Simi Valley Schools
SIMI VALLEY UNIFIED SCHOOL DISTRICT

HEAT ILLNESS PREVENTION PLAN

SAFETY POLICY

It is the policy of our District to provide a safe and healthful workplace. This Heat Illness Prevention Plan is intended to reduce the risk of work related heat illnesses and to comply with California Code of Regulations, Title 8, section 3395, Heat Illness Prevention.

Scope

This Heat Illness Prevention Plan applies to all employees who work outdoors, including:

- Grounds staff
- Maintenance staff
- Custodial staff
- Child nutrition staff
- Warehouse staff
- Campus supervisors and yard duty staff
- Physical education staff and athletics coaches
- After school program and child care staff.

High heat procedures apply to grounds crews.

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 14 days of regular work for at least two hours per day in the heat.

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

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

***Potentially Impacted Employees*:** Employees whose job tasks expose them to environmental risk factors for heat illness. Custodian, Food Service, Grounds, Maintenance, Warehouse, Campus Supervisors, PE staff, and Athletic Coaches may all be impacted at some point.

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

***Shade*:** The 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 – allowing the body to cool.

RESPONSIBILITY

The Emergency Services and Safety Coordinator in Risk Management has the authority and the responsibility for implementing and maintaining this Heat Illness Prevention Plan.

Managers and supervisors are responsible for implementing and maintaining the Plan in their work areas and for answering worker questions about the Plan. A copy of this Heat Illness Prevention Plan is available on the District website, under Risk Management.

Monitoring Weather

Some requirements of heat illness prevention are triggered by outside temperatures. These include:

- Shade will be present when the temperature exceeds 80 degrees Fahrenheit.
- The district will implement high-heat procedures when the temperature equals or exceeds 95 degrees Fahrenheit
- Acclimatization

The Plan administrator will monitor weather and alert supervisors to taking appropriate action in response to predicted hot weather. The National Weather Service forecasts the temperature in various locations in California. Weather forecasts and information are broadcast on NOAA Weather radio and can be accessed at http://www.weather.gov/view/states.php?state=ca&map=on

Weather information can also be accessed at http://www.vcapcd.org/Forecast.aspx or www.weather.com.

The United States Department of Labor, Occupational Safety and Health Administration (OSHA) provides a Heat Illness index app (*click here*) that is available for smart phones. The OSHA Heat Safety Tool allows supervisors and workers to calculate the heat index for their worksite, and, based on the heat index, displays a risk level to outdoor workers. Then, supervisors and workers can get reminders about the protective measures that should be taken at that risk level to protect workers from heat-related illness.

The Plan administrator will monitor predicted weather temperatures in advance to know when the temperature is likely to exceed 80 degrees. Supervisors are expected to know if the temperature is in fact exceeding 80 degrees at the work site.

The supervisor should use a thermometer to keep track of the temperature at the work site on hot days. A simple thermometer available at hardware stores can be used to measure the outdoor ("dry bulb") temperature, as long as it is taken in an area where there is no shade. The temperature measurement must be taken in an area with full sunlight and the bulb or sensor of the thermometer should be shielded from direct contact with sunlight (with the hand or some other object) while taking the measurement.

Provision of Water

Drinking water means water that is fresh, cooler than the outside temperature, fit to drink, and free from odors.

The frequent drinking of water is encouraged. The supervisor will provide frequent reminders to employees to drink frequently, and more water breaks will be provided. Water is a key preventive measure to minimize the risk of heat related illnesses. Drinking water is available at no cost to the employees.

Workers at school sites are encouraged to drink from drinking fountains or water provided in offices. Employees are encouraged to take breaks near sufficient supply of drinking water.

Where plumbed water is not readily accessible, 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. Grounds vehicles will be equipped with insulated containers to keep water cool and disposable cups for drinking. The Supervisor/designated person will monitor water containers every 30 minutes, and employees are encouraged to report to supervisor/designated person low levels or dirty water.

Outlets for non-potable water, such as water for landscaping irrigation purposes, are posted in a manner understandable to all employees to indicate that the water is unsafe and is not to be used for drinking.

Access to Shade

Shade means 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 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. Shade is available at all district sites. Employees are encouraged to take breaks in areas of shade and open to the air.

Areas of shade include:

- Sides of buildings under roof eves;
- Inside buildings;
- Permanent lunch shade structures;
- Fully-leaved trees (worker makes no shadow)
- Vehicles with air conditioning operating.

Employees are allowed and encouraged to take a preventative cool-down rest in the shade when they feel the need to do so to protect themselves from overheating. Such access to shade is permitted at all times.

An individual employee who takes a preventative cool-down rest:

- Will be monitored and asked if he or she is experiencing symptoms of heat illness;
- Will be encouraged to remain in the shade; and
- Will not be ordered back to work until any signs or symptoms of heat illness have abated, but in no event, less than 5 minutes in addition to the time needed to access the shade.

If an employee exhibits signs or reports symptoms of heat illness while taking a preventative cool-down rest or during a preventative cool-down rest period, the supervisor will provide appropriate first aid or emergency response according to the Emergency Response section below.

High Heat Procedures

The district will implement the following high-heat procedures when the temperature equals or exceeds 95 degrees Fahrenheit:

1. Ensuring that effective communication 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 mobile telephone or text messaging device, may be used for this purpose only if reception in the area is reliable. The district will provide employees who do not have mobile telephones with radios.
2. Observing employees for alertness and signs or symptoms of heat illness. The district shall ensure effective employee observation/monitoring by implementing one or more of the following:
   a. Supervisor or designee observation of 20 or fewer employees, or
   b. Mandatory buddy system, or
   c. Regular communication with sole employee such as by radio or cellular phone.
3. 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.
4. Reminding employees throughout the work shift to drink plenty of water, meaning drinking small quantities of water more frequently.
5. Providing additional and/or longer rest breaks - employees may need to take more frequent and longer breaks.
6. Pre-shift meetings before the commencement of work as described in the Training section below.
7. Cut work shifts short or stop work altogether.

Emergency Response

Emergency medical services will be provided as quickly as possible if an employee suffers heat illness. The district's procedures will include contacting emergency medical services when necessary, as well as taking immediate steps to keep a stricken employee cool and comfortable once emergency service responders have been called. The goal is to stop the rapid progression to more serious illness, which can include mental confusion, loss of consciousness, and seizures.

Supervisors will carry mobile telephones and/or radios to ensure that emergency services can be called, and check that these are functional at all worksites prior to and/or during each shift.

One or more employees on each worksite is authorized to call for emergency medical services, and allowing other employees to call for emergency services when no designated employee is available.

Supervisors will respond to signs and symptoms of possible heat illness, including but not limited to providing first aid measures and contacting emergency medical services.

Emergency services will be provided if any of the following symptoms are observed:

- Confusion, altered mental status, slurred speech
- Loss of consciousness (coma)
- Hot, dry skin or profuse sweating
- Seizures
- Very high body temperature:

First aid will be provided for the following symptoms:

- Headache
- Nausea
- Dizziness
- Weakness
- Irritability
- Thirst
- Heavy sweating
- Elevated body temperature

During and after provision of first aid, affected employees will not be left alone. The supervisor or other district employee will transport employees displaying signs and symptoms for medical follow-up.

The district will not provide medical personnel on site, and supervisors and employees are not expected to have medical expertise to diagnose heat illness.

Acclimatization Methods and Procedures

Heat wave means any day in which the predicted high temperature for the day will be at least 80 degrees Fahrenheit and at least ten degrees Fahrenheit higher than the average high daily temperature for the preceding five days.

Acclimatization is a process by which the body adjusts to increased heat exposure. The body needs time to adapt when working in hotter environments. Employees are more like to develop heat illness if they are not allowed or encouraged to take it easy when a heat wave strikes or when starting a job that newly exposes them to heat. Acclimatization is fully achieved in most people within 4 to 14 days of regular work involving at least 2 hours per day in the heat.

During heat waves and with new, un-acclimatized employees, the district will be especially vigilant. The supervisor will closely observe employees.

Best practices include finding ways to lessen the intensity of employees' work during a heat wave and during two-week break-in periods of new employees. These options include:

1. If employees are not accustomed to working in hot environments, they should start work slowly, and pick up the pace gradually;
2. New employees and all employees during heat waves, employees are given less physically demanding tasks and gradually be assigned to more demanding tasks;
3. Schedule and provide frequent breaks for new employees and all employees during heat waves;
4. Cut work shifts short or stop work altogether;
5. Schedule work for progressively longer periods in warm or hot conditions where employees are at risk of heat illness. Begin shifts early, when temperatures are cooler.

TRAINING AND INSTRUCTION

All workers listed in the scope section, including supervisors, shall have training and instruction on general and job-specific safety and health practices. Training and instruction will include:

1. 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;
2. The district’s procedures for complying with the requirements of this standard, including, but not limited to, the employer's responsibility to provide water, shade, cool-down rests, and access to first aid as well as the employees' right to exercise their rights under this standard without retaliation;

TRAINING AND INSTRUCTION cont.

3. 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;
4. The concept, importance, and methods of acclimatization pursuant to this plan;
5. Whenever the District is made aware of a new or previously unrecognized hazard;
6. 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
7. The importance to employees of immediately reporting to the district, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers;
8. The district's procedures for responding to signs or symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary;
9. The district'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;
10. 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 shall include designating a person to be available to ensure that emergency procedures are invoked when appropriate.

Supervisors of employees listed in the Scope section will be trained on the following:

1. The information listed above in employee training.
2. The procedures the supervisor is to follow to implement the applicable provisions in this section;
3. The procedures the supervisor is to follow when an employee exhibits signs or reports symptoms consistent with possible heat illness, including emergency response procedures;
4. How to monitor weather reports and how to respond to hot weather advisories.

Employees listed in the High Heat section will be trained on the following:

1. A review of the high heat procedures.
2. Encouraging employees to drink plenty of water;
3. Reminding employees of their right to take a cool-down rest when necessary.

Employee and Supervisor training will be conducted when this Plan is implemented and periodically thereafter. High heat training will be conducted prior to work on those days forecast to be 95 degrees Fahrenheit or higher.

RECORDKEEPING

Training records will be kept for three (3) years following the date of the training.
Records of high heat days will be kept for three (3) years**.**

PROGRAM MAINTENANCE

The Heat Illness Administrator in Risk Management will periodically review this Plan. This person shall verify effective implementation of each element of the Program, make any changes needed and communicate program status and changes made to management and to affected employees.

Appendix A

OVERVIEW OF HEAT ILLNESS SYMPTOMS, TREATMENT AND PREVENTION

Employees: Please review this important information regarding Heat Illness symptoms, treatment and prevention.

Heat Cramps: Heat cramps are the most common type of heat-related injury. Heat cramps are muscle spasms that usually affect the arms, legs, or stomach. Heavy sweating especially when water is not replaced quickly enough causes heat Cramp. Frequently the cramps do not occur until after work, at night or when relaxing. Although heat cramps can be quite painful, they usually do not result in permanent damage.

Prevention/First-Aid*:* Drink plenty of water during the day or an electrolyte solution such as sports drink. Eating fruits can also help keep your body hydrated during hot water.

Heat Exhaustion: Heat exhaustion is more serious than heat cramps. Heat exhaustion occurs when the body's internal temperature regulating system is overworked but has not completely shut down. During heat exhaustion, the surface blood vessels and capillaries, which originally enlarged to cool the blood, collapse from loss of body fluids and necessary minerals. This occurs when you do not drink enough fluids to replace what you are sweating away.

Symptoms of Heat Exhaustion: Headache, heavy sweating, intense thirst, dizziness, fatigue, loss of coordination, nausea, impaired judgment, loss of appetite, hyperventilation, tingling in hands or feet, anxiety, cool moist skin, weak and rapid pulse (100-120), and low to normal blood pressure.

Prevention/First-Aid*:* The employee should be moved to a cool location such as a shaded area or air-conditioned building. Instruct them to lie down with their feet slightly elevated. Loosen their clothing, apply cool, wet cloths or fan them. Have them drink water or electrolyte drinks. Try to cool them down, and have them checked by medical personnel. Victims of heat exhaustion should avoid strenuous activity for at least one day, and they should continue to drink water to replace lost bodily fluids.
Call 9-1-1 if the person becomes non-responsive, refuses water, vomits, or loses consciousness.

Heat Stroke: Heat stroke is a life-threatening illness with a high death rate. It occurs when the body has depleted its supply of water and salt, and the victim's core body temperature rises to deadly levels. A heat stroke victim may first suffer heat cramps and/or heat exhaustion before progression into the heat stroke stage; however, this is not always the case. It is important to note that heat stroke symptoms are similar to those of a heart attack. Therefore, it is very important to know how to recognize the signs and symptoms of heat stroke and to check for them anytime an employee collapses while working in a hot environment.

Symptoms include: A high body temperature (103° F); a distinct absence of sweating (usually); hot red or flushed dry skin; rapid pulse; difficulty breathing; constricted pupils; any/all of the signs or symptoms of heat exhaustion such as dizziness, headache, nausea, vomiting, or confusion, and possibly more severe symptoms including, bizarre behavior; and high blood pressure. Advanced symptoms may be seizure or convulsions, collapse, loss of consciousness and a body temperature of over 108° F.

Prevention/First-Aid*:* It is vital to lower a heat stroke victim's body temperature. Quick actions can mean the difference between life and death. Pour water on them, fan them, or apply cold packs. **Call 911 to get the person medical aid as soon as possible.**

Appendix B

PLEASE REVIEW: PRECAUTIONS TO PREVENT HEAT ILLNESS

Tips for Working in Hot Environments

- **Acclimatization:** Condition yourself for working in hot environments. Allow your body to adjust to working in heat over a few days.
- **Drink plenty of water or electrolyte drinks**! Hydration is a continuous process. Electrolyte drinks, such as sports drinks, are good for replacing both water and minerals lost through sweating. Avoid caffeinated beverages like coffee and soda, as these liquids can have the opposite effect and can actually increase the level of dehydration.
- **Take frequent breaks out of the heat**, especially if you notice you are getting a headache or you start feeling overheated.
- **Assure that adequate water and shade** are available at the job site before work is to begin.
- **Wear lightweight, light-colored clothing** when working out in the sun.
- **Immediately report all unsafe conditions** and/or concerns to your supervisor or area manager.
- **For additional information** on Heat Illness Prevention, contact your supervisor or Risk Management.
- **Call 911** if you or a co-worker are experiencing dangerous signs of heat illness.

Required Four Steps to Prevent Heat Illness

California Code of Regulations, Title 8, section 3395, Heat Illness Prevention
Department of Industrial Relations (link)

1. **Training**: Attend provided training in heat illness prevention.
2. **Water**- Hydrate with water –Drink 1 quart of water per hour
   Which equals four 8 ounces glasses of water per hour.
   Do not wait until you feel sick to cool down!
3. **Shade:** Cool down in shade or indoors for at least 5 minute.
   Do not wait until you feel sick to take a break.
4. **Planning-** SVUSD Heat Illness Plan is located on the Simi Valley Unified School District webpage. SVUSD Heat Illness Prevention Plan (link)