

HEAT ILLNESS PREVENTION AND TREATMENT

California Code of Regulations, Title 8, Section 3395 titled “Heat Illness Prevention” is the standard that requires employers to have a written “Heat Illness Prevention Procedure” if they have employees who work in outdoor places of employment. The Parks and Recreation Department’s Procedure is included in this tailgate training. This training is required for all new employees before they begin work that could reasonably be anticipated to expose them to heat illness. It is also required annually for all employees who work in outdoor places of employment.

There are many risk factors, both environmental and personal, that can create the possibility that heat illness could occur. These all need to be taken into consideration when working outdoors in hot weather. They are:

Environmental

- 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 (PPE) worn by employees

Personal

- Age
- Degree of acclimatization
- Health
- Water consumption
- Alcohol consumption
- Caffeine consumption
- Medications that effects the body’s water retention
- Other physiological responses to heat

Acclimatization

- It is important to allow a person’s body to gradually adapt to working in the heat
- Supervisors should lessen the intensity of work for newly-hired employees and employees that have been away from working in the heat (vacation, illness, job transfer, etc.) for a two or more-week break-in period during hot weather
- During the hottest months, supervisors should modify work schedules or reschedule non-essential duties when possible
- Supervisors need to be extra vigilant of their employees to recognize immediately symptoms of possible heat illness

Water Consumption

- Employees must have access to potable drinking water either from plumbed outlets or sanitary containers, e.g., Igloo Coolers
- Employees should be encouraged to frequently consume small quantities of water
- No less than one quart per employee per hour of drinking water will be provided for their entire shift

- Shifts may be started with smaller quantities if effective procedures for replenishment are in place in advance of the shift to continuously meet the one quart or more per hour per employee requirement
- A container, e.g., Igloo Cooler, of potable water with drinking cups will be provided if work is being conducted at facilities plumbed with drinking fountains or other means for a continuous supply of water but the actual worksite is not close enough to these sources for an employee to be able to frequently consume small quantities of water
- Supervisors will check the water level in containers often and more frequently when temperatures reach 85 degrees Fahrenheit or above

Shade – Temperature Above 80 Degrees Fahrenheit

- Shade must be available at all times and provided to employees that are suffering from heat illness, or believe a cool-down rest period is needed
- The shade must be open to the air or provided with ventilation or cooling
- The cool-down rest period will be for no less than five minutes
- Cool-down rest periods will be encouraged
- Shade areas must not cause exposure to other health or safety hazards
- Shaded areas must be close as practical to where the employees are working

Shade – Temperature Exceeds 85 Degrees Fahrenheit

- Supervisors must meet all of the above requirements for when the temperature is above 80 degrees Fahrenheit
- Additionally, supervisors must provide and maintain one or more areas of shade with sufficient area to accommodate all employees on the shift at any given time
- Employees must be able to sit in a normal posture fully in the shade without physical contact with each other

Shade – Temperature 95 Degrees Fahrenheit or Above – “High-Heat Procedures”

- Supervisors must meet all of the above requirements
- Additionally, supervisors must establish a means of effective communication between their employees and themselves, e.g. voice, observation or electronic. A cell phone or text messaging device may be used if reception is reliable
- Observe employees for alertness and signs or symptoms of heat illness
- Remind employees to drink plenty of water
- Provide close supervision for new employees

Monitor the Weather

- Supervisors must track the weather of the job site by monitoring predicted temperature highs and periodically using a thermometer
- Extended weather forecast should be monitored to allow for advance planning
- Weather reports can be monitored via television, e.g., the weather channel, radio or internet at www.weather.gov and other weather websites
- OSHA has released a **free application for mobile devices that enables workers and supervisors to monitor the heat index at their work sites**. The app displays a risk level for workers based on the heat index, as well as reminders about protective measures that should be taken at that risk level. Available for Android-based platforms and the iPhone, the app can be downloaded in both English and Spanish by visiting <http://s.dol.gov/RI>
- Weather information should be used to modify work schedules, increase the number of water and rest breaks or cease work early, if necessary

IMPORTANT

IMMEDIATELY REPORT TO A SUPERVISOR ANY SYMPTOMS OR SIGNS OF HEAT ILLNESS IN ONESELF OR A CO-WORKER!

HEAT ILLNESS SYMPTOMS AND ACTIONS

Heat Cramps

Symptoms

- Painful, involuntary muscle spasms that usually occur during or after heavy exercise.
- Muscles most often affected include calves, arms, abdomen, and back.

Actions

- Rest briefly and cool down.
- Drink clear juice or an electrolyte-containing sports drink (Squinchers are offered in City Stores).
- Practice gentle, range of motion stretching and gentle massage of the affected muscle group.
- Returning to strenuous activity immediately after cramps subside is discouraged since doing so without sufficient rest and recovery can lead to heat exhaustion or heat stroke.
- If cramps do not go away within 1 hour, consult a physician.

Heat Exhaustion

Symptoms

- Headache
- Dizziness or fainting
- Weakness
- Wet skin
- Irritability
- Thirst
- Nausea or vomiting
- Fast heart beat
- Cramps

Actions

- Move person to a cool, shaded area and lay them down; if symptoms include nausea, roll person onto their side.
- Elevate legs and feet slightly.
- Loosen or remove the person's clothing.
- Have the person drink cool (not iced) water or sports drink containing electrolytes.
- Cool the person by spraying or sponging him/her with cool water and fanning.

MONITOR THE PERSON'S CONDITION CLOSELY. DO NOT LEAVE THEM ALONE.

Note: Call 9-1-1 immediately if the person has any underlying illness, faints, vomits, convulses, requests you call for assistance, or if he/she does not feel better within 5 minutes.

Heat Stroke

Symptoms

- Red, hot, dry skin
- High body temperature

- Irritability, confusion, or unconsciousness
- Fainting
- Convulsions
- Rapid heart beat
- Cessation of sweating

THIS IS A MEDICAL EMERGENCY. CALL 9-1-1.

Actions

- Move person to a cool, shaded area and lay them down; if symptoms include nausea, roll person onto their side.
- Loosen or remove person's clothing.
- Have person drink cool (not iced) water or sports drink containing electrolytes.
- Cool person by spraying or sponging him/her with cool water and fanning.
- Place ice packs under the armpits, neck, knees, or on the groin.

MONITOR THE PERSON'S CONDITION CLOSELY. DO NOT LEAVE THEM ALONE.

PROCEDURES FOR SUMMONING EMERGENCY MEDICAL SERVICES

- Dial 9-1-1 on a phone or radio Public Works Dispatch (formerly Station 38) or phone 619/52-77500 for help.
- Provide clear and precise directions to the worksite. Provide address and nearest cross street; or cross street and landmark if at a location with no address.
- If in a non right-of-way, provide the location of access point, distance/direction from access point, and landmark.
- In all cases, an employee should be sent to meet medical responders and guide them to the location of the emergency.
- After administering first aid, if necessary, transport the ill employee to a point where they can be reached by emergency medical services.

Supervisors must be trained:

- Prior to supervising employees performing work that could result in heat illness.
- On the Department's written procedures (included in this tailgate package).
- On the process for providing the above information to their employees via tailgate training.
- Directions for advance planning for providing shade and water.
- Steps to follow if an employee exhibits symptoms of heat illness.
- How to monitor weather reports via television, radio or internet for hot weather advisories and modify employee working conditions when appropriate as dictated in this Procedure.

Heat Illness Prevention Checklist

Employer: _____

Location / Department: _____

Date: _____ Time: _____ am /pm Weather Forecast _____

Water

- Is there potable, fresh, pure, and suitably cool drinking water? Yes No
- Is there at least 1 quart per employee per hour for the entire shift? Yes No
- Are steps taken to prevent contamination of drinking water? Yes No
- Is there a plan for refilling water coolers throughout the day? Yes No
- Is there an effective procedure to replenish the water? Yes No
- Is the water as close as practical? Yes No
- Is the water readily accessible? Yes No
- Do supervisors encourage the frequent drinking of water? Yes No

Shade and Rest

- Is enough shade available to accommodate all employees on cool down rest periods and those onsite taking meal periods? Yes No
- Is shade available for workers to rest and cool down for at least 5 minutes? Yes No
- Is shade available when the temperature exceeds 80 degrees F? Yes No
- Is shade available when requested by an employee? Yes No
- Is shade structure large enough to allow employees to sit in a normal posture? Yes No
- Is the shade as close as practical to where employees are working? Yes No
- Is a plan in place to check the weather forecast, and notify workers of high heat alerts? Yes No

Training

- Have workers been trained to recognize and prevent heat illness? Yes No
- Can workers identify symptoms of heat illnesses? Yes No
- Is there a plan in place to allow workers to get adjusted to the heat? Yes No
- New employees' intensity and/or shift length modified to allow for acclimatization? Yes No
- Is work planned to avoid the hottest part of the day, when possible? Yes No
- Do supervisors know how to monitor weather reports? Yes No

Temperature exceed 95 degrees F

- Is shade available for workers to rest and cool down for at least 10 minutes? Yes No
- Is there effective communication with employees? Yes No
- Are employees observed for alertness and symptoms of heat illness? Yes No
- Are employees frequently reminded to drink water? Yes No
- Are new employees closely supervised for the first 14 days? Yes No

Emergency Plan

- Do workers know who to notify if there is an emergency? Yes No
- Can workers explain their locations if they need to call an ambulance or 911? Yes No
- Have workers been trained to provide first aid of heat illnesses? Yes No
- To immediately report any symptoms of heat illness to a supervisor? Yes No

Heat Illness Prevention Checklist

Special Notes / Instructions:

Heat Checklist Completed by:

_____ (Signature)

Print Name: _____

Title: _____

Medical Provider Network (MPN) For Work Related Injuries



OCCUPATIONAL MEDICAL CLINICS



NORTH COUNTY

1N RANCHO BERNARDO
858-521-2350
16899 W. BERNARDO DRIVE
OCCUPATIONAL HEALTH SERVICES
MON - FRI • 8 A.M. - 5 P.M.
URGENT CARE SERVICES
DAILY • 8 A.M. - 8 P.M.

CENTRAL COUNTY

1C SORRENTO MESA
858-526-6150
10243 GENETIC CENTER DRIVE
OCCUPATIONAL HEALTH SERVICES
MON - FRI • 8 A.M. - 5 P.M.
URGENT CARE SERVICES
MON - FRI • 8 A.M. - 8 P.M.

2C KEARNY MESA
858-616-8400
2020 GENESEE
OCCUPATIONAL HEALTH SERVICES
MON - FRI • 7 A.M. - 5 P.M.

3C DOWNTOWN
619-446-1524
300 FIR STREET
OCCUPATIONAL HEALTH SERVICES
MON - FRI • 8 A.M. - 5 P.M.
URGENT CARE SERVICES
WEEKDAYS • 8 A.M. - 10 P.M.
WEEKENDS AND HOLIDAYS
8 A.M. - 8 P.M.

EAST COUNTY

1E LA MESA
619-644-6600
5525 GROSSMONT CENTER DRIVE
SUITE 601
OCCUPATIONAL HEALTH SERVICES
MON - FRI • 8 A.M. - 5 P.M.
URGENT CARE SERVICES
DAILY • 8 A.M. - 8 P.M.

SOUTH COUNTY

1S CHULA VISTA
619-585-4050
525 THIRD AVENUE
OCCUPATIONAL HEALTH SERVICES
MON - FRI • 7 A.M. - 5 P.M.
URGENT CARE SERVICES
DAILY • 8 A.M. - 8 P.M.



RIVERSIDE COUNTY

MURRIETA
951-600-9070
25285 MADISON AVENUE #101
MON - FRI • 8 A.M. - 7 P.M.
SAT • 9 A.M. - 2 P.M.

NORTH COUNTY

OCEANSIDE
760-941-2000
3910 VISTA WAY - SUITE 106
MON - FRI • 8 A.M. - 5 P.M.

CARLSBAD EAST
760-929-8269
5810 EL CAMINO REAL - SUITE A
MON - FRI • 7 A.M. - 6 P.M.

ESCONDIDO SOUTH
760-740-0707
860 WEST VALLEY PARKWAY
SUITE 150 - MON - FRI • 7 A.M. - 7 P.M.
SAT • 9 A.M. - 2 P.M.

CENTRAL COUNTY

SORRENTO MESA
858-455-0200
10350 BARNES CANYON ROAD
SUITE 200
MON-FRI • 8 A.M. - 5 P.M.

MIRAMAR
858-549-4255
7590 MIRAMAR ROAD - SUITE C
MON-FRI • 8 A.M. - 5 P.M.

KEARNY MESA
858-277-2744
5575 RUFFIN ROAD - SUITE 100
24 HOURS • 7 DAYS

HILLCREST
619-297-9610
3930 4TH AVENUE - SUITE 200
MON-FRI • 7 A.M. - 7 P.M.

EAST COUNTY

LA MESA
619-697-3093
8090 PARKWAY DRIVE
MON-FRI • 8 A.M. - 5 P.M.
SAT • 10 A.M. - 3 P.M.

SANTEE
619-448-4841
9745 PROSPECT AVENUE
SUITE 100
MON-FRI • 7 A.M. - 6 P.M.

SOUTH COUNTY

NATIONAL CITY
619-474-9211
102 MILE OF CARS WAY
MON-FRI • 7 A.M. - 9 P.M.

CHULA VISTA
619-425-8212
542 BROADWAY • SUITE G
MON-FRI • 8 A.M. - 6 P.M.
SAT • 9 A.M. - 3 P.M.



**Report injuries immediately
to your supervisor.**

The complete list of MPN Physicians and locations can be viewed at
www.sandiego.gov/riskmanagement

This information is available in alternative formats upon request. Revised 2/2017

PARKS AND RECREATION DEPARTMENT HEAT ILLNESS PREVENTION PROCEDURE

1. PURPOSE

Is to establish the policies and procedures for compliance with the Cal/OSHA Heat Illness Prevention Standard and to control the risk of occurrence of heat illness for employees in all outdoor places of employment.

2. AUTHORITY

- California Code of Regulations, Title 8, Section 3395

3. DEFINITIONS

Acclimatization – The temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed. 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, 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 (PPE) 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.

Cool-down rest period – A period of time in the shade, not less than five minutes, to allow an employee to recover from the heat.

Shade – The 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 air conditioning is running in the car. Shade may be provided by any natural or artificial means that does not expose employees to unsafe or unhealthy conditions.

Temperature – 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.

Supervisor – The person in charge at the work site.

4. RESPONSIBILITY

4.1 Supervisors

- Comply with this Procedure.
- Provide “Heat Illness Prevention and Treatment” training, in the form of a tailgate, to new employees before they begin work that could reasonably be anticipated to expose them to heat illness.
- Track the weather of the job site.
- Provide a minimum of one quart of drinking water per employee per hour for entire shift.
- Attend required heat illness training.
- Assess each employee’s level of heat acclimatization.
- Provide employees access to shade at all times.
- Provide employees with cool-down rest periods in the shade for no less than five minutes at a time, when requested.
- Encourage employees to drink small quantities of water frequently when working under extreme exertion and heat.
- Conduct short tailgate meetings to review this procedure when the temperature exceeds 80 degrees Fahrenheit and complete the “Heat Stress/Illness Prevention Checklist.”

4.2 Employees

- Comply with this Procedure.
- Attend required training.
- Drink small quantities of water frequently when working under extreme exertion and heat.
- Immediately report to supervisor any symptoms or signs of heat illness in oneself or co-worker.

4.3 Training Section

- Ensure employees who work in outdoor places of employment and supervisors of employees who work in outdoor places of employment are trained in Heat Illness Prevention and Treatment.

5. REQUIREMENTS

5.1 Acclimatization

It is important to allow a person’s body to gradually adapt to working in the heat. Acclimatization can take from four to fourteen days of regular work, for at least two hours per day, in the heat. New employees and employees that have been away from working in the heat (vacation, illness, job transfer, etc.) must be provided close supervision during the acclimatization period.

5.2 Provision of Water

Employees shall have access to potable drinking water. Where drinking water is not plumbed or otherwise continuously supplied, water shall be provided in sufficient quantity at the beginning of each work shift to provide one quart per employee per hour for drinking for the entire shift. Supervisors may begin the shift with smaller quantities of water if they have effective procedures for replenishment as needed during the shift to allow employees one quart or more per hour. The water provided must be fit to drink. When water is provided in containers, they will be maintained in a sanitary condition and located as close as practical to the worksite. Enough drinking cups for each worker must be made available when providing water from a container.

5.3 Access to Shade

Employees suffering from heat illness, or believing a cool-down rest period is needed, shall 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 such shade shall be permitted at all times and encouraged. Shaded areas must not cause exposure to other health or safety hazards.

Shade is required to be present when the temperature exceeds 80 degrees Fahrenheit.

Supervisors must have and maintain one or more areas with shade that are either open to the air or provided with ventilation or cooling. The amount of shade present must be sufficient enough to accommodate all employees on the shift at any time, so they can sit in a normal posture fully in the shade without having to be in physical contact with each other. The shaded area shall be located as close as practical to the areas where employees are working.

When the temperature equals or exceeds 95 degrees Fahrenheit, supervisors must implement the following “high-heat procedures” to the extent practical.

- Ensure effective communication by voice, observation, or electronic means is maintained so employees at the work site can contact a supervisor when necessary. A cell phone or text messaging device may be used for the purpose only if reception in the area is reliable.
- Observe employees for alertness and signs or symptoms of heat illness.
- Remind employees throughout the work shift to drink plenty of water.
- New employees must be provided close supervision by a supervisor or designee for the first 14 days of the employee’s employment, 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.

5.4 Monitor the Weather

Supervisors must track the weather of the job site by monitoring predicted temperature highs and periodically using a thermometer. Weather reports can be monitored via television, radio or internet at www.weather.gov and other weather websites. Weather information should be used to modify work schedules, increase the number of water and rest breaks or cease work early, if necessary.

5.5 Training

Supervisors and employees must be trained in the following topics before beginning work that could reasonably be anticipated to result in a heat illness.

- Risk Factors – Environmental and personal risk factors including the added burden of heat load on the body caused by exertion, clothing and PPE.
- This Procedure – “Heat Illness Prevention Procedure.”
- The importance of the frequent consumption of small quantities of water.
- The different types of heat illness along with the common signs and symptoms.
- The importance of acclimatization and the Department’s guidelines for allowing a body to adapt to working in the heat.
- The importance of immediately reporting the signs or symptoms of heat illness in themselves, or a co-worker, to a supervisor.
- The procedures for responding to symptoms of heat illness.
- The procedures for contacting emergency medical services, and if needed, the transporting of the employee to a different location.
- The procedures for clear and precise directions to be provided to the emergency responders.

5.6 Supervisor Training

Supervisors must be trained on the following topics prior to supervising employees performing work that could reasonably be anticipated to result in heat illness.

- Training will include this written procedure.
- The process for implementing the provisions of this Procedure via tailgate training.
- The procedures listed below in **Section 6 “Recognizing Heat Illness Symptoms and Actions.”**
- How to monitor weather reports and respond to hot weather advisories.

Supervisors and employees shall be aware of the signs and symptoms of heat illness and, according to the situation, take the actions indicated in **Section 6**, below:

6. RECOGNIZING HEAT ILLNESS SYMPTOMS AND ACTIONS

6.1 Heat Cramps

Symptoms

- Painful, involuntary muscle spasms that usually occur during or after heavy exercise.
- Muscles most often affected include calves, arms, abdomen, and back.

Actions

- Rest briefly and cool down.
- Drink clear juice or an electrolyte-containing sports drink. (Sqwinchers are offered in City Stores.)
- Practice gentle, range of motion stretching and gentle massage of the affected muscle group.
- Returning to strenuous activity immediately after cramps subside is discouraged since doing so without sufficient rest and recovery can lead to heat exhaustion or heat stroke.
- If cramps do not go away within 1 hour, consult a physician.

6.2 Heat Exhaustion

Symptoms

- Headache
- Dizziness or fainting
- Weakness
- Wet skin
- Irritability
- Thirst
- Nausea or vomiting
- Fast heart beat
- Cramps

Actions

- Move person to a cool, shaded area and lay them down. If symptoms include nausea, roll person onto their side.
- Elevate legs and feet slightly.
- Loosen or remove the person's clothing.
- Have the person drink cool (not iced) water or sports drink containing electrolytes.
- Cool the person by spraying or sponging him/her with cool water and fanning.

MONITOR THE PERSON'S CONDITION CLOSELY. DO NOT LEAVE THEM ALONE.

Note: Call 9-1-1 immediately if the person has any underlying illness, faints, vomits, convulses, requests you call for assistance, or if he/she does not feel better within 5 minutes.

6.3 Heat Stroke

Symptoms

- Red, hot, dry skin
- High body temperature
- Irritability, confusion, or unconsciousness
- Fainting
- Convulsions
- Rapid heart beat
- Cessation of sweating

THIS IS A MEDICAL EMERGENCY. CALL 9-1-1.

Actions

- Move person to a cool, shaded area and lay them down.
- Lay person down and elevate legs and feet slightly. If symptoms include nausea, roll person onto their side.
- Loosen or remove person's clothing.
- Have person drink cool (not iced) water or sports drink containing electrolytes.
- Cool person by spraying or sponging him/her with cool water and fanning.
- Place ice packs under the armpits, neck, knees, or on the groin.

MONITOR THE PERSON'S CONDITION CLOSELY. DO NOT LEAVE THEM ALONE.

6.4 Procedures for Summoning Emergency Medical Services

- Dial 9-1-1 on a phone or radio Public Works Dispatch (formerly Station 38) or phone 619/527-7500 for help.
- Provide clear and precise directions to the worksite. Provide address and nearest cross street; or cross street and landmark if at a location with no address.
- If in a non right-of-way, provide the location of access point, distance/direction from access point, and landmark.
- In all cases, an employee should be sent to meet medical responders and guide them to the location of the emergency.
- After administering first aid, if necessary, transport the ill employee to a point where they can be reached by emergency medical services.

Heat Index Table

The heat index is a measure of the contribution that high humidity makes with abnormally high temperatures in reducing the body’s ability to cool itself. For example, the heat index shows that for an actual air temperature of 100 degrees Fahrenheit and a relative humidity of 50 percent, the effect on the human body would be the same as 120 degrees.

Air Temperature	70	75	80	85	90	95	100	105	110	115	120
Relative Humidity	Apparent Temperature										
0%	64	69	73	78	83	87	91	95	99	103	107
10%	65	70	75	80	85	90	95	100	105	111	116
20%	66	72	77	82	87	93	99	105	112	120	130
30%	67	73	78	84	90	96	104	113	123	135	148
40%	68	74	79	86	93	101	110	123	137	151	
50%	69	75	81	88	96	107	120	135	150		
60%	70	76	82	90	100	114	132	149			
70%	70	77	85	93	106	124	144				
80%	71	78	86	97	113	136	157				
90%	71	79	88	102	122	150	170				
100%	72	80	91	108	133	166					

Heat stroke and heat exhaustion are likely when the heat index reaches 150. The heat index is a measure of what hot weather “feels like” to the average person for various temperatures and relative humidities.

Note: Degree of heat stress can vary with age, health, and body characteristics.