Heat Illness Prevention Plan

El Monte Union High School District 2017

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I. Program Description

The purpose of this program is to ensure that all El Monte Union High School District (EMUHSD) employees, working in outdoor places of employment or in other areas when environmental risk factors for heat illness are present, are protected from heat illness and are knowledgeable of heat illness symptoms, methods to prevent illness, and procedures to follow if symptoms occur.

II. Scope

The Heat Illness Prevention Program applies to EMUHSD employees that may be at risk of heat illness and applies to all indoor and outdoor places of employment where environmental risk factors for heat illness are present.

III. Definitions

Acclimatization - The 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 - 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.

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 personal protective equipment worn by employees.

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 affects the body's water retention or other physiological responses to heat.

Preventative recovery period - A period of time, at least five minutes, used to recover from the heat in order to prevent further heat illness.

Shade - 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.

IV. Heat Illness & the Types of Heat Stress

Workers who are exposed to extreme heat or work in hot environments may be at risk of heat stress. Heat stress can result in heat stroke, heat exhaustion and heat cramps. Heat can also increase the risk of injuries in workers as it may result in sweaty palms, fogged-up safety glasses, and dizziness. Prevention of heat stress is important. Everyone should understand what heat stress is, how it affects their health and safety and how it can be prevented.

Here are the 3 levels of Heat Stress, their symptoms and first aid measures.

A. Heat Cramps: Early signs of Heat Illness

Heat cramps usually affect workers who sweat a lot during strenuous activity. This sweating depletes the body's salt and moisture levels. Low salt levels in muscles cause painful cramps may also be a symptom of heat exhaustion.

Symptoms:

- ❑ Muscle pain or spasms usually in the abdomen arms or legs.

First Aid Measures: Workers with heat cramps should;

- ❑ Stop all activity and sit in a cool place
- ❑ Drink clear juice or a sports beverage
- ❑ Do not return to strenuous work for a few hours after the cramps subside because further exertion or hear stroke
- ❑ Seek medical attention if any of the following apply:
  - o The worker has heart problem.
  - o The worker is on a low-sodium diet.
  - o The cramps do not subside within one hour.

B. Heat Exhaustion

Heat exhaustion is the body's response to an excessive loss of the water and salt, usually through excessive sweating. Workers most prone to heat exhaustion are those that elderly, have high blood pressure and those working in a hot environment.

Symptoms:

- ❑ 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

First Aid Measures: Treat a worker suffering from heat exhaustion with the following:

- ❑ Move the person into a cooler environment
- ❑ Loosen or remove clothing
- ❑ Lie the person down and elevate the legs
- ❑ Cool the person (wet, cloth, fan, spray mist)
- ❑ If conscious, give small amounts of cool water
- ❑ Be prepared to call 911 if no improvement

C. Heat Stroke

Heat stroke is the most serious heat-related disorder. It occurs when the body becomes unable to control its temperature: The body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. When heat stroke occurs, the body temperature can rise to 106 degrees Fahrenheit or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not given.

Symptoms:

- ❑ Hot, dry skin
- ❑ Reddening of the skin
- ❑ Altered behavior, person becomes confused, agitated, irritable, etc.
- ❑ Rapid & shallow breathing
- ❑ Increased heart rate
- ❑ Throbbing headache
- ❑ High body temperature (104 degrees or higher)
- ❑ Dizziness
- ❑ Nausea & vomiting
- ❑ Slurred speech

First Aid Measures: Take the following steps to treat a worker with heat stroke:

- ❑ Call 911 & notify your supervisor

- ❑ Move the person into a cooler, shaded environment
- ❑ Loosen or remove unnecessary clothing (lay on their side if vomiting)
- ❑ Cool the entire body (spraying/sponging and fanning the body)
- ❑ Apply ice packs to the neck, groin and armpits

V. Responsibilities

A. Employees

- ❑ Awareness and compliance with all appropriate heat illness prevention procedures while performing assigned duties
- ❑ Employees are ultimately responsible for drinking adequate amounts of hydrating fluids when the environmental risk factors for heat illness are present
- ❑ Ensure access to a shaded area is available to recover from heat related symptoms
- ❑ Inform their supervisor if shade and/or water are inadequate
- ❑ Report symptoms of heat related illness promptly to their supervisor
- ❑ Call 911 to request emergency medical services in the event medical assistance is required

B. Supervisors

- ❑ Identify and maintain records of all tasks/employees that are required to work outdoors where potential heat illness could occur
- ❑ Require all affected employees receive proper training on heat illness prevention and comply with all appropriate procedures
- ❑ Ensure that adequate water and shade are available at the job site when the environmental risk factors for heat illness are present
- ❑ Encourage employees to drink water frequently
- ❑ Call 911 to request emergency medical services in the event medical assistance is required

C. District / Risk Management

- ❑ Establish and update the written Heat Illness Prevention Program
- ❑ Provide consultation/training to all EMUSD sites and departments who fall within the scope of the program
- ❑ Assist sites and departments in determining when, where, and how water and shade is provided

VI. Program Components

The following elements of the EMUHSD program for heat illness prevention provide specific information for departments and supervisors complying with the program:

A. Provision of Water

Whenever environmental risk factors for heat illness exist, supervisors are responsible to ensure that clean, fresh, pure and suitably cool potable water is available and located as close as practicable to where employees are working, with exceptions when employers can demonstrate infeasibility.
Where unlimited drinking water is not immediately available from a plumbed system, supervisors must provide enough water for every employee to be able to drink one quart of water per hour for the entire shift (at least 2 gallons per employee for an 8-hour shift). Smaller quantities of water may be provided at the beginning of the shift if there are effective procedures for replenishing the water supply during the shift as needed.

The Cal/OSHA standard requires not only that water be provided, but that supervisors encourage employees to drink frequently. Employees must understand that thirst is not an effective indicator of a persons need for water and it is recommended that individuals drink one quart of water, or four 8-ounce cups, per hour when working in hot environments.

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Sites and/or Departments shall take one or more of the following steps to ensure employees have access to drinking water:

a. Provide access to drinking fountains
b. Supply water cooler/dispenser and single service cups
c. Supply sealed one time use water containers

Drinking water and water dispensers shall meet the following requirements:

- ❑ All sources of drinking water shall be maintained in a clean and sanitary condition.
- ❑ Drinking water must always be kept cool. When temperatures exceed 90°F it is recommended that ice be provided to keep the water cool.
- ❑ Potable drinking water dispensers used to provide water to more than one person shall be equipped with a spigot or faucet.
- ❑ Any container used to store or dispense drinking water shall be clearly marked as to the nature of its contents and shall not be used for any other purpose.
- ❑ Dipping or pouring drinking water from containers, such as barrels, pails or tanks, is prohibited regardless of whether or not the containers are fitted with covers.
- ❑ The use of shared cups, glasses or other vessels for drinking purposes is prohibited.
- ❑ Non-potable water shall not be used for drinking.
- ❑ Outlets for non-potable water shall be posted in a manner understandable to all employees that the water is unsafe for drinking.

B. Access to Shade

Supervisors are responsible to ensure that employees have access to a shaded area when the temperature reaches 80 degrees. Shaded areas shall accommodate all employees on recovery periods and meal periods and allow employees to sit in the shade without touching each other.

The nearest shaded area must be as close as practicable. Usually this will mean that shade must be reachable within a 2 1/2 minute walk, but in no case more than 1/4-mile or a five minute walk away, whichever is shorter.

Canopies, umbrellas or other temporary structures may be used to provide shade, provided they block direct sunlight. Trees and dense vines can provide shade if the canopy of the trees is sufficiently dense to provide substantially complete blockage of direct sunlight. Areas shaded by artificial or mechanical means, such as by a pop-up canopy as opposed to a tree, must provide a means for employees to avoid contact with bare soil.

The interior of a vehicle may be used to provide shade if the vehicle is air-conditioned and the air conditioner is operating.

If the National Weather Service, as of 5 pm the previous day, forecasts the temperature to be over 80° F, shade structures must be available at the beginning of the shift and present throughout the day. Regardless of predicted temperatures, supervisors must always have the capability to provide shade promptly if it is requested by an employee. If the temperature exceeds 90° F, shade must actually be present regardless of the previous day's predicted temperature high.

C. Acclimatization

Supervisors are required to acclimatize employees and allow time to adapt when temperatures rise suddenly and employee risks for heat illness increase. Acclimatization may also be required for new employees, employees working at temperatures to which they haven't been exposed for several weeks or longer, or employees assigned to new jobs in hot environments.

Generally, about four to fourteen days of daily heat exposure is needed for acclimatization. Heat acclimatization requires a minimum daily heat exposure of about two hours of work. Gradually increase the length of work each day until an appropriate schedule adapted to the required activity level for the work environment is achieved. This will allow the employee to acclimate to conditions of heat while reducing the risk of heat illness.

It should be noted that new employees are among those most at risk of suffering the consequences of inadequate acclimatization. Supervisors with new employees should be extra-vigilant during the acclimatization period, and respond immediately to signs and symptoms of possible heat illness.

D. Preventive Cool-Down Periods

The purpose of the cool-down rest period is prevention of heat illness. The supervisor is required to provide access to shade for employees who believe they need a preventive cool-down rest period from the effects of heat and for any who exhibit indications of heat illness. Employees taking a "preventative cool-down rest" must be monitored for symptoms of heat illness, encourage to remain in the shade and not ordered back to work, until symptoms are gone.
Access to shade must be allowed at all times and employees must be allowed to remain in the shade for at least five minutes.

The purpose of the preventive cool-down rest period is to reduce heat stress on the employee. The preventive cool-down rest period is not a substitute for medical treatment.

E. Emergency Procedures

If an employee has any symptoms of heat illness, first-aid procedures should be initiated without delay. Common early signs and symptoms of heat illness include headache, muscle cramps, and unusual fatigue. However, progression to more serious illness can be rapid, and can include loss of consciousness, seizures, mental confusion, unusual behavior, nausea or vomiting, hot dry skin, or unusually profuse sweating.

Any employee exhibiting any of the above mentioned symptoms requires immediate attention. Even the initial symptoms may indicate serious heat exposure. If medical personnel are not immediately available onsite and serious heat illness is suspected, emergency medical personnel should be immediately contacted and on-site first aid undertaken. No employee with symptoms of possible serious heat illness should be left unattended or sent home without medical assessment and authorization.

All Supervisors and employees must be trained to recognize and respond to symptoms of possible heat illness.

If any employee exhibits signs or symptoms of heat stroke emergency medical services must be contacted. Supervisors must be able to provide clear and precise directions to the worksite and should carry cell phones or other means of communication to ensure that emergency services can be called.

F. High Heat Procedures

High heat procedures are additional preventative measures that the District will take when the temperature equals or exceeds 95 degrees Fahrenheit. These procedures will include the following to the extent practicable:

- ❑ Ensuring that effective communication by voice, observation, or electronic means is maintained so that employees at the work site or area can contact a supervisor when necessary. An electronic device, such as a cell phone or radio may be used for the purpose only if reception in the area is reliable.

- ❑ Observing employees for alertness and signs or symptoms of heat illness. The employer shall ensure effective employee observation/monitoring by implementing one or more of the following:

    - o Supervisor or designee observation of 20 or fewer employees
    - o Mandatory buddy system
    - o Regular communication with sole employee such as by radio or cellular phone
    - o Other effective means of observation

- ❑ Designating one or more employees on each worksite as authorized to call for emergency medical services and allowing other employees to call for emergency services when no designated employee is available
- ❑ Reminding employees throughout the work shift to drink plenty of water
- ❑ Pre-shift meetings before the commencement of work to review the high heat procedures, encourage employees to drink plenty of water and remind employees of their right to take a cool-down rest when necessary

VII. Reporting Requirements

Constant awareness of and respect for heat illness prevention procedures and compliance with all applicable EMUHSD safety rules is mandatory.

Employees may report any safety concerns to their supervisor or Risk Management.

Supervisors may issue warnings to employees and implement disciplinary actions up to and including termination for failure to follow the guidelines of this program.

The District is authorized to issue safety warnings to departments, supervisors, and employees and stop unsafe work from continuing.

VIII. Training Requirements and Competency Assessment

The District shall provide training for all potentially impacted employees, and their supervisors, working where environmental risk factors for heat illness are present. Training information shall include, but not be limited to:

- ❑ Environmental and personal risk factors for heat illness.
- ❑ Procedures for identifying, evaluating, and controlling exposure to environmental risk factors for heat illness.
- ❑ The importance of frequent consumption of hydrating fluids, up to 1 quart (4 cups of water) per hour, when environmental risk factors for heat illness are present; particularly when employee is excessively sweating during the exposure.
- ❑ The importance of acclimatization.
- ❑ 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, to their supervisor.

- ❑ Understanding the procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by emergency medical service.
- ❑ Procedures for ensuring that, in the event of an emergency, clear and precise direction to the work site can and will be provided to emergency responders.

Supervisors shall receive training on the following topics prior to being assigned to supervise outdoor employees:

- ❑ The training information required of the employees, detailed above
- ❑ Procedures supervisors are to follow to implement the provisions of this program
- ❑ Procedures the supervisor shall follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures

Retraining will be required under any of the following conditions:

- ❑ Changes in the workplace render previous training obsolete.
- ❑ Inadequacies in an employee's knowledge of heat illness prevention indicate that the employee has not received the required training.

The District shall maintain training records for a minimum of 3 years.

IX. Designated Persons Who Have the Authority and Responsibility for Implementing the Provisions of this Program

Name/Title/Phone Number

1. Norma Macias, Director F.M.O.T., (626) 444-9005 ext.9865
2. Jorge Estrada, M & O Coordinator, (626) 444-9005 ext. 9866

X. Information and External References

Title 8 California Code of Regulations, General Industry Safety Orders - §3395

Department of Industrial Relations - Heat Illness Regulation Amendments
https://www.dir.CA.gov/dosh/documents/Heat_Illness

Heat Illness Prevention: What you need to know
http://www.dir.ca.gov/dosh/HIPnews6-11-08.pdf

Heat Illness Prevention enforcement Q&A
http://www.dir.ca.gov/DOSH/heatIllnessQA.html

Protect Yourself from Heat Illness
http://www.dir.ca.gov/dosh/dosh_publications/HeatIllnessEmployeeEngSpan.pdf

To check weather forecasts, use – The National Weather Service (NOAA)
http://www.weather.gov/

For Heat Safety Resources & Heat Index Chart
http://www.nws.noaa.gov/om/heat/heat_index.shtlm

http://www.dir.ca.gov/dosh/documents/Heat-Illness-Prevention-Regulation-Amendments.pdf