



## HEAT ILLNESS PREVENTION PROGRAM

### I. Scope

The SBVC Heat Illness Prevention Plan (HIPP) is intended to provide SBVC 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.

Grounds Maintenance  
Maintenance & Operations  
Custodial Maintenance  
Art Department  
Child Development Center  
Campus Police & Police Academy

Automotive Tech Programs  
Welding  
Refrigeration Tech Programs  
Physical Education  
Athletics  
Food Services

### II. Program Responsibilities

The Vice President of Administrative Services is the designated Heat Illness Prevention Program Administrator and is responsible for the implementation and annual evaluation of the program. **The Administrator will:**

- coordinate formal program reviews and revisions with the College's Facilities and Safety Committee (FASC);
- distribute the HIPP to the campus community, including administrators, managers, supervisors, and academic deans;
- 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.

**Managers, supervisors, and academic deans will:**

- 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.

**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;
- 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 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.

### **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. Program Components**

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

##### **Provision 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.

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. It is the manager's responsibility to ensure water supplies are replenished as necessary.

The Cal/OSHA standard requires not only that water be provided, but that supervisors encourage employees to drink frequently. Employees must

be 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.

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

1. Provide access to drinking fountains
2. Supply water cooler/dispenser and single service cups
3. 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 potable 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, showering, washing, etc.
- Outlets for non-potable water shall be posted in a manner understandable to all employees that the water is unsafe for drinking

### **Access to Shade**

Supervisors are responsible to ensure that employees have access to a shaded area. 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.

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 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 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.

### **Acclimatization**

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. 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.

### **Preventive Recovery Periods**

The purpose of the recovery period is prevention of heat illness. The supervisor is required to provide access to shade for employees who believe they need a preventive recovery period from the effects of heat and for any who exhibit indications of heat illness.

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 recovery period is to reduce heat stress on the employee. The preventive recovery period is not a substitute for medical treatment.

### **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. Emergency medical personnel should be immediately summoned by calling campus Police at (909) 384-4491. **On-site first aid should be undertaken immediately. First aid measures are outlined in Appendix A 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.

All supervisors and employees must be trained to recognize and respond to the symptoms of possible heat illness, as outlined in Appendix A 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.

## **V. Reporting Requirements**

Employees may report any safety concerns to their supervisor, the Vice President of Administrative Services office, or the SBCCD Human Resources department.

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

## **VI. Training Requirements and Competency Assessment**

Training shall be provided by the college for all potentially impacted employees and their supervisors. 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 the following additional training prior to being assigned to supervise employees impacted by this program:

- Provisions to be made to avoid employee heat illness in the workplace
- How to recognize the symptoms of heat illness
- First aid procedures to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures

(Re)Training for any **SBVC employee** will be required under any of the following conditions:

- Initial employment
- Physical changes in the workplace or job assignments render previous heat illness prevention training obsolete
- 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.

## **VII. 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](http://www.dir.ca.gov/dosh/dosh_publications/HeatIllnessEmployeeEngSpan.pdf)



**APPENDIX A**  
**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.

Monitor the victim's vital signs frequently. Be prepared to begin CPR should the victim become unconscious and not be breathing.