



Safety Instruction

Heat Illness & Medical Response

What is Heat Illness?

- Several heat-related illnesses may occur when the body is unable to cool itself by sweating.
- Heat illnesses may include heat rash, heat cramps, heat syncope, heat exhaustion, and in severe instances heat stroke (**may be life threatening**).
- When temperatures exceed an ambient heat index of 90°F, emergency medical response must be readily available.



Preventing Heat Illness

- Know the symptoms outlined below.
- Monitor yourself. Use the buddy system.
- Block out direct sun or other heat sources.
- Wear lightweight, light colored, loose fitting clothes.
- Avoid alcohol, caffeinated drinks, or heavy meals.
- Take appropriate breaks under shade according to the heat index and activity levels.
- Drink plenty of fluids, about every 15 minutes, and before you are thirsty.
- Have on-hand 1 quart water/person/hour worked.

How to Treat Heat-Related Illness

- Take appropriate action according to the illness severity.
- Call 911 when in doubt and provide first aid assistance.
- Assist until emergency medical personnel arrive.

While waiting for medical personnel ...

- Move person to cool shaded area.
- Loosen or remove heavy clothing.
- Provide cool drinking water, if able to drink.
- Fan and mist person with water.

If not in proximity to emergency medical services, employees are to:

- Have two-way radio or other equivalent means of communication.
- Have knowledge of where to meet emergency services and the ability to get there.

| | | Relative Humidity (%) | | | | | | | | | | | | | |
|-----------------|-----|-----------------------|---|----|----|----|----|----|----|----|----|----|----|-----|--|
| | | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | |
| Air Temperature | °F | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | |
| | 110 | 136 | Heat Index (Apparent Temperature) | | | | | | | | | | | | |
| | 108 | 130 | | | | | | | | | | | | | |
| | 106 | 124 | | | | | | | | | | | | | |
| | 104 | 119 | | | | | | | | | | | | | |
| | 102 | 114 | | | | | | | | | | | | | |
| | 100 | 109 | | | | | | | | | | | | | |
| | 98 | 105 | | | | | | | | | | | | | |
| | 96 | 101 | | | | | | | | | | | | | |
| | 94 | 97 | | | | | | | | | | | | | |
| | 92 | 94 | | | | | | | | | | | | | |
| | 90 | 91 | | | | | | | | | | | | | |
| | 88 | 88 | | | | | | | | | | | | | |
| | 86 | 85 | | | | | | | | | | | | | |
| | 84 | 83 | | | | | | | | | | | | | |
| | 82 | 81 | | | | | | | | | | | | | |
| 80 | 80 | | | | | | | | | | | | | | |

Extreme Danger: Heat stroke highly likely

Danger: Muscle cramps, and/or heat exhaustion likely

Extreme caution: Muscle cramps and/or heat exhaustion possible

Caution: Fatigue possible



Contact EHS:

safety@oregonstate.edu
ehs.oregonstate.edu/
541 • 737 • 2273

- Have awareness of those in their group who are trained in first aid.
- For Forestry activities, all personnel must be training in first aid and CPR. For Construction activities, first aid supplied must be available and at least one first aid/CPR trained if the site is remote.

Types of Heat Illness

| | Symptoms | First Aid / Treatment |
|-----------------|--|---|
| Heat rash | <ul style="list-style-type: none"> • Clusters of red bumps on skin (usually on neck, upper arms, folds of skin) | <ul style="list-style-type: none"> • Keep affected area dry • Apply powder if necessary to absorb moisture and avoid using creams • Try to work in a cooler, less humid environment when possible |
| Heat cramps | <ul style="list-style-type: none"> • Painful muscle spasms (usually in abdomen, legs, arms) | <ul style="list-style-type: none"> • Rest in cool, shady area • Drink water or other cool beverages • Wait a few hours before returning to strenuous activity • Seek medical attention if cramps worsen or do not go away |
| Heat syncope | <ul style="list-style-type: none"> • Dizziness • Fainting (short duration) • Light-headedness during prolonged standing or sudden standing from a sitting or lying position | <ul style="list-style-type: none"> • Rest in a cool, shady area • Drink water or other cool beverages • Wait a few hours before returning to strenuous activity |
| Heat exhaustion | <ul style="list-style-type: none"> • Headache • Dizziness • Cool, moist skin • Heavy sweating • Nausea or vomiting • Light-headedness • Weakness • Rapid heart beat | <ul style="list-style-type: none"> • Rest in cool, shady area • Drink water or other cool beverages • Use methods of cooling to reduce body temperature such as fans, cold compresses, and wetting clothes • Take to clinic or emergency room for medical evaluation or treatment if symptoms do not improve within 60 minutes • Stay with the worker while waiting for emergency medical services or during recovery period |
| Heat stroke | <ul style="list-style-type: none"> • Confusion • Disorientation • Staggering • Irrational behavior • Fainting • Slurred speech • Very high body temperature • Red, hot, dry skin • Seizures • Rapid heart beat | <ul style="list-style-type: none"> • This is a medical emergency. Contact emergency medical services by dialing 9-1-1 • If possible, move the worker to a shady, cool area • Use methods of cooling to reduce body temperature such as fans, cold compresses, and wetting clothes • Stay with the worker while waiting for emergency medical services |

More Information

- [OSHA-NIOSH Heat Safety Phone App](#)
- [Oregon School Activities Association \(Current and Forecasted Heat Indices\)](#)
- Heat index calculator: <https://www.wpc.ncep.noaa.gov/html/heatindex.shtml>
- [NWS/NOAA Heat Index Chart](#)
- [Oregon OSHA Heat Resources](#)
- [Oregon OSHA Mandatory Information for Heat Illness Prevention](#)
- [Oregon OSHA Heat Illness Prevention Training](#)