



Heat Stress Recognition & Prevention Program

Purpose

This Heat Stress Recognition & Prevention Program has been developed to provide workers with the training and tools needed to protect them from heat related exposures and illnesses.

Scope

This program implements efficient and safe work practices that will prevent both indoor and outdoor heat-related illnesses among team members at our workplaces. It will be used for training new team members and for the annual refresher training of all team members. All team members potentially exposed to hot working environments are subject to his program.

Training

All team members who are or may be exposed to potential heat related illnesses will receive training on the following:

- The environmental and personal risk factors that cause heat related illnesses.
- The employer's procedures for identifying, evaluating, and controlling exposures to the environmental and personal risk factors for heat illness.
- The importance of frequent consumption of small quantities of water, up to 4 cups per hour under extreme conditions of work and heat.
- The importance of acclimatization (beneficial physiological adaptations that occur during repeated exposure to a hot environment).
- The different types of heat illness and the common signs and symptoms of heat illness.
- The importance of immediately reporting to the employer, directly or through the team member's supervisor, symptoms or signs of heat illness in themselves, or in co-workers.

- The employer's procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary (i.e., contacting 911).
- Procedures for contacting emergency medical services, and if necessary, for transporting team members to a point where they can be reached by an emergency medical service provider.
- How to provide clear and precise directions to the work site.

Supervisor Responsibilities

- All supervisors will be provided a copy of this program and training documents prior to assignment of team members working in environments where heat exposures may occur.
- Supervisors will be provided the procedures to follow to implement the applicable provisions of this program.
- Supervisors will be provided the procedures to follow when a team member exhibits symptoms consistent with possible heat illness, including emergency response procedures.

Provision of Water

Team members shall have access to potable water. Water shall be provided in sufficient quantity at the beginning of the work shift to provide one quart per team member per hour for drinking the entire shift for a total of 2 gallons per team member per 8-hour shift. Team members may begin the shift with smaller quantities of water if effective procedures for replenishment of water during the shift have been implemented to provide team members one quart or more per hour.

Access to Shade

Team members suffering from heat illness or believing a preventative recovery 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. Such access to shade shall be always permitted. Shade areas can include trees, buildings, canopies, lean-tos, or other partial and/or temporary structures that are either ventilated or open to air movement. The interior of cars or trucks are not considered shade unless the vehicles are air conditioned or kept from heating up in the sun in some other way.

Heat Stress Disorders

Heat Rash

Symptoms:

- Red blotches and extreme itchiness in areas persistently damp with sweat.
- Prickling sensation on the skin when sweating occurs.

Treatment:

- Cool environment.
- Cool shower.
- Thorough drying.

Heat rashes typically disappear in a few days after exposure. If the skin is not cleaned frequently enough the rash may become infected.

Heat Cramps

Symptoms:

- Loss of salt through excessive sweating.
- Cramping in back, legs and arms.

Treatment:

- Stretch and massage muscles.
- Replace salt by drinking commercially available carbohydrate/electrolyte replacement fluids.

Heat Exhaustion

Heat exhaustion occurs when the body can no longer keep blood flowing to supply vital organs and at the same time send blood to the skin to reduce body temperature.

Symptoms:

- Weakness.
- Difficulty continuing work.
- Headache.
- Breathlessness.
- Nausea or vomiting.
- Feeling faint or actually fainting.

Treatment:

- **Call 911.**

Help the victim to cool off by:

- Resting in a cool place.
- Drinking cool water.
- Removing unnecessary clothing.
- Loosening clothing.
- Showering or sponging with cool water.

It takes 30 minutes to cool the body down once a worker becomes overheated and suffers heat exhaustion.

Heat Stroke

Heat stroke occurs when the body can no longer cool itself and body temperature rises to critical levels.

Symptoms:

- Confusion.
- Irrational behavior.
- Loss of consciousness.
- Convulsions.
- Lack of sweating.
- Hot, dry skin.
- Abnormally high body temperature.

Treatment:

- **Call 911.**

Provide immediate, aggressive, general cooling.

- Immerse victim in tub of cool water or;
- Place in cool shower; or
- Spray with cool water from a hose; or
- Wrap victim in cool, wet sheets and fan rapidly.
- Transport victim to hospital.

Do not give anything by mouth to an unconscious victim. This condition is a true emergency and must be dealt with accordingly.

Safe Work Procedures

Supervisors Responsibilities

Supervisors are responsible for performing the following:

- Give workers frequent breaks in a cool area away from heat.
- Adjust work practices as necessary when workers complain of heat stress.
- Oversee heat stress training and acclimatization for new workers and for workers who have been off the job for a period of time.
- Monitor the workplace to determine when hot conditions arise.
- Increase air movement by using fans where possible.
- Provide potable water in required quantities.
- Determine whether workers are drinking enough water.
- Make allowances for workers who must wear personal protective clothing (welders, etc.) and equipment that retains heat and restricts the evaporation of sweat.
- Schedule hot jobs for the cooler part of the day; schedule routine maintenance and repair work in hot areas for the cooler times of the day.
- Make available to all workers, cooling devices (hard hat liners/bibs/neck bands) to help rid bodies of excessive heat.

Workers (Team Members)

Workers are responsible for performing the following:

- Follow instructions and training for controlling heat stress.
- Be alert to symptoms in yourself and others.
- Determine if any prescription medications you're required to take can increase heat stress.
- Wear light, loose-fitting clothing that permits the evaporation of sweat.
- Wear light-colored garments that absorb less heat from the sun.
- Drink small amounts of water – approximately 1 cup every 15 minutes.
- Avoid beverages such as tea or coffee.
- Avoid eating hot, heavy meals.
- Do not take salt tablets unless prescribed by a physician.
- Review Attachment below for additional information.

Periodic Review

The Safety Director will periodically review this program for compliance with all applicable regulatory standards. Updates will be provided to all team members.










Program Recap...Main Points to Remember:

- Factors that contribute to heat stress are high air temperature, high humidity, radiant heat sources (including the sun), and strenuous physical activity.
- Know the early signs and symptoms of a heat related illness: headache, nausea, dizziness, weakness, confusion, thirst, heavy sweating, elevated body temperature, and irritability.
- Ways to protect yourself from heat related illness and stress: stay fit, take frequent cooling breaks, increase fluid intakes, replace electrolytes, avoid alcohol and caffeine, acclimate yourself to hot weather, and use the “buddy” system to watch out for each other.
- What to do if heat illness is suspected: move to a cooler environment like air conditioning or a shaded area, loosen or remove unnecessary clothing, drink fluids if conscious, place cooling packs around the neck, under the arms, and in the groin areas, mist with cool water, provide moving air with a fan or breeze, and seek medical care early for more severe cases.
- The most important aspects of taking care of a heat related illness are seeking immediate emergency medical care (**911**) and cooling the team member.

Heat Illness Prevention Guidance for Workers

Awareness of heat illness symptoms can save your life or the life of a co-worker. The following provides valuable information concerning heat-related illnesses and preventative measures.

- If you are coming back to work from an illness or an extended break or you are just starting a job working in the heat, it is important to be aware that you are more vulnerable to heat stress until your body has time to adjust. Let your employer know you are not used to the heat. It takes about 5-7 days for your body to adjust.
- Drinking plenty of water frequently is vital for workers exposed to the heat. An individual may produce as much as 2 to 3 gallons of sweat per day. In order to replenish that fluid, you should drink 3 to 4 cups of water every hour starting at the beginning of your shift.
- Taking your breaks in a cool shaded area and allowing time for recovery from the heat during the day are effective ways to avoid a heat-related illness.
- Avoid or limit the use of alcohol and caffeine during periods of extreme heat. Both dehydrate the body.
- If you or a co-worker start to feel symptoms such as nausea, dizziness, weakness, or unusual fatigue, let your supervisor know and rest in a cool shaded area. If symptoms persist or worsen seek immediate medical attention.
- Whenever possible, wear clothing that provides protection from the sun but allows airflow to the body. Protect your head and shade your eyes if working outdoors (maintain company policy on uniforms requirements).
- When working in the heat pay extra attention to your co-workers and be sure you know how to call for medical attention (**911**).

HEAT EXHAUSTION		OR	HEAT STROKE	
Faint or dizzy			Throbbing headache	
Excessive sweating			No sweating	
 Cool, pale, clammy skin			Body temperature above 103° Red, hot, dry skin	
Nausea or vomiting			Nausea or vomiting	
Rapid, weak pulse			Rapid, strong pulse	
Muscle cramps			May lose consciousness	
<ul style="list-style-type: none">• Get to a cooler, air conditioned place• Drink water if fully conscious• Take a cool shower or use cold compresses			<h1>CALL 9-1-1</h1> <ul style="list-style-type: none">• Take immediate action to cool the person until help arrives	



Weather.gov/socialmedia
Weather.gov/heat



@SacramentoOES
SacramentoReady.org

Factors That Increase Risk to Workers

- High temperature and humidity
- Direct sun exposure (with no shade)
- Limited air movement (no breeze)
- Low fluid consumption
- Physical exertion
- Heavy personal protective clothing and equipment
- Poor physical condition or health problems
- Certain medications like blood pressure and antihistamines
- Pregnancy
- Lack of recent exposure to hot working conditions
- Previous heat-related illness
- Advanced age (65+)
- Certain medical conditions like heart disease

YouTube Video on Heat Safety

<https://www.youtube.com/watch?v=QWoux3EVDrc>

*The above YouTube Video is construction-based, but it aligns well with our heat stress program.

Heat Index Calculator

<https://www.calculator.net/heat-index-calculator.html?airtemperature=85&airtemperatureunit=fahrenheit&humidity=70&ctype=1&x=61&y=23>

*The above Heat Index calculator takes heat and humidity into account and provides clear directions for supervising team members in hotter environments.

Safety Training Sign In Sheet

Date: _____

Training Title: Heat Stress Recognition & Prevention Program

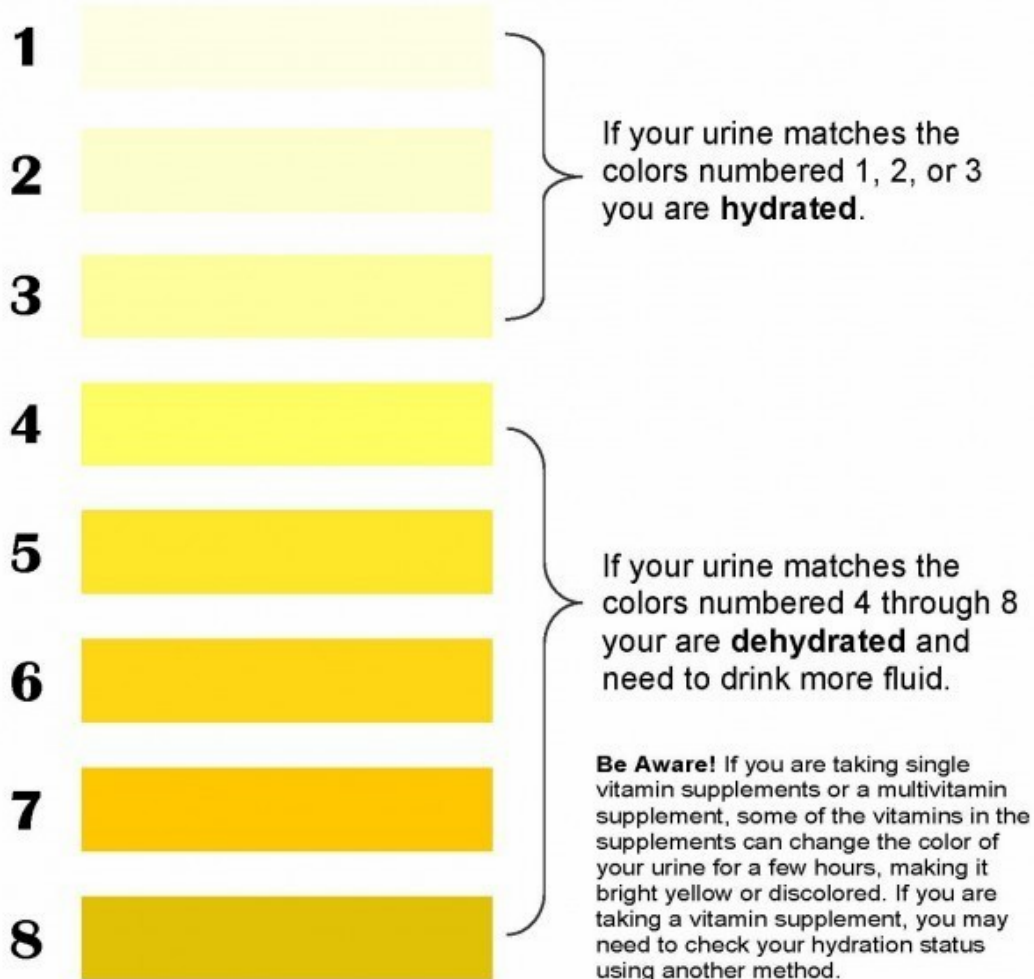
Location: _____

Trainer: _____

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Am I Hydrated? Urine Color Chart

This urine color chart is a simple tool you can use to assess if you are drinking enough fluids throughout the day to stay hydrated.



Your Nose Knows!

While some foods, like asparagus, can cause your urine to smell different, a strong smelling odor can also be a sign of dehydration.

	temperature (°F)															
	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Caution
 Extreme Caution
 Danger
 Extreme Danger

Effects of the heat index

Celsius	Fahrenheit	Notes
27-32°C	80-90°F	Caution: fatigue is possible with prolonged exposure and activity. Continuing activity could result in heat cramps.
32-41°C	90-105°F	Extreme caution: heat cramps and heat exhaustion are possible. Continuing activity could result in heat stroke.
41-54°C	105-130°F	Danger: heat cramps and heat exhaustion are likely; heat stroke is probable with continued activity.
Over 54°C	Over 130°F	Extreme danger: heat stroke is imminent.

First Aid



OSHA's [Medical Services and First Aid standard](#) and the [Medical Service and First Aid in Construction](#) require the ready availability of first aid personnel and equipment. First aid for heat-related illness involves the following principles:

- Take the affected worker to a cooler area (e.g., shade or air conditioning).
- Cool the worker immediately. Use active cooling techniques such as:
 - Immerse the worker in cold water or bath. **This is the best method to cool workers rapidly in an emergency.** (avoid making the team member shiver....this can raise the body's metabolism and oxygen usage and generate heat).
 - Remove outer layers of clothing, especially heavy protective clothing.
 - Place ice or cold wet towels on the head, neck, trunk, armpits, and groin.
 - Use fans to circulate air around the worker.
- Never leave a worker with heat-related illness alone. The illness can rapidly become worse. Stay with the worker.
- When in doubt, call 911!

Understanding the Contents of this Program

Supervisors (Managers or District Managers)

Supervisors need to review this program and understand all materials before attempting to present any part (s) of the program to their team members. While reviewing this program, please reach out to the Safety & Compliance Department Manager at anytime there are questions or concerns about this program. Post or make available all learning elements of this program to your team members so that they can access the material at any time. At the conclusion of the training of team members, have the team members sign the roster and the supervisor should always keep the roster available for review. The supervisor may also send a copy of the completed roster to the Safety & Compliance Department Manager.

Team members

Team members need to review this program in its entirety, understand all aspects of the program, and put into practice the contents of this program in order to eliminate any events related to heat stress in the workplace (and in your personal lives as well). Team members are to review this program yearly, anytime a question arises related to heat stress, and anytime the program is updated, or changes are made. Understanding the contents of this and any other safety related program(s) is the responsibility of each team member employed by Mammoth Holdings.

Safety & Compliance Department Manager's Contact Information

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