavy: Intense activity at an almost maximum pace.
- Assumes 70kg (154lb) employee; variations in workforce

Work rate assessments

Effective WBGT (°C)	Unacclimatized workers	Acclimatized workers
Below 70°F (21°C)	Low risk of heat-related illness	Low risk of heat-related illness
70 to 77°F(21 to 25°C)	Strenuous work possibly unsafe	Low risk of heat-related illness
Above 77°F (25°C)	High risk of heat-related illness with strenuous work	Strenuous work possibly unsafe

Note: Effective WBGT equals measured WBGT plus any clothing adjustment factors.

Clothing Work Rates

Type of Clothing	Clothing Adjustment Factor – This amount must be added to the measured WBGT when determining heat stress.
Normal work clothes (e.g., long sleeve shirt and pants)	0
Cloth (woven) coveralls*	0
SMS polypropylene coveralls*	0.9°F (0.5°C)
Polyolefin coveralls*	1.8°F (1°C)
Double layer of clothing	5.4°F (3°C)
Limited-use vapor-barrier coveralls*	19.8°F (11°C)

* Coveralls assume that only undergarments, not a second layer of clothing, are worn underneath.

Acclimatation Considerations

Workload	Limit for Unacclimatized Workers (Action Limit)	Limit for Acclimatized Workers (Threshold Limit Value)
	Effective WBGT	
Light	28°C (82.4°F)	30°C (86°F)
Moderate	25°C (77°F)	28°C (82.4°F)
Heavy	23°C (73.4°F)	26°C (78.8°F)
Very heavy	21°C (69.8°F)	25°C (77°F)

OSHA Heat Stress Calculator

[Prevention](#) » Heat Stress Calculator

Fill in the following form to determine whether a worker's heat stress is above recommended limits. Please read OSHA's [Heat Hazard Recognition page](#) for more information about WBGT, workload, acclimatization status, and clothing.

Wet bulb globe temperature (WBGT, degrees Fahrenheit):

Workload:

Acclimatization status:

Clothing:

Body weight:

Result

Heat Stress is Above Limits

Creating a Plan of Action



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Create a Heat Illness Prevention Plan

- <https://oshainfo.gatech.edu/resources/>

Job Task/ Exposure to Heat	Company Implemented Control Measures
1.Example: Field work for botanical garden that is conducted outside in direct sunlight	Example: Use of moveable pop-up tent to provide shade Use of jugs of water and electrolytes stationed within 10 ft. of work area Use of cooling vests



Have the Resources You Need On-Hand

Check out our Shopping List



Temperature Extremes Susan Harwood Training

- The training modules were produced under a FY20241 Susan Harwood Targeted Training Grant (grant number SH-000018-SH3) from the Occupational Safety and Health Administration.
- The training modules are available as slide decks (in MS PowerPoint) with lesson plans available in MS Word.



A Shared Responsibility

- Identify Employer Responsibilities
- Determine who needs training and the types of training based on groups: guests, volunteers, employees, etc.
- Identify Water Sources: location, how water will be provided, persons responsible for checking on quantity
- Identify Shade or Cooling Locations and Sources
- Have a plan for emergencies



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Safety & Health Consultation Program

No-cost, confidential, non-enforcement assistance with OSHA compliance for small-medium sized employers. Virtual and on-site services available.

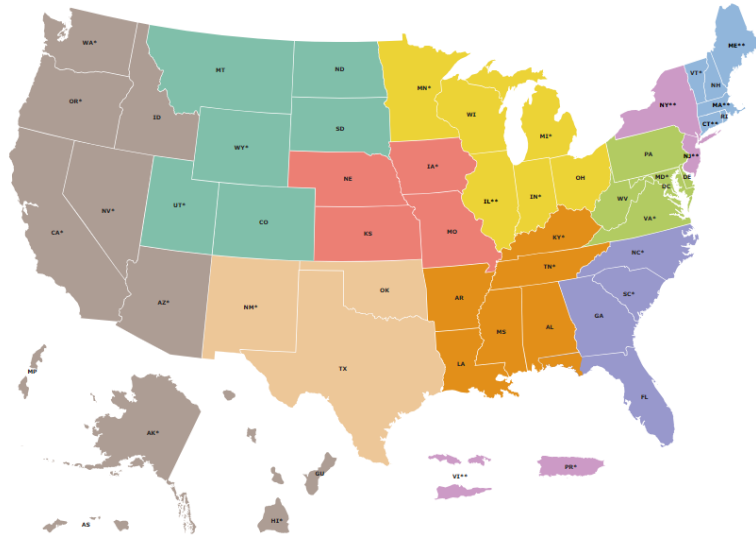
OSHA's Consultation Directory

OSHA Consultation Programs

Select the map below to see the Consultation Program in your state.

Book a no-cost consultation. Get help for your business

List View



* This is one of twenty-two State Plans (21 states and Puerto Rico) that cover both private and state and local government workplaces.

** This is one of seven State Plans (Connecticut, Illinois, Maine, Massachusetts, New Jersey, New York, and the Virgin Islands) that cover state and local government workers only.

To submit changes to the information listed below please contact [Christian Wojnar](#).

Scan to find your state's consultation program contact information



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Quarterly newsletter for
Safety Professionals

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Contact Me!

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Q&A

Please use the Q&A feature to submit your questions.

We will not be discussing specifics related to the ongoing rulemaking process.

For rulemaking updates, we encourage you to visit [OSHA.gov](https://www.osha.gov), and to subscribe to your QuickTakes for official up to date information.



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