

Protecting Workers from Heat

Having a health emergency?

Call 911 and contact your doctor.

National Weather Service
<http://www.weather.gov/view/national.php?thumbs=on>

American Red Cross
<http://oregonredcross.org/index.asp?IDCapitulo=663B0ID44V>

Environmental Protection Agency
<http://www.epa.gov/>



OHA Facebook

www.facebook.com/OregonHealthAuthority



OHA Twitter

www.Twitter.com/OHAOregon

Workers may be at risk for heat stress if they are exposed to hot weather or work in hot environments. When the human body is unable to maintain a normal temperature, heat-related illness can occur and may result in death.

Factors that may cause heat-related illness:

- High temperature/humidity
- Dehydration
- Direct sun exposure (with no shade) or extreme heat
- Limited air movement (no breeze or wind)
- Physical exertion
- Use of bulky protective clothing and equipment (e.g. Tyvek, a respirator, gloves, etc.)
- Poor physical condition or chronic health issues
- Some medications
- Pregnancy
- Lack of acclimatization to hot workplaces
- Previous heat-related illness

Mild types of heat-related illnesses

Condition	Symptoms	First aid
Sunburn	Skin redness and pain, possible swelling, blisters, fever, and headache	<ul style="list-style-type: none"> • Use ointment for mild cases • Don't break blisters • If blisters break, apply dry sterile dressing • Use cool compresses
Heat rash Caused by excessive sweating during hot, humid weather	Heat rash looks like red pimples or small blisters. It commonly occurs on the neck, upper chest, in the groin, under the breasts, and in elbow creases.	<ul style="list-style-type: none"> • Work in a cooler, less humid place if possible • Keep rash area dry • Use dusting powder to increase comfort
Heat cramps These usually affect workers who sweat a lot during strenuous activity. The sweating depletes the body's salt and moisture levels.	Muscle pain or spasms, usually in the abdomen, arms, or legs	<ul style="list-style-type: none"> • Stop all activity and sit in a cool place • Drink juice or a sports drink every 20 minutes • Don't do strenuous work for a few hours after cramps subside • Seek medical attention if: <ul style="list-style-type: none"> ○ The worker has heart problems ○ The worker is on a low-sodium diet ○ Cramps do not subside within one hour

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More severe types of heat-related illnesses		
Condition	Symptoms	First aid
<p>Heat syncope</p> <p>This is a fainting episode or dizziness that usually occurs with prolonged standing or sudden rising from a sitting or lying position.</p>	<ul style="list-style-type: none"> • Light-headedness • Dizziness • Fainting 	<ul style="list-style-type: none"> • Sit or lie down in a cool place • Slowly drink water, clear juice, or a sports beverage
<p>Heat exhaustion</p> <p>This is a very serious heat-related health problem. It must be treated immediately or it could lead to heat stroke.</p>	<ul style="list-style-type: none"> • Heavy sweating • Extreme weakness or fatigue • Dizziness, confusion • Nausea • Clammy, moist skin • Pale or flushed complexion • Muscle cramps • Slightly elevated body temperature • Fast and shallow breathing 	<ul style="list-style-type: none"> • Take the worker to a clinic or ER for medical evaluation and treatment. • Have worker rest in a cool, shaded or air-conditioned area. • Have worker drink plenty of water or other cool, nonalcoholic beverage. • Have worker take a cool shower, bath, or sponge bath.
<p>Heat stroke</p> <p>This is the most serious heat-related health problem. Heat stroke occurs when the body's temperature rises to critical levels (greater than 104 F). This is a medical emergency that may result in death!</p>	<ul style="list-style-type: none"> • Hot, dry skin or profuse sweating • Hallucinations • Chills • Throbbing headache • High body temperature • Confusion/dizziness • Slurred speech 	<ul style="list-style-type: none"> • Call 911 and stay with the worker until medical help arrives. • Move sick worker to cool or shaded area. • Cool the worker using methods such as: <ul style="list-style-type: none"> ○ Soaking clothes with water ○ Spraying, sponging, or showering with water ○ Fanning the body

Sources: U.S. Department of Labor, Occupational Safety and Health Administration; National Institute for Occupational Safety and Health; National Oceanic and Atmospheric Administration

Here are some links to more information on protecting workers from heat:

Oregon Occupational Safety and Health Division (Oregon OSHA) – [Rules, publications, safety tips, and videos and DVDs.](#)

Oregon OSHA – [Stay safe working in hot weather](#), [Safety tips for young workers.](#)

U.S. Centers for Disease Control and Prevention (CDC) – [Workplace safety and health.](#)

Center for Research on Occupational and Environmental Toxicology (CROET) – [Heat stress and sun exposure.](#)

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Local Health Departments

Baker	541-523-8211
Benton	541-766-6835
Clackamas.....	503-655-8430
Clatsop.....	503-325-8500
Columbia	503-397-4651
Coos.....	541-756-2020
.....	ext. 510
Crook	541-447-5165
Curry.....	541-247-3300
Deschutes.....	541-322-7400
Douglas.....	800-234-0985
Gilliam	541-384-2061
Grant	541-575-0429
Harney	541-573-2271
Hood River.....	541-386-1115
Jackson	541-774-8209
Jefferson.....	541-475-4456
Josephine.....	541-474-5325
Klamath	541-882-8846
Lake	541-947-6045
Lane	541-682-4041
Lincoln	541-265-4112
Linn	541-967-3888
Malheur	541-889-7279
Marion.....	503-588-5357
Morrow	541-676-5421
Multnomah.....	503-988-3674
Polk.....	503-623-8175
Sherman	541-506-2600
Tillamook.....	503-842-3900
Umatilla	541-278-5432
Union	541-962-8801
Wallowa.....	541-426-4848
Wasco.....	541-506-2600
Washington	503-846-8881
Wheeler.....	541-763-2725
Yamhill.....	503-434-7525

V.1.0 revised 08/2011

Recommendations for employers

To protect workers from heat stress:

- Schedule maintenance and repair jobs in hot areas for cooler months.
- Schedule hot jobs for the cooler part of the day.
- Acclimate workers by exposing them for progressively longer periods to hot work environments. Re-acclimate workers who have been away for more than a week.
- Reduce the physical demands placed on workers.
- Use relief workers or assign extra workers for physically demanding jobs.
- Provide cool water or liquids to workers.
 - Avoid drinks with caffeine, alcohol, or large amounts of sugar.
 - Provide one cup of cool water every 20 minutes.
- Provide frequent rest periods with water breaks.
- Provide cool areas for use during break periods. Note that air conditioning in break areas will not result in loss of heat tolerance and is recommended when possible.
- Monitor workers who are at risk of heat stress.
- Provide heat stress training to workers and supervisors that includes information about:
 - Worker risk;
 - Prevention;
 - Symptoms;
 - The importance of monitoring yourself and coworkers for symptoms;
 - Treatment;
 - Personal protective equipment.

Recommendations for employees

Avoid exposure to extreme heat, direct sun and high humidity when possible. When you cannot avoid them, take the following steps:

- Wear light-colored, loose-fitting, breathable clothing such as cotton.
 - Avoid non-breathing synthetic clothing.
- Gradually build up to heavy work.
- Schedule heavy work during the coolest parts of day.
 - If not possible, you may need more break time.
- When it is very hot and humid, take more breaks.
 - Take breaks in the shade or a cool area when possible.
- Drink plenty of cool water (one small cup every 15-20 minutes).
- Avoid drinks with caffeine, alcohol, and large amounts of sugar.
- Be aware that protective clothing or personal protective equipment may increase the risk of heat stress. This is especially if wearing semi-permeable (penetrable) or impermeable clothing (such as Tyvek or rubber), when the outside temperature exceeds 70 F, or when doing strenuous work.
- Monitor your physical condition and that of your coworkers.