

437-002-XXXX Heat Illness Prevention

(1) Scope and Application

(a) This standard applies to all places of employment where the climate is not adequately controlled with a cooling system. This standard applies to the control of heat-related injuries and illnesses. When any other applicable standard addresses other hazards that may be present, you must comply with the provisions of that standard and this standard. Where the requirements of one standard are more restrictive than the other, follow the more stringent requirements.

EXCEPTION:

- This standard does not apply when an employee is not required to perform work activities outdoors where the ambient air temperature equals or exceeds 80 degrees Fahrenheit and the relative humidity equals or exceeds 40% for more than 15 minutes in any sixty-minute period. This exception may be applied once every hour during the work shift.
- Exposure to heat that is only generated from the work process is not subject to this standard. When the only exposure to heat is from the work process, follow the requirements of 437-002-0144(2).

(2) Definitions

Acclimatization - temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.

Drinking water – Potable water that is suitable to drink and that is cool (66°F -77°F) or cold (35°F - 65°F). Drinking water packaged as a consumer product and electrolyte-replenishing beverages that do not contain caffeine (for example, sports drinks) are acceptable substitutes, but should not completely replace the required water.

Heat Illnesses - medical conditions resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.

Relative humidity – the amount of water vapor present in air expressed as a percentage of the amount needed for saturation at the same temperature

Shade - blockage of direct sunlight. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with a working air conditioning. Shade may be provided by any natural or artificial means that does not expose employees to unsafe or unhealthy conditions and that does not deter or discourage access or use.

(3) Access to shade

- (a) Establish and maintain one or more shade areas when:
 - (A) The outdoor temperature in the work area exceeds 80 degrees Fahrenheit; or
 - (B) When requested by an employee.
- (b) A shade area must meet the following:
 - (A) The shade area must either be open to the air or provide mechanical ventilation for cooling.
 - (B) The amount of shade present must be at least enough to accommodate the number of employees on recovery or rest periods, so that they can sit in a normal posture fully in the shade.
 - (C) The shade must be located as close as practical to the areas where employees are working.
 - (D) Shade present during meal periods must be large enough to accommodate the number of employees on the meal period that remain onsite.
- (c) If trees or other vegetation are used to provide shade (such as in orchards, or forests), ensure the thickness and shape of the shaded area provides sufficient shadow to protect employees.
- (d) Where providing access to shade is not safe or feasible (e.g., during high winds), employers must identify and implement steps, in writing, that will be taken to provide alternative cooling measures with equivalent protection as shade.

Exceptions to paragraphs (3)(a) and (3)(b) :

(1) When a shade structure or other shade present on a continuous basis is not feasible at the worksite, develop and implement alternative procedures for providing access to shade that meets the requirements of (3)(b).

(4) High Heat Procedures.

- (a) Implement high heat procedures when the ambient outdoor temperature equals or exceeds 90 degrees Fahrenheit. These procedures must include the following to the extent practical:
 - (A) Employers must ensure that effective communication, in a language readily understood, by voice, observation, or electronic means is maintained so that employees at the work site can contact a supervisor when necessary. An electronic device, such as a cell phone, may be used for this purpose only if reception in the area is reliable.
 - (B) Employers must ensure that employees are observed for alertness and signs and symptoms of heat illness and monitored to determine whether medical attention is necessary by implementing one or more of the following:

- (i) Regular communication with employees working alone, such as by radio, cellular phone, or other alternative means, or
 - (ii) Create a mandatory buddy system, or
 - (iii) Implement other equally effective means of observation or communication.
- (b) Employers must designate and equip one or more employees on each worksite as authorized to call for emergency medical services, and must allow other employees to call for emergency services when designated employees are not immediately available (such a practice supplements existing requirements to ensure that emergency medical care is immediately available in all workplaces).
- (c) Employers must ensure that each employee takes a minimum ten-minute preventative cool-down rest period in the shade at least every two hours, regardless of the overall length of the shift.

Note: The preventative cool-down rest period required by this paragraph may be provided concurrently with any other meal or rest period required by policy, rule or law if the timing of the preventative cool-down rest period coincides with the otherwise required meal or rest period. Except when such a rest period coincides with the existing unpaid meal break, the preventative cool-down rest period is a work assignment and must be compensated accordingly.

(5) Drinking water

- (a) Ensure there is an adequate supply of drinking water that is either cool or cold.
- (b) Ensure enough drinking water is adequate to provide at least 32 ounces to each employee every hour on every shift.
- (c) Encourage employees to drink plenty of water.

(6) Emergency Response Procedures

- (a) Develop and implement an effective emergency response plan per OAR 437-002-0042. Agricultural employers, follow OAR 437-004-0450. In addition to the requirements of Emergency Response Plan, the procedures must include and address the following:
 - (A) Responding to signs and symptoms of possible heat illness, including but not limited to first aid measures and how emergency medical services will be provided.
 - (i) If a supervisor observes, or any employee reports, any signs or symptoms of heat illness in any employee, the supervisor must take immediate action appropriate to the severity of the illness.
 - (ii) If a supervisor observes signs or an employee reports symptoms of heat illness, the employee must be relieved from duty and provided with a sufficient means to reduce body temperature. Examples include, but not limited to: cooling blankets, cooling vests, and fans.

- (iii) If the signs or symptoms are indicators of severe heat illness (such as, but not limited to, decreased level of consciousness, staggering, vomiting, disorientation, irrational behavior or convulsions), immediately implement the emergency response procedures.
 - (iv) An employee exhibiting signs or symptoms of heat illness must be monitored and must not be left alone or sent home without being offered onsite first aid and/or being provided with emergency medical services in accordance with the employer's procedures.
- (b) Contacting emergency medical services and, if necessary and instructed to do so by the medical professionals, transporting employees to a place where they can be reached by an emergency medical provider.
- (c) Ensuring that, in the event of an emergency, clear and precise directions to the work site is provided for first responders to quickly navigate to the location of the worker.

(7) Acclimatization Plan.

- (a) Develop and implement effective acclimatization procedures. These procedures must include:
 - (A) A schedule for gradually increasing exposure time over a period of 7 to 14 days.
- (b) For new workers, the work schedule must be no more than 20% of the usual duration of work in the hot environment on day 1 and a no more than 20% increase on each additional day.
- (c) For workers who have had previous experience with the job, the acclimatization regimen must be no more than 50% of the usual duration of work in the hot environment on day one, 60% on day two, 80% on day three, and 100% on day four.

(8) Heat Illness Prevention Plan.

- (a) The employer must develop, implement, and maintain, an effective heat illness prevention plan, in writing. The plan must be made available at the worksite to employees and to Oregon OSHA upon request. The plan must, at a minimum, contain:
 - A. Training employees about the hazards of heat, steps to prevent heat-related illnesses, how to recognize the symptoms of dehydration, and how to respond to suspected heat-related illnesses in others.
 - B. Providing adequate amounts of cool, potable water in work areas.
 - C. Providing employees frequent opportunities and encouragement to stay hydrated by drinking water.
 - D. Providing a cool, climate-controlled area where heat-affected employees may take their breaks and for recovery when signs and symptoms of heat-related illnesses are recognized.

- E. Providing adequate space in shaded areas for affected employees at hot worksites where they may take their breaks and cool off.
- F. Implementing a work/rest regimen if necessary to keep employees safe.
- G. Implementing heat acclimatization procedures for new employees or employees returning to work from absences of three or more days.
- H. Acclimatization and training about health conditions aggravated by heat

(9) Training

- (a) Supervisor and employee training. Train all employees, including new employees, supervisory, and non-supervisory employees in the following topics, in a language readily understood, before employees begin work that should reasonably be anticipated to expose employees to the risk of heat illness:
 - (A) The environmental and personal risk factors for heat illness, as well as the added burden of heat load on the body caused by exertion, clothing, and personal protective equipment.
 - (B) The employer's procedures for complying with the requirements of this standard, including, but not limited to, the employer's responsibility to provide water, provide heat index information (including the risks to experiencing a heat-related illness), shade, cool-down rests, and access to first aid as well as the employees' right to exercise their rights under this standard without fear of retaliation.
 - (C) The importance of frequent consumption of small quantities of water, up to 32 ounces per hour, when the work environment is hot and employees are likely to be sweating more than usual in the performance of their duties.
 - (D) The concept, importance, and methods of the acclimatization plan pursuant to the employer's procedures under paragraph (7)
 - (E) The different types of heat illness, the common signs and symptoms of heat illness, and appropriate first aid and/or emergency responses to the different types of heat illness, and in addition, that heat illness may progress quickly from mild symptoms and signs to serious and life-threatening illness.
 - (F) The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers.
 - (G) The employer's procedures for responding to signs or symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary.
 - (H) The employer's procedures for contacting emergency medical services, and if necessary and instructed to do so by the medical professionals, for transporting employees to a point where they can be reached by an emergency medical service provider.

- (I) The employer's procedures for ensuring that, in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders. These procedures must include designating a person to be available to ensure that emergency procedures are invoked and followed when appropriate.
- (J) The effects of nonoccupational factors (drugs, alcohol, obesity, etc.) on tolerance to occupational heat stress.
- (K) The added heat load caused by exertion, clothing, and personal protective equipment.
- (L) The role, expectations, and responsibilities of the monitor.
- (M) How to monitor weather reports and how to respond to hot weather advisories.
- (N) Ensure all employees are trained annually.