Heat Exposures in the Workplace

Heat exposure in the workplace is a concern for many occupations, including both outdoor and indoor workers.

Outdoor workers at risk include:

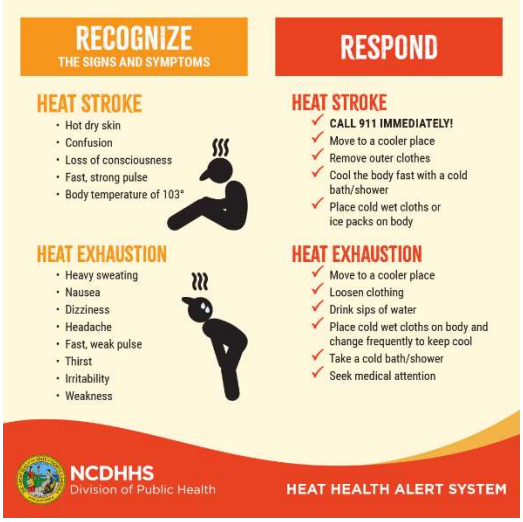
- Construction
- Farmworkers
- Landscaping
- Mail and package delivery
- Oil and gas well operations

Indoor workers at risk include:

- Bakeries, kitchens, laundries
- Electrical utilities (particularly boiler rooms)
- Fire Service
- Iron and steel mills and foundries
- Manufacturing with hot local heat sources
- Warehousing

Excess heat exposure in the workplace can result In:

- Heat rash
- Heat cramps
- Heat fainting
- Heat exhaustion
- Heat stroke



Using the heat index to measure heat exposure

Heat index is often used to measure heat exposure. Heat index is a measure of how hot it "actually feels". The heat index increases with temperature and humidity. This means that it can feel hotter when it is also humid.

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	136
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						
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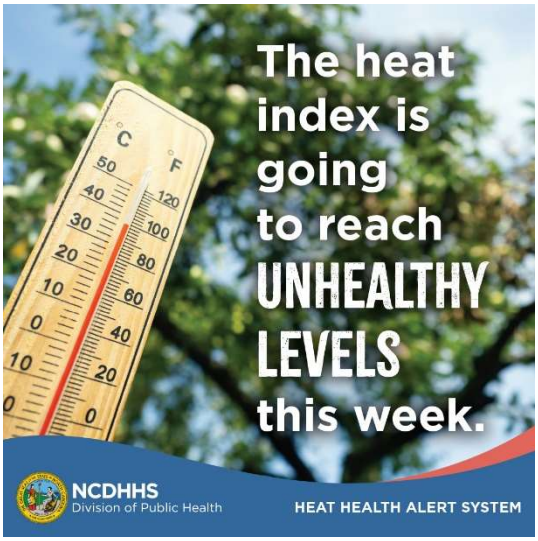
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

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

Caution Extreme Caution Danger Extreme Danger

Heat index alone is not enough to measure the risk of heat exposure to workers. We must also look at other factors like level of exertion and duration of activity, hydration, sources of direct heat, health condition, physical fitness, acclimatization.



Protecting workers from heat related illness

Heat-related illnesses can be prevented. Prevention requires employers and workers to recognize heat hazards. Employers may need to:

- Train supervisors and workers to control and recognize heat hazards.
- Implement engineering and administrative controls to reduce heat stress.
- Provide sufficient rest, shade, and fluids.
- Determine, for each worker throughout each workday, whether total heat stress is too high, both from the conditions of that day and potential carryover effects. A "carryover effect" means that the worker's body temperature could continue to heat up even after being removed from a hot environment.
- Take extra precautions to protect new workers.

More information about these preventive measures is available by exploring the following links on OSHA's website:
https://www.osha.gov/heat-exposure/prevention
https://www.osha.gov/heat-exposure

Steps to take if a worker experiences a heat related illness:

- Call 911 for immediate medical care.
- Never leave a worker with heat-related illness alone. The illness can rapidly become worse. Stay with the worker.
- Stop working, get cool, get shade, and drink fluids.
- Symptoms can occur in any order. You don't need to have all of the symptoms in a category to have heat illness.

Illnesses caused by heat	Signs and Symptoms	What to do
Heat Rash	• Red cluster of pimples or small blisters	• Move to cooler, less humid areas • Keep rash area dry; do not use ointments or creams
Heat Cramps	• Muscle cramps, pain, or spasms in abdomen, arms, or legs	• Drink fluids • Get medical help
Heat Fainting	• Fainting, dizziness • Light-headedness after standing or suddenly rising from a sitting/lying	• Sit or lie down in a cool place • Slowly drink water or clear juice
Heat Exhaustion	• Headache, nausea, dizziness, weakness, thirst, heavy sweating, irritability	• Get medical help • Remove from hot area and give frequent sips of liquids • Cool worker with cold compresses, ice bath, fans
Heat Stroke	• Confusion, altered mental state • slurred speech, loss of consciousness • hot, dry skin • seizures	• MEDICAL EMERGENCY - get medical help immediately • Move to cool place • Remove clothing and immerse in tub of ice water (or place in tarp with ice) or apply cold wet towers to entire body

Table source: "NIOSH First Aid for Heat Illness Fact Sheet" (https://www.cdc.gov/niosh/mining/UserFiles/works/pdfs/2024-100.pdf)

Proposed Occupational Safety and Health Administration (OSHA) rules for employers

OSHA has proposed a rule currently titled "Heat Injury and Illness Prevention in Outdoor and Indoor Work Settings". In summary, the proposed rule would require employers to develop an injury and illness prevention plan to control heat hazards in workplaces affected by excessive heat. Among other things, the plan would require employers to evaluate heat risks and — when heat risks increase — implement requirements for drinking water, rest breaks and control of indoor heat. It would also require a plan to protect new or returning workers unaccustomed to working in high heat conditions. Employers would also be required to provide training, have procedures to respond if a worker is experiencing signs and symptoms of a heat-related illness, and take immediate action to help a worker experiencing signs and symptoms of a heat emergency.

This OSHA proposed rule has not yet been finalized.

Before finalization, OSHA has to collect public comments, respond to all comments, and then develop a final rule.