



# Prevent Heat-related Illness: Action Steps for Employers with Self-monitoring Instructions

## Overview

Employees who work outdoors or in hot environments, inside or out, are likely to have more frequent and intense exposure to heat and its effects than the general population.

There are renewed calls for the federal Occupational Health and Safety Administration (OSHA) to adopt a national standard on heat exposure.

According to the Bureau of Labor Statistics (BLS), at least 815 employees were killed and another 70,000 were injured due to heat stress between 1992 and 2017.<sup>1</sup> Heat stress occurs when the body loses ability to control internal temperature, leading to heat exhaustion and potentially fatal heat stroke.

**Heat-related illness is always preventable** with increased awareness of the warning signs and simple precautionary and heat-stress alleviating measures.

## Warning signs of heat exhaustion

- Fatigue
- Heavy sweating
- Headache
- Cramps
- Dizziness
- High pulse rate
- Nausea/vomiting

## Life-threatening signs – call 9-1-1

- High body temperature
- Red, hot, dry skin
- Heavy sweating
- Confusion, irrational behavior
- Convulsions
- Fainting

## Action steps for employers

1. **Download the OSHA-NIOSH Heat Safety Tool to your smartphone and encourage your employees to do the same.** This phone app allows employees and supervisors to calculate the heat index at their work site to understand the risk level of heat exposure. This tool was created by the Department of Labor, OSHA, the Centers for Disease Control and Prevention (CDC), and the National Institute for Occupational Safety and Health (NIOSH). [https://www.osha.gov/SLTC/heatillness/heat\\_index/heat\\_app.html](https://www.osha.gov/SLTC/heatillness/heat_index/heat_app.html)
2. **In hot environments, provide water, rest, and shade at regular intervals to keep employees safe in the heat.** <https://www.osha.gov/heat/>
3. **Distribute heat safety information to employees and post workplace reminders that describe warning signs of heat-related illness, first aid and/or emergency measures to take in response.** Make employees aware that ambient temperature (in a room or outdoors) is only one contributor to heat illness. Individuals may respond differently to heat, based on metabolism, evaporative cooling rate, use of medications or presence of certain medical conditions, and degree of acclimatization to hot temperatures.
4. **Post and/or advise employees and supervisors to carry a copy of the Self-Monitoring Instructions on the back of this page.**

<sup>1</sup> “What You Need to Know to Beat the Heat This Summer,” Workerscompensation.com, June 28, 2019. Accessed August 14, 2019. [https://www.workerscompensation.com/news\\_read.php?id=32982](https://www.workerscompensation.com/news_read.php?id=32982)



# Employee Self-monitoring Instructions for Work Safety in the Heat

Heat-related illness is preventable if you know the warning signs and take precautions.

## Warning signs of heat exhaustion

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- Heavy sweating
- Headache
- Cramps
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## Life-threatening signs – call 9-1-1 NOW!

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## Medications

Certain medications may increase risk of heat-related illness. Talk to your doctor about this possibility if you take any of the following medications: beta blockers and other blood pressure medications, diuretics, antihistamines, antidepressants/psychiatric medications, bronchodilators, sleep aids, or medications to treat attention deficit hyperactivity disorder (ADHD).

## Medical conditions

Speak with your doctor if you have any of these conditions. You may have a higher risk of heat-related illness.

- Kidney disease
- High blood pressure
- Obesity
- Thyroid disorder
- History of heat illness
- Heart disease
- Diabetes
- Alcoholism
- Scleroderma
- Other skin disease
- Pregnancy

## Self-monitoring and Self-care

1. Download the OSHA-NIOSH Heat Safety Tool to your smartphone to calculate the heat index at the worksite. [https://www.osha.gov/SLTC/heatillness/heat\\_index/heat\\_app.html](https://www.osha.gov/SLTC/heatillness/heat_index/heat_app.html)
2. Drink plenty of cool, fresh water – at least one 8-ounce cup (three cones) every 15 minutes throughout your work shift. *Do not wait until you are thirsty.*
3. Take rest breaks in shaded areas.
4. Monitor your urine color. If it is anything but clear to pale yellow, you need to increase hydration. Choose water over soft drinks, and avoid coffee, energy drinks, and alcohol.
5. Monitor your pulse rate by placing your thumb on the side of your wrist and counting the number of beats for 30 seconds. You can also use a pulse app on a smartphone. If your pulse rate is faster than 55 beats in 30 seconds (110 beats per minute), shorten the next work period by one third and maintain the same rest period.
6. Monitor your body’s water loss. Weigh yourself at the beginning and end of each work day. If weight loss is more than 1.5 percent (as shown in the table), increase fluid intake.

Start of Shift Weight	End of Shift Weight	1.5% Total Body Weight Loss =
150	148.0	-2 pounds
175	173.5	-2.5 pounds
200	197.0	-3 pounds
225	221.5	-3.5 pounds
250	246.0	-4 pounds
275	270.8	-4.2 pounds