



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												
	108	130	137											
	106	124	130	137										
	104	119	124	131	137									
	102	114	119	124	130	137								
	100	109	114	118	124	129	136							
	98	105	109	113	117	123	128	134						
	96	101	104	108	112	116	121	126	132					
	94	97	100	103	106	110	114	119	124	129	135			
	92	94	96	99	101	105	108	112	116	121	126	131		
	90	91	93	95	97	100	103	106	109	113	117	122	127	132
	88	88	89	91	93	95	98	100	103	106	110	113	117	121
	86	85	87	88	89	91	93	95	97	100	102	105	108	112
	84	83	84	85	86	88	89	90	92	94	96	98	100	103
	82	81	82	83	84	84	85	86	88	89	90	91	93	95
80	80	80	81	81	82	82	83	84	84	85	86	86	87	

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](#)