



HEAT ILLNESS PREVENTION PROGRAM

October 2016

San Bernardino Valley College
701 South Mount Vernon Avenue
San Bernardino, California 92410

&

Crafton Hills College
11711 Sand Canyon Road
Yucaipa, California 92399

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Policy Statement

On August 22, 2005, the Office of Administrative Law approved the California Occupational Safety and Health Standards Board's adoption of the California Code of Regulations Proposed State Standard, Title 8, Chapter 4, Section 3395. The Office of Administrative Law formally adopted the revised, permanent regulation on July 27, 2006, making the regulation effective immediately. The regulations are meant to significantly reduce the severity and frequency of occupational heat-related illness in all outdoor places of employment.

The District has developed this Heat Illness Prevention Plan to control the risk of occurrences of heat illness and to comply with the California Code of Regulations Proposed State Standard, Title 8, Chapter 4, Section 3395. The plan is designed to educate employees and their supervisors on the symptoms of heat illness, causes of these symptoms, ways to prevent heat illness, and what to do if they or a fellow employee experience symptoms of heat illness. Employees that fall under this regulation could include, but are not limited to, maintenance, grounds, and transportation workers, custodians, security personnel, physical education teachers, and playground supervisors.

The SBCCD Heat Illness Prevention Plan (HIPP) is intended to provide SBCCD employees with a safe working environment and control the occurrence of heat related illness. The HIPP applies to:

- All outdoor areas of the campus where employees can be assigned to work, and where environmental conditions cannot be mitigated by active cooling methods;
- Indoor or covered facilities where the air temperature meets or exceeds 100 degrees Fahrenheit; and,
- Emergency response personnel and any college employee who is required to wear and perform work in full-body personal protective suits, regardless of interior or exterior ambient temperatures.

It is the policy of the San Bernardino Community College District that all employees and supervisors of those employees who perform job functions in areas where the environmental risk factors for heat illness are present shall comply with the procedures set forth in this plan.

Responsibilities

HIPP Administrator

The ultimate responsibility for establishing and maintaining the procedures of the Heat Illness Prevention Plan specific to college facilities and operations rests with the college president. General procedures, which govern the activities and responsibilities of the Heat Illness Prevention Plan, are established under their final authority.

The Vice President of Administrative Services (VPAS) serves as the designated Heat Illness Prevention Program (HIPP) Administrator and is responsible for the implementation and annual evaluation of the program. The Administrator will:

- Coordinate formal program reviews and revisions with District Safety & Risk Management;
 - Distribute the HIPP to the applicable campus administrators, managers, supervisors, and academic deans in which Title 8, Chapter 4, Section 3395 applies.
 - Facilitate initial employee training for the appropriate college employees, managers and supervisors covered by this Plan; and
 - Maintain copies of employee training records and ensure that copies are also maintained by the respective work area supervisor.
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Assigned campus designees are as follows:

Vice President of Administrative Services/SBVC, Site Safety Officer
San Bernardino Valley College
Tel: (909) 384-8958

&

Vice President of Administrative Services/CHC, Site Safety Officer
Crafton Hills College
Tel: (909) 389-3210

Managers, Supervisors, and Academic Deans

Management or supervisory employees are responsible for:

- Ensure that employee work assignments, both indoors and outdoors, are evaluated and the components of this HIPP are implemented when the established temperature/humidity thresholds are met or exceeded;
 - Make active and/or passive (shading, etc.) cooling equipment available to employees that may require its use;
 - Ensure that initial and periodic training is provided to employees under their supervision and that the training is consistent with the requirements put forth in this HIPP;
 - Maintain copies of employee training records and forward file copies to the office of the Vice President of Administrative Services; and
 - Observing employees for signs of heat-related illness and taking quick action to ensure immediate assistance is provided when necessary.
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Employees

Employees are responsible for:

- Understanding and complying with the requirements of this HIPP;
- Understanding the responsibilities of both the college and its employees for maintaining compliance with this program; and
- Immediately reporting any observed unsafe working conditions to their supervisor and take any necessary steps to mitigate personal risk factors that may exist prior to beginning work in a regulated high temperature or humidity environment.

Failure for any SBVC or CHC campus employee to observe and comply with the provisions of this safety program may result in progressive disciplinary action as outlined by the California Educational Code.

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; and
- 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.

Program Components

1. Monitor Weather Conditions

- a. "Temperature" means the dry bulb temperature in degrees Fahrenheit obtainable by using a thermometer to measure the outdoor temperature in an area where there is no shade. While the temperature measurement must be taken in an area with full sunlight, the bulb or sensor of the thermometer should be shielded while taking the measurement, e.g., with the hand or some other object, from direct contact by sunlight.

- b. Supervisor training. Prior to supervising employees performing work that should reasonably be anticipated to result in exposure to the risk of heat illness effective training on the following topics shall be provided to the supervisee:
 - i. How to monitor weather reports and how to respond to hot weather advisories. (See New Heat Illness Standard – Reference Flow Chart in Appendix E).

2. Provisions of Water - Whenever environmental risk factors for heat illness exist, supervisors are responsible to ensure that clean, fresh, and cool potable water is readily available to employees.

- a. At the beginning of each shift, all employees who work outside when environmental risk factors for heat illness are present shall have sufficient quantities and immediate access to at least one (1) quart of potable drinking water per hour for the entire shift (at least two (2) gallons of potable water per person per eight-hour shift).
- b. Smaller quantities may be provided if the college has an effective procedure for replenishment that meets the above quantity and time requirements.
- c. The importance of frequently drinking water shall be conveyed and encouraged as described in the training section.
- d. Departments shall take one or more of the following steps to ensure employees have access to drinking water:
 - i. Provide access to drinking fountains;
 - ii. Supply water cooler/dispenser and single service cups; and
 - iii. Supply sealed one time use water containers.
- e. Drinking water and water dispensers shall meet the following requirements:
 - i. All sources of drinking water shall be maintained in a potable and sanitary condition;
 - ii. Drinking water must always be kept cool. When temperatures exceed 90° F it is recommended that ice be provided to keep the water cool;
 - iii. Potable drinking water dispensers used to provide water to more than one person shall be equipped with a spigot or faucet;
 - iv. 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;
 - v. 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;
 - vi. The use of shared cups, glasses or other vessels for drinking purposes is prohibited
 - vii. Non-potable water shall not be used for drinking, showering, washing, etc.; and
 - viii. Outlets for non-potable water shall be posted in a manner understandable to all employees that the water is unsafe for drinking.

3. Access to Shade

- a. Supervisors are responsible to ensure that employees have access to a shaded area.
 - b. Shaded areas should be large enough to accommodate 25 percent of the employees on a shift and allow employees to sit in the shade without touching each other.
 - c. Access to shade shall be made available at all times to any employee experiencing heat illness, symptoms of heat illness, or believing a preventative recovery period is needed.
 - d. 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.
 - e. 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 means for employees to avoid contact with bare soil.
 - f. The interior of a vehicle may be used to provide shade if the vehicle is air-conditioned and the air conditioner is operating.
 - g. The preventative recovery period shall be at least five (5) minutes.
 - h. Water shall be made available in the shade/preventative recovery period area.
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- i. If the National Weather Service, as of 5 p.m. the previous day, forecasts the temperature to be over 85° 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.

4. High Heat Procedures

- a. The employer shall implement high-heat procedures when the temperature equals or exceeds 95 degrees Fahrenheit. These procedures shall include the following to the extent practicable:
 - i. 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. Contact via radio or cell phone is sufficient to maintain communication between the employee and the supervisor.
 - ii. Observing employees for alertness and signs or symptoms of heat illness.
 - iii. Reminding employees throughout the work shift to drink plenty of water.
 - iv. Close supervision of a new employee by a supervisor or designee for the first 14 days of the employee's employment by the employer, unless the employee indicates at the time of hire that he or she has been doing similar outdoor work for at least 10 of the past 30 days for 4 or more hours per day.

5. Acclimatization

- a. Supervisors are required to acclimatize employees and allow time to adapt when temperatures rise suddenly and employee risks for heat illness increase. Acclimatization is 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.
- b. 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.
- c. 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.

6. Reducing the risk of Heat-related Illness (HI) and Responding to Possible Symptoms of HI

- a. All employees will be trained prior to working outdoors;
- b. Working hours will be modified to work during the cooler hours of the day, when possible;
- c. When a modified work schedule is not possible, more water and rest breaks will be provided as necessary to prevent heat illness.
- d. Supervisors will continually check all employees, and stay alert to the presence of heat-related symptoms.
- e. The supervisor *is* responsible for responding to all reports and/ or observations of heat illness symptoms and signs

7. Emergency Procedures

- a. If an employee has any symptoms of heat illness, first-aid procedures should be initiated without delay.
 - b. Common early signs and symptoms of heat illness include:
 - i. 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.
 - c. Any employee exhibiting any of the above mentioned symptoms requires immediate attention. Even the initial symptoms may indicate serious heat exposure. Emergency medical personnel should be immediately summoned by calling 911. On-site first aid should be undertaken immediately. First aid
-

measures are outlined in Appendix B of this document. For personal safety reasons, no employee with symptoms of possible serious heat illness should be left unattended or sent home without medical assessment and the authorization of their supervisor.

- d. All supervisors and employees must be trained to recognize and respond to the symptoms of possible heat illness, as outlined in Appendix B of this document. Supervisors must be able to provide clear and precise directions to employees at the worksite during an emergency and should carry a means of communication, to ensure that emergency services can be called.
- e. Supervisors will carry a cell phone or radio to ensure that emergency services can be called, and check that these are functional at the worksite prior to each shift.

8. Reporting Symptoms or Signs of Heat Illness

- a. Employees exhibiting signs or symptoms of heat illness, or who observe a co-worker with signs or symptoms, shall report these symptoms to their supervisor, the Vice President of Administrative Services office, or the SBCCD Human Resources department.
- b. Supervisors may issue warnings to employees and implement disciplinary actions up to and including termination for failure to follow the guidelines of this program.

9. Training

- a. Supervisory and non-supervisory employees will be trained on the following:
 - i. The environmental and personal risk factors for heat illness
 - ii. The college's procedures for complying with the requirements of this standard
 - iii. 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
 - iv. The importance of acclimatization
 - v. The different types of heat illness and the common signs and symptoms of heat illness
 - vi. The importance to employees of immediately reporting to their supervisor symptoms or signs of heat illness in themselves, or in co-workers
 - vii. The college's procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary
 - viii. The college'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
 - ix. The college'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
 - b. Employee Training
 - i. The information required to be provided by the section pertaining to "Emergency Procedures".
 - ii. All employees will receive heat illness prevention training prior to working outdoors. Especially all newly hired employees.
 - iii. On hot days, and during a heat wave, supervisors will hold short tailgate meetings to review this important information with all workers.
 - iv. All newly hired workers will be assigned a buddy or experienced coworker to ensure that they understood the training and follow the college's procedures.
 - c. Supervisors Training
 - i. Supervisors will be trained prior to being assigned to supervise outdoor workers
 - ii. The information required to be provided by the section pertaining to "Emergency Procedures".
 - iii. The procedures the supervisor is to follow to implement the applicable provisions in this section
 - iv. The procedures the supervisor is to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures
 - d. Employees of Primary or Secondary Employers Training
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- i. Primary (staffing companies, etc.) and secondary employers will ensure that all employee's (including temporary) working outdoors are trained in heat illness prevention
- e. (Re)Training for any SBCCD employee will be required under any of the following conditions:
 - i. Initial employment;
 - ii. Physical changes in the workplace or job assignments render previous heat illness prevention training obsolete; and
- f. Inadequacies in an employee's application of the HIPP which may indicate that the employee has not retained the required training.

Training records shall be maintained in the respective supervisor's and office and the office of the Vice President of Administrative Services for a minimum of 3 years.

Information and External References

[Title 8 California Code of Regulations, General Industry Safety Orders - §3395](#)

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

Appendix A: What is Heat Illness?

WHAT IS HEAT ILLNESS?

The body normally cools itself by sweating. During hot weather, especially with high humidity, sweating isn't enough. Body temperature can rise to dangerous levels if precautions are not taken such as drinking water frequently and resting in the shade or air conditioning. Heat illnesses range from heat rash and heat cramps to heat exhaustion and heat stroke. Heat stroke requires immediate medical attention and can result in death.

HOW CAN HEAT ILLNESS BE PREVENTED?

Employers should establish a complete heat illness prevention program to prevent heat illness. This includes: provide workers with water, rest and shade; gradually increase workloads and allow more frequent breaks for new workers or workers who have been away for a week or more to build a tolerance for working in the heat (acclimatization); modify work schedules as necessary; plan for emergencies and train workers about the symptoms of heat-related illnesses and their prevention; and monitor workers for signs of illness. Workers new to the heat or those that have been away from work and are returning can be most vulnerable to heat stress and they must be acclimatized.

To prevent heat related illness and fatalities:

- Drink water every 15 minutes, even if you are not thirsty.
- Rest in the shade to cool down.
- Wear a hat and light-colored clothing.
- Learn the signs of heat illness and what to do in an emergency.
- Keep an eye on fellow workers.
- "Easy does it" on your first days of work in the heat. You need to get used to it.

If workers are new to working in the heat or returning from more than a week off, and for all workers on the first day of a sudden heat wave, implement a work schedule to allow them to get used to the heat gradually.

Remember these three simple words: Water, Rest, Shade. Taking these precautions can mean the difference between life and death.

WHO IS AFFECTED?

Any worker exposed to hot and humid conditions is at risk of heat illness, especially those doing heavy work tasks or using bulky protective clothing and equipment. Some workers might be at greater risk than others if they have not built up a tolerance to hot conditions, including new workers, temporary workers, or those returning to work after a week or more off. This also includes everyone during a heat wave. Industries most affected by heat-related illness are: construction; trade, transportation and utilities; agriculture; building, grounds maintenance; landscaping services; and support activities for oil and gas operations.

APPENDIX B: First Aid for Heat Illness

FIRST AID FOR HEAT CRAMPS

Heat cramps usually occur when a person has been active in hot weather and is dehydrated.

Treating heat cramps is very simple, do the following:

- Remove the victim from the hot environment, a shady area will suffice.
- Stretch the calf and thigh muscles gently through the cramp. This usually results in immediate relief.
- Hydrate the victim, use a small concentration of salt for best results. (*ex. Giving the person a saltine cracker to eat while drinking.*)
- Have the victim rest.
- Should the cramping continue, seek further medical advice.

FIRST AID FOR HEAT EXHAUSTION

Heat exhaustion is a milder form of heat-related illness that can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids. Those most prone to heat exhaustion are elderly people, people with high blood pressure, and people working or exercising in a hot environment.

Symptoms of Heat Exhaustion

Heavy sweating
Paleness
Muscle cramps
Tiredness
Weakness
Dizziness
Headache
Nausea or vomiting
Fainting

Treatment of Heat Exhaustion

- Loosen the clothing.
- Apply cool wet cloths.
- Move the victim to either a cool or an air-conditioned area, and fan the victim.

The treatment priority for heat exhaustion is to cool the victim. Heat exhaustion is not life-threatening (unlike heat stroke), so EMS is not needed unless the victim's condition worsens to the point of entering heat stroke. If the victim's level of consciousness is affected, that is heat stroke.

FIRST AID FOR HEAT STROKE

Heatstroke occurs when the core body temperature rises too far for the body's natural cooling mechanisms to function. It is a serious, life-threatening problem that can cause death in minutes. The treatment priority with heat stroke is to call Emergency Medical Services (911) and **cool the victim down**.

When you provide first aid for heatstroke, remember that this is a true life-and-death emergency. The longer the victim remains overheated, the higher the chances of irreversible body damage or even death occurring.

Symptoms of Heat Stroke

- Unconscious or has a markedly abnormal mental status
- Flushed, hot, and dry skin (although it may be moist initially from previous sweating or from attempts to cool the person with water)
- May experience dizziness, confusion, or delirium
- May have slightly elevated blood pressure at first that falls later
- May be hyperventilating
- Core temperature of 105°F or more

Treatment of Heat Stroke

- Notify EMS by calling 911
 - Cool the victim's body immediately by dousing the body with cold water.
 - Apply wet, cold towels to the whole body.
 - Pack ice into the victim's heat-loss areas (underarms, groin, neck). Do not let ice contact the victim's bare skin as this may cause frostbite!
 - Wetting and evaporating measures work best. (Think, artificial sweating.)
 - Move the victim to the coolest possible place and remove as much clothing as possible (ensure privacy).
 - Maintain an open airway.
 - Expose the victim to a fan or air-conditioner since drafts will promote cooling.
 - Immersing the victim in a cold water bath is also effective.
 - Give the victim (if conscious) cool water to drink.
 - Do **not** give any hot drinks or stimulants.
 - **Never** give an unconscious victim something to drink as it may obstruct the airway or cause vomiting.
 - Get the victim to a medical facility as soon as possible. Cooling measures must be continued while the victim is being transported
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Appendix C: SBVC Campus-Specific Information

College President

- (909) 384-8298

VP Administrative Services

- (909) 384-8958

Administrative Services

- (909) 384-8965

SBCCD Safety & Risk Management

- (909) 382-4040

Web Links

- <https://sbccd.org/safetyrisk>

National Weather Service

- <http://www.weather.gov/>
- (805) 988-6610

Appendix D: CHC Campus Specific Information

College President

- (909) 389-3202

VP Administrative Services

- (909) 389-3210

Administrative Services

- (909) 389-3211

SBCCD Safety & Risk Management

- (909) 382-4040

Web Links

- <https://sbccd.org/safetyrisk>

National Weather Service

- <http://www.weather.gov/>
- (805) 988-6610

Appendix E: New Heat Illness Standard – Reference Flow Chart

THE HEAT ILLNESS PREVENTION REGULATION WAS AMENDED EFFECTIVE MAY 1, 2015
REFERENCE [TITLE 8, CALIFORNIA CODE OF REGULATIONS, 3395. HEAT ILLNESS PREVENTION](#)

Water must be "fresh, pure, suitably cool" and located as close as practicable to where employees are working, with exceptions when employers can demonstrate infeasibility.



Shade must be present at 80 degrees, instead of the previous 85, and must accommodate all employees on recovery or rest periods, plus those onsite who are taking meal breaks.



Employees taking a "preventive cool-down rest" must be monitored for symptoms of heat illness, encouraged to remain in the shade and not ordered back to work until symptoms are gone. Employees with symptoms must be provided appropriate first aid or emergency response.



High-heat procedures triggered at 95 degrees were tightened in the revised standard. Employers must ensure "effective" observation and monitoring, including a mandatory buddy system and regular communication with employees working by themselves. In a provision exclusive to agriculture, employees must be provided with a minimum 10-minute cool-down period every two hours during high-heat periods.



Emergency response procedures must include effective communication, response to signs and symptoms of heat illness, and procedures for contacting emergency responders to help stricken workers.



Acclimation procedures must include close observation of all employees during a heat wave—defined as at least 80 degrees. New employees must be closely observed for their first two weeks on the job.



Safety Program Approval Form

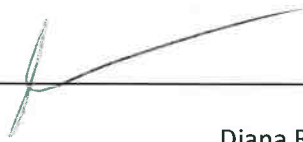
Safety Program: **Heat Illness Prevention Consolidated Safety Program – San Bernardino Valley College – September 2016**

Reviewed by:  Date 09/19/16
Whitney J. Fields

SBCCD Director, Safety & Risk Management

Approved by:  Date 9.25.16
Scott Stark


SBVC/Vice President Administrative Services/Business Services

Approved by:  Date 9.21.16
Diana Rodriguez
SBVC President




Safety Program Approval Form

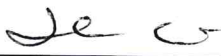
Safety Program: Heat Illness Prevention Consolidated Safety Program – Crafton Hills College – September 2016

Reviewed by:  Date 09/19/16
Whitney J. Fields

SBCCD Director, Safety & Risk Management

Approved by:  Date 9/23/16
Michael Strong

CHC/Vice President Administrative Services/Business Services

Approved by:  Date 9/27/16
Dr. Wei Zhou
CHC President