

MD Draft Heat Stress Standard

COMAR 09.12.32: Heat Stress Standards

Authority: Labor and Employment Article, §2-106(b)(5) and 5-1201(b), Annotated Code of Maryland

.01 Scope

- A. This chapter applies to an employer with employees whose employment activities, indoor or outdoor, exposes employees to a heat index in the work area that equals or exceeds 80 degrees Fahrenheit.
- B. This chapter does not apply to:
 - (1) Emergency operations and essential services as defined in §02B(3)(a) that involve protecting life or property; or
 - (2) Incidental exposures when employees are not required to perform work activities for more than 15 consecutive minutes per hour

.02 Definitions

- A. In this chapter, the following terms have the meanings indicated.
- B. Terms Defined.
 - (1) “Acclimatization” means the body's temporary adaptation to work in heat that occurs as a person is exposed over time.
 - (2) “Drinking water” means potable water that is safe to drink and cool in temperature.
 - (3) “Emergency Operations/Essential Service” means work in connection with an emergency that requires the involvement of one or more of the following entities; law enforcement, emergency medical services, firefighting, rescue and evacuation operations, emergency restoration of essential utilities or telecommunications.
 - (4) “Heat Index” means a measure of how hot it feels when relative humidity is taken into account along with the actual air temperature. It is important to note that, since heat index values were devised for shady, light wind conditions, that exposure to full sunshine can increase heat index values by up to 15°F.
 - (5) “Heat Wave” means a period of time when the predicted high heat index temperature is at least 80 degrees and is at least 10 degrees higher than the average high temperature in the preceding 5 days.

(6) “High Heat Conditions” means working conditions where the heat index of the work area equals or exceeds 90 degrees Fahrenheit.

(7) “Shade/Shaded Areas” means blockage of direct sunlight.

.03 Heat Illness Prevention and Management Plan

A. An employer shall develop, implement, and maintain an effective heat illness prevention and management plan in writing.

B. The heat illness prevention and management plan shall contain the following elements:

(1) How sufficient amounts of cool, potable water in work areas will be provided;

(2) How employees will be provided frequent opportunities and encouragement to stay hydrated by drinking water;

(3) How to recognize the symptoms of dehydration, and how to respond to suspected heat-related illnesses in others;

(4) How employees will be provided sufficient space to rest in a shaded or cool climate-controlled area where heat-affected employees may cool off, and recover when signs and symptoms of heat-related illnesses are recognized;

(5) How the employer will implement rest break schedules when necessary;

(6) Procedures for high heat conditions in accordance with Regulation 07A of this chapter;

(7) Procedures for heat acclimatization in accordance with Regulation 04B of this chapter;

(8) Procedures for emergency response in accordance with Regulation.08A of this chapter;
and

(9) How employees will be trained on the hazards of heat exposure and the necessary steps to prevent heat-related illnesses.

C. The plan shall be made available to employees and to MOSH upon request.

.04 Acclimatization

A. An employer shall provide for acclimatization of exposed employees and shall observe employees regularly for the symptoms of heat-related illnesses.

(1) An employer shall observe employees closely for the symptoms of heat-related illnesses for 14 days when the heat index in the work area is 80 degrees Fahrenheit in the following circumstances

- (a) When employees are newly assigned to work; When employees return to work after 7 or more consecutive days of absence; or
 - (b) When a heat wave occurs at the geographical location of the worksite.
- B. An employer shall develop and implement acclimatization procedures, in writing, which consider the following elements:
 - (1) Acclimated and unacclimated employees;
 - (2) The effects of clothing and personal protective equipment adding to the heat burden on employees;
 - (3) The personal and environmental risk factors that put employees at a higher risk of heat-related illness;
 - (4) Re-acclimatizing employees as necessary, in accordance with § A of this regulation; and
 - (5) The use and maintenance of auxiliary cooling systems such as water-cooled garments, air-cooled garments, cooling vests, and wetted overgarments.

.05 Shade Access

- A. An employer shall provide readily accessible shaded areas to exposed employees.
 - (1) Shaded areas shall:
 - (a) Be outside, open, and exposed to air on at least three sides;
 - (i) An employer can provide cooling mechanical ventilation indoors in lieu of outdoor shade.
 - (b) Prevent contributing heat sources from reducing its effectiveness;
 - (c) Be sufficiently sized for the number of employees taking cooldown breaks and arranged in a configuration where all employees can sit or stand with normal posture; and
 - (d) Accommodate the removal and storage of personal protective equipment that may be retaining heat.
- B. If creating shade is demonstrably infeasible or unsafe in certain work environments, the employer must implement alternative cooling measures that provide equivalent protection to shade.
 - (1) Alternative methods could include water-cooled garments, misting equipment, or similar methods.

.06 Drinking Water

- A. An employer shall provide readily accessible drinking water at no cost to exposed employees as follows:
 - (1) An employer shall make available at least 32 ounces of water per hour to each exposed employee per work day.
 - (a) An employer is not required to provide the full water supply at the beginning of an employee's shift.

.07 High Heat Procedures

- A. An employer shall implement high heat procedures when the heat index in the work area reaches or exceeds 90 degrees Fahrenheit where the work is being performed.
 - (1) The high heat procedures for employers shall include the following:
 - (a) Employees exposed to a heat index in the work area above 90 and below 100 degrees Fahrenheit during work activities shall receive a cooldown rest period of at least 10 minutes for every 2 hours worked; and
 - (b) Employees exposed to a heat index in the work area above 100 degrees Fahrenheit during work activities shall receive a cooldown rest period of at least 15 minutes for every hour worked.
 - (i) Rest periods can coincide with a scheduled rest or meal period.
- B. When high heat procedures are in effect, an employer shall monitor exposed employees for signs of heat-related illnesses with regular communication via phone or radio, a buddy system, or other effective means of observation.
- C. An employer shall consider the contribution of personal protective equipment on heat stress.
- D. An employer shall make high heat procedures available in a language and manner that all employees can understand.

.08 Emergency Response Procedures

- A. An employer shall implement emergency response procedures that include:
 - (1) Ensuring effective communication at the worksite to enable an employee to contact a supervisor or emergency medical services if needed;
 - (2) Responding to signs and to symptoms of possible heat-related illness or heat stress;
 - (3) Monitoring of employees exhibiting signs of heat-related illness or heat stress; and

- (4) Contacting emergency medical services and, if necessary, transporting employees to a location accessible to emergency medical services.

.09 Training

- A. An employer shall provide annual heat stress training to employees covered by this chapter.
- B. Training shall be presented in a language and manner that all employees can understand.
- C. Training shall occur before an employee's first exposure to a heat index that reaches or exceeds 80 degrees Fahrenheit.
- D. Training shall include at least the following:
 - (1) Environmental and personal risk factors for heat illness;
 - (2) Employer's procedures for complying with the requirements of this chapter;
 - (3) The importance of frequent consumption of water;
 - (4) The concept, importance, and methods of acclimatization;
 - (5) Types of heat illnesses, signs and symptoms of heat illnesses, and the appropriate first aid and emergency response measures; and
 - (6) The importance of and procedures for employees to immediately report to the employer signs and symptoms of heat illness
- E. Training records shall be maintained for one year from the date on which the training occurred, which shall include:
 - (1) The names of the persons trained;
 - (2) The dates of the training sessions; and
 - (3) General information about the contents of the training sessions.