

# HEAT ILLNESS PREVENTION

## I. INTRODUCTION:

On June 15, 2006, the California Occupational Safety and Health Standards Board approved a permanent heat stress standard that was created to protect outdoor workers from heat-related deaths and illnesses. The new standards applies to "all outdoor places of employment" and require employers maintain policies and procedures, including employee training on the prevention of heat illness, identifying and responding to symptoms of heat illness, providing adequate amounts of water, as well as access to adequate shade or cooling, and provide emergency medical services as needed.

## II. POLICY:

Employees who work outdoors, or on job tasks in other areas when environmental risk factors for heat illness are present, are at risk for developing heat illnesses if they do not take adequate precautions. It is the policy of the Town of Truckee to protect employees at risk for heat illness by controlling, to the extent possible, the risk factors that can lead to heat illness and developing employee and supervisor awareness of heat illness prevention and response. All employees who are at risk from heat illness are expected to comply with the procedures in this program and in the Injury and Illness Prevention Program.

This policy is based on the California Code of Regulations, Title 8, Section 3395.

## III. DEFINITIONS

**Acclimatization:** Temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed. Acclimatization peaks in most people within 4 to 14 days of regular work for about two hours per day in the heat.

**Environmental Risk Factors for Heat Illness:** Working conditions that create 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 personnel protective equipment worn by employees.

**Heat Illness:** A serious medical condition resulting from the body's inability to cope with a particular heat load and includes heat cramps, heat exhaustion, heat syncope, and heat stroke.

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**Heat Cramps:** Painful muscle spasms that usually occur in the legs (hamstrings) and abdomen. Heat cramps are treatable, and are the least severe form of heat related illness.

**Heat Exhaustion (heat syncope):** An early indicator that the body's cooling system is becoming overwhelmed. Signs of heat exhaustion include:

- Cool, moist, pale, ashen or flushed skin.
- Headache, nausea, dizziness.
- Weakness, exhaustion
- Heavy sweating (a capstone sign)

**Heat Stroke:** A profound medical emergency. Heat stroke occurs when the body's systems are overwhelmed by heat and stop functioning. Heat stroke is a life threatening condition and requires professional emergency medical intervention. Signs of heat stroke include:

- Red, hot, dry skin.
- Changes in the level of consciousness
- Vomiting

**Personal Risk Factors for Heat Illness:** 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.

**Preventative Recovery Period:** A period of time to recover from the heat in order to prevent heat illness.

**Shade:** Blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. 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.

#### IV. RESPONSIBILITIES

Department Directors or Managers are responsible for the effective implementation of this program in order to ensure the safety of the Town's employees.

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Risk Manager or Safety Officer is responsible for:

- Preparing and maintaining a written program that complies with the requirements of applicable Cal/OSHA requirements.
- Assisting with training to all potentially impacted employees and their supervisors on the risks and prevention of heat illness, including how to recognize symptoms and respond when they appear.

Supervisors are responsible for:

- Identifying all employees, within their respective departments, who are required to work outdoors where potential heat illness could occur.
- Ensuring adequate water is available at a job site when the environmental risk factors for heat illness are present and encouraging affected employees to consume small amounts of water frequently.
- Ensuring adequate shade is available at a job site when the environmental risk factors for heat illness are present and encourage employees to take preventative recovery periods whenever necessary.
- Ensuring all affected employees receive proper training on heat illness prevention.
- Ensuring the requirements in this document are followed.
- Contacting emergency medical services in the event medical assistance is required.

Employees are responsible for:

- Complying with the provisions of the Heat Illness Prevention Program, as described in this document and in the training sessions they attend.
- Consuming small amounts of water frequently at all times when the environmental risk factors for heat illness are present.
- Taking preventative recovery periods in a shaded area to prevent or recover from heat related symptoms.
- Reporting heat related illness symptoms to their supervisor.

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### V. PROCEDURES

#### A. EMPLOYER REQUIREMENTS

**Provision of Water:** Affected employees will have reliable access to potable drinking water to replace fluid lost due to heat and working conditions. Where water is not plumbed, or otherwise continuously supplied, it will be provided in sufficient quantity at the beginning of the work shift to provide one quart of drinking water per employee per hour for the entire shift.

Supervisors will encourage the frequent drinking of water by employees and will never pressure employees in any way to reduce their consumption of water to conserve the supply. Supervisors will ensure each affected employee has at least one quart per hour of drinking water available at all times and shall remind employees to drink frequently. Any practice that allows the water supply to run out or requires an employee to request water before replenishing the supply is prohibited.

**Access to Shade:** Employees suffering from heat illness or require a preventative recovery period are to 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. Access to shade will be permitted at all times. The preventive recovery period shall not be a substitute for medical treatment. If an employee has any symptoms of heat illness, call 911 and initiate first aid procedures.

Enclosed areas will not be used to provide shade unless it allows cooling comparable to that provided by shade in the open air. Interiors of cars or other vehicles will not be used for shade unless the vehicle's air conditioning is running, or the vehicle is kept from heating up in the sun in some other way. Interior areas such as metal storage sheds and other out-buildings will not be used for shade unless they provide a cooling environment comparable to shade in open air, meaning they must be mechanically ventilated or open to air movement.

**Training:** All employees exposed to environmental risk factors for heat illness and their supervisors will receive initial training on preventing and responding to heat illness when this program is first established and annually before working in heat. All new employees who will be working outdoors will be trained upon hire, and all employees transferring to outdoor positions will be trained upon transfer. Supervisors will be trained initially when the program is first established, upon promotion or hire into a supervisory role, and annually thereafter.

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Employees training shall include:

- Environmental and personal risk factors for heat illness;
- Procedures for complying with the requirements of this standard;
- The importance of frequent consumption of small quantities of water, up to 4 cups per hour, when the work environment is hot and employees are likely to be sweating more than usual in the performance of their duties;
- The importance of acclimatization;
- Awareness of the different types of heat illness and the common signs and symptoms of heat illness;
- The importance of immediately reporting symptoms or signs of heat illness in themselves, or in co-workers;
- The Town's procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary;
- The Town's 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;
- The Town'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.

Supervisors training shall include:

- The training information required of the employees, detailed above.
- The Town's procedures to implement the provisions of this program.
- The Town's procedures when an employee exhibits symptoms consistent with possible heat illness, including emergency response.

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### B. Hazard Identification

The Department Director or Manager will identify all employees and supervisors who are required to work outdoors when the environmental risk factors for heat illness are present.

The Town will evaluate the actual environmental risk factors each day throughout the year, including:

- Actual weather conditions at the work site, such as temperature, humidity, and sunshine;
- Severity and duration of the work to be performed at the site;
- Amount of exposure to direct sunlight;
- Types of clothing and personal protective equipment used.

The Town will consider a variety of means to control these risk factors, such as:

- Allowing employees to acclimate to hot weather;
- Providing shade for work areas;
- Scheduling outdoor or vigorous work in the cooler parts of the day;
- Scheduling additional breaks during the hot times of the day;
- Providing misters and other cooling mechanisms;
- Job rotation.

### C. Reporting and Response

Employees are to promptly report to their immediate supervisor any symptoms of heat illness they are experiencing or signs of heat illness they observe in their co-workers. Employees will use an available, effective communication method, including a Town issued or personal cell phone, two way radio, or public telephone.

Supervisors will be trained to recognize the symptoms of heat illness and to provide an effective response. As soon as a supervisor becomes

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aware of an employee with possible heat illness symptoms, the Supervisor shall take immediate steps to safeguard the employee's well being and to determine the response level needed.

If the employee is suffering from Heat Cramps or Heat Exhaustion, the American Red Cross curriculum First Aid/CPR/AED for the Workplace - 2007 suggest:

- Moving the employee out of the sun to a cool shaded place.
  - Loosening tight or restrictive clothing, and remove any personal protective equipment over garments.
  - Removing perspiration soaked clothing.
  - Applying cool, wet towels to the skin
  - Fanning the employee gently
  - If the person is conscious, provide small sips of cool water (but not sports drinks)
- Call 911 for emergency medical service (EMS) response if the employee's condition appears to be severe or does not improve after a recovery period.

Employees with any of the symptoms of possible serious heat illness will not be sent home or left unattended without medical assessment and authorization from a qualified health care provider.

If the supervisor determines the affected employee needs to be transported to a location that can be accessed by the EMS provider, the employee will either be transported manually to that location or transported by a vehicle, depending on patient condition, distance, work site conditions, and time considerations.

If the supervisor determines external emergency medical response is needed, the supervisor will provide clear and precise directions to the work site and be prepared to provide pertinent information such as cross streets, mile markers, landmarks, and any other information requested by the emergency medical services dispatcher. Employees will be trained to provide the same information if needed.

## VI. ONLINE RESOURCES

- [www.dir.ca.gov/dosh/HeatIllnessInfo](http://www.dir.ca.gov/dosh/HeatIllnessInfo)
- [www.cdc.gov/niosh/topics/heatstress](http://www.cdc.gov/niosh/topics/heatstress)
- [www.redcross.org/services/hss/tips/heat](http://www.redcross.org/services/hss/tips/heat)
- [www.osha.gov](http://www.osha.gov)