

02-05; Preventing Heat Stress while on the job SAFETY BULLETIN # 02-05

August 17, 2005

California Emergency Standard for Heat Illness

Overview: The California Occupational Safety and Health Standards Board on August 12, 2005 adopted an emergency standard for inclusion in Title 8 of the California Code of Regulations as Section 3395 of the General Industry Safety Orders (heat-related illnesses). These amendments are authorized by Labor Code Section 142.3. This emergency rulemaking and adoption was initiated at the request of the Division of Occupational Safety and Health as a response to a recent, significant increase in the number of heat-related illnesses and fatalities in agriculture and construction in California resulting from exposure to environmental heat.

The effect of the language for Scope and Application is to limit the requirements of the standard to the subset of employers with workers operating outdoors to prevent heat illness when environmental risk factors warrant. The limitations on Scope and Application has the effect that employers not conducting outdoor work operations would not be covered by this standard. Also, employers with employees who were working outdoors but not affected by environmental risk factors would not be covered by the requirements for addressing heat illness prevention. The scope and application also states that related sections like section 3203 Injury and Illness Prevention Program, and other applicable Title 8 standards such as for the provision of drinking water and emergency medical services would not be superseded by this new standard.

Adopted Emergency Standard

§3395. Heat Illness Prevention.

(a) Scope and Application. This section applies to the control of risk of occurrence of heat illness. This section is not intended to exclude the application of other sections of Title 8, including, but not necessarily limited to, sections 1230(a), 1512, 1524, 3203, 3363, 3400, 3439, 3457, 6251, 6512, 6969, 6975, 8420 and 8602(e). **This section applies to all outdoor places of employment at those times when the environmental risk factors for heat illness, as defined in (b), are present.**

Note No. 1: The measures required here may be integrated into the employer's Injury and Illness Program required by section 3203.

Note No. 2: This standard is enforceable by the Division of Occupational Safety and Health pursuant to Labor Code sections 6308 and 6317 and any other statutes conferring enforcement powers upon the Division. It is a violation of Labor Code sections 6310, 6311, and 6312 to discharge or discriminate in any other manner against employees for exercising their rights under this or any other provision offering occupational safety and health protection to employees.

(b) Definitions.

"Acclimatization" means 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.

"Heat Illness" means a group of serious 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.

"Environmental risk factors for heat illness" means working conditions that affect the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personal protective equipment worn by employees.

"Personal risk factors for heat illness" means factors such as an individual's age, degree of acclimatization, health, water consumption, alcohol consumption, caffeine consumption, and use of prescription medications that affect the body's water retention or other physiological responses to heat.

"Recovery Period" means a period of time to recover from the heat in order to prevent heat illness.

"Shade" means blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. 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 air conditioning.

(c) Provision of Water. Employees shall have access to potable drinking water meeting the requirements of Sections 1524, 3363, and 3457, as applicable. Water shall be provided in sufficient quantity at the beginning of the work shift to provide one quart per employee per hour for drinking for the entire shift. Employers may begin the shift with smaller quantities of water if they have effective procedures for

replenishment during the shift as needed to allow employees to drink one quart or more per hour. The frequent drinking of water, as described in (e), shall be encouraged.

(d) Access to Shade. Employees suffering from heat illness or believing a preventative recovery period is needed, shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling for a period of no less than five minutes. Such access to shade shall be permitted at all times.

(e) Training.

(1) Employee training: Training in the following topics shall be provided to all supervisory and non-supervisory employees.

(A) The environmental and personal risk factors for heat illness;

(B) The employer's procedures for identifying, evaluating, and controlling exposures to the environmental and personal risk factors for heat illness;

(C) The importance of frequent consumption of small quantities of water, up to 4 cups per hour under extreme conditions of work and heat;

(D) The importance of acclimatization;

(E) The different types of heat illness and the common signs and symptoms of heat illness;

(F) The importance 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 symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary;

(H) Procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider;

(I) How to provide clear and precise directions to the work site.

(2) Supervisor training: Prior to assignment to supervision of employees working in the heat, training on the following topics shall be provided:

(A) The information required to be provided by section (e)(1) above.

(B) The procedures the supervisor is to follow to implement the applicable provisions in this section.

(C) The procedures the supervisor is to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

(f) Review.

No later than January 1, 2006, the Occupational Safety and Health Standards Board shall review the feasibility of providing shade for all rest periods at outdoor places of employment.

Employee Training: PMA has prepared a Safety Tip Flyer entitled "Preventing Heat Stress while on the Job". Employers should consider delivery of "Gang way Safety Talks" and distribution of the Heat Stress Safety Tip Flyer at those times when environmental risk factors for heat illness are present to fulfill the educational requirements for employee training of this emergency rule.

Supervisor Training and Responsibility: Employers should consider requiring supervisors to be aware of the following topical areas to fulfill the educational requirements for supervisor training under this emergency rule.

- Study the Safety Flyer and be aware of the symptoms of heat stress.
- Be aware when environmental factors for heat illness are present.
- Provide employee pre shift training as noted above.
- Provide shade as necessary or requested.
- Summon emergency medical assistances as necessary.
- Provide first aid immediately as necessary.

More heat illness information is available on the Cal OSHA website at: <http://www.dir.ca.gov/dosh/HeatIllnessInfo.html>

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