

HEAT ILLNESS PREVENTION

Purpose

This program is designed to reduce the risk of work-related heat illnesses. Pulsar Helium (the company) is committed to taking every precaution to protect employees who might be exposed to heat stress, including establishing safe work practices, heat illness prevention controls, and emergency preparedness, which will be detailed in this plan. Pulsar Helium complies with local, state, and federal regulations.

Scope

This procedure applies to all company employees exposed to hot environments in the course of/during their employment duties. This program may be adopted for use by contractors who do not have a formal heat illness program.

Definitions

Acclimatization- means 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- means 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.

Heat Stress- stress on the body due to high temperatures or exertion, which can lead to heat illness if unchecked.

Preventative recovery period- means a period of time to recover from the heat in order to prevent heat illness.

Shade- means 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.

Requirements

All managers and supervisors are responsible for implementing and maintaining the Heat Illness Program in their work areas.

Provision of Water

Employees shall have access to potable drinking water. Where it is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift.

Access to Shade

Employees will be provided with access to shade as well as sufficient rest periods will be provided in an area that is conducive to the cooling of the body, such as but not limited to cooling rooms or tents, trailer/s

on site, vehicle etc. Employees 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. Such access to shade shall be permitted at all times. See definition of "Shade".



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Control Measures

Each work location involved in working in hot environments shall implement measures that must be in place to control the effects of environmental factors that can contribute to heat related illnesses. The most common environmental factors are air temperature, humidity, radiant heat sources and air circulation.

Physical factors that can contribute to heat related illness shall be taken into consideration before performing a task. The most common physical factors that can contribute to heat related illness are type of work, level of physical activity and duration, and clothing color, weight and breathability.

Supervisors must ensure personal factors that contribute to heat related illness are taken into consideration before assigning a task where there is the possibility of a heat-related illness occurring. The most common personal factors that can contribute to heat related illness are age, weight/fitness, drug/alcohol use, prior heat-related illness, etc.

Each work site shall develop site specific procedures but shall include the minimum:

- Bring at least 2 quarts per employee at the start of the shift, and employees are encouraged to report to supervisor when water supply gets low.
- Supervisors will provide frequent reminders to employees to drink frequently.
- Every morning there will be short tailgate meetings to remind workers about the importance of frequent consumption of water throughout the shift during hot weather.
- Place water containers as close as possible to the workers.
- Water levels should not fall below the point that will allow for adequate water during the time necessary to effect replenishment.
- Working hours will be modified to work during the cooler hours of the day, when possible.
- When a modified or shorter work-shift is not possible, more water and rest breaks will be provided.
- Supervisors will continuously check all employees and stay alert to the presence of heat related symptoms.
- Supervisors will carry cell phones or other means of communication, to ensure that emergency services can be called and check that these are functional at the worksite prior to each shift.
- On occasion, workers will be reminded about address and directions to the worksite to inform medical responders and emergency procedures. The County Specific Emergency Action Plans are available at Pulsar Helium office.

Heat Illness Detection and Response

Heat cramps:

This affects employees who have perspired so heavily that they have depleted the body's water and salt.

Symptoms:

- Muscle cramps
- Pain or spasms in the abdomen, arms, or legs

First aid:

The victim should do the following:

- Sit and rest in a cool place.
- Drink sports drinks, juice, or water combined with food.

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- After recovery, do not begin strenuous work again for several hours.
- Seek medical help if you have heart problems, are on a low-sodium diet, or if you don't feel better after one hour.

Heat exhaustion:

This is the body's response to not being able to cool itself efficiently due to dehydration. Without prompt treatment, this condition can lead to heat stroke.

Symptoms:

- Rapid, weak pulse
- Headache
- Heavy sweating
- Extreme weakness
- Dizziness or fainting
- Irritability
- Nausea or vomiting
- Cold, pale, clammy skin

First aid:

- Help the victim to do the following:
 - Sit and rest in a cool place.
 - Drink small amounts of cool water.
 - Take a cool shower or bath or apply ice packs.
- Monitor the victim carefully. If they do not improve within 30 minutes, get medical help.
- Confusion, vomiting, or fainting may indicate a more serious condition. Seek medical attention immediately in this case.

Heat stroke:

This condition occurs when the body is unable to control its temperature as a result of prolonged exposure or physical exertion in high temperatures. Untreated, it can quickly cause death or disability.

Symptoms:

- High body temperature
- Strong, rapid pulse
- Confusion
- Loss of coordination
- Hot, red, dry or moist skin
- Nausea and vomiting
- Seizure or unconsciousness

First aid:

- Contact emergency medical services immediately.
- Move the victim to a cool, shaded area.
- Remove any excess clothing.
- Cool the victim's body as quickly as possible, using ice or cold water.

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- If the victim is able to drink, give him or her cool fluids.

Emergency Response Procedures

- If an employee shows signs of heat illness, they will be monitored and shall not be left alone or sent home without being offered first aid or emergency medical services.
- If an employee reports symptoms of heat illness or if a supervisor or coworker sees evidence of the symptoms, the supervisor will take immediate action appropriate to the symptoms.
- If symptoms indicate severe heat illness, the employer will provide for prompt medical attention according to the Emergency Action Plan for the respective county.

Training

Training in the following topics shall be provided to all supervisory and non-supervisory employees:

- 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, when the work environment is hot, and employees are likely to be sweating more than usual in the performance of their duties;
- The importance of acclimatization;
- The different types of heat illness and the common signs and symptoms of heat illness;
- The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers;
- Pulsar Helium procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary;
- Pulsar Helium 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;
- Pulsar Helium 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.

Supervisors must receive training in the prevention of heat related illnesses prior to supervising employees working in the heat.

Training for employees shall be in a form readily understandable by all affected employees.

Pulsar Helium shall ensure all contractors, subcontractors, staffing companies, etc. employees (including temporary) working outdoors have been trained in heat illness prevention.