

# Clearheart Construction Co., Inc.

## Heat Illness Prevention

### Heat Illness Prevention Program

Heat related work illness is a real threat to our employees who work outside during months of high heat and humidity. In order to lessen this threat, this program has been prepared.

Our Contact Person/Program Administrator is:

All current employees will be given instruction in this program prior to working in heat illness inducing environments or other severe environmental conditions. All new hires will be given this instruction prior to performing any job task. These written procedures, as well as all safety materials, are readily available to all employees.

On days when applicable environmental conditions exist, supervisors will, before the morning shift starts, remind workers of the danger of heat illness, the procedures to lessen its impact, and, in the worst case, the procedure for medical response.

All persons should recognize the symptoms of heat related illness. As noted in Section I of our Safety Program, symptoms and first aid procedures are:

#### HEAT EXHAUSTION

(Fatigue; weakness; profuse sweating; normal temperature; pale clammy skin; headache; cramps; vomiting; fainting)

Remove from hot area.

Have victim lay down and raise feet.

Apply cool wet cloths.

Loosen or remove clothing.

Allow small sips of water if victim is not vomiting.

#### HEAT STROKE

(Dizziness; nausea; severe headache; hot dry skin; confusion; collapse; delirium; coma and death)

Call for immediate medical assistance.

Remove victim from hot area.

Remove clothing.

Have victim lay down.

Cool the body (shower, cool wet cloths)

**Do not** give stimulants.

The purpose of this program is to take definitive measures prior to the onset of heat exhaustion and heat stroke so that medical response will not

be necessary. If the above conditions do present themselves, the supervisor, who will always have access to a mobile phone, will follow our **standard emergency procedures** listed below:

1. Call 911 or the emergency response number posted on the job site.
2. Provide clear and precise directions to the work site for the emergency responders.
3. Provide any medical assistance he/she is trained and certified to do.
- 4 **DO NOT** provide any medical assistance he/she is not trained to do.

Definitive measures to prevent heat related illness include:

1. Provision of water
2. Provision of shade
3. Provision of rest (recovery period)
4. Modified work procedures

### **Provision of water**

Water is a key preventive measure to minimize the risk of heat related illnesses. Employees will have access to adequate quantities of potable drinking water.

Where the supply of water is not plumbed or otherwise continuously supplied, water will be provided in sufficient quantity at the beginning of the work shift to provide one quart per employee per hour for drinking for the entire shift.

Supervisors will encourage the frequent drinking of water. The supervisor or a designated person will monitor water consumption every 30 minutes. Employees are encouraged to report bad tasting water or low levels of water immediately so the situation can be corrected.

Supervisors will provide frequent reminders to employees to drink frequently, and, if needed, more water breaks will be provided.

Every morning during conditions where this program is applicable, there will be short tailgate meetings to remind workers about the importance of frequent consumption of water throughout the shift.

Water containers will be placed as close as possible to the workers. Supervisors will monitor water consumption and water supply and ensure adequate levels are available to last the whole shift.

Disposable/single use drinking cups will be provided to employees

During extreme conditions, the supervisor will blow an air horn to remind workers to take a water break.

Supervisors will remind employees that personal military style canteens may be worn containing water. Employees are cautioned, however, that sharing water from a personal canteen is forbidden and, because of the health hazard to the user and the person with whom it is shared, disciplinary action will be taken against both employees if they drink out of the same container. This disciplinary action will be documented using our disciplinary enforcement form.

As a reminder of the importance of water to the human system, the following information is supplied which was extracted from one of our safety meetings:

## FLUIDS

If you heard in advance that this safety meeting was on job site fluids, you may well have thought that the meeting would focus on the storage, use, clean-up, and possible emergency procedures involved with the liquid chemical products used on or job sites. You'd be wrong. While the above are important topics and questions related to them should be addressed to the competent person, this safety meeting is about **your** bodily fluids.

From a safety standpoint, you must not neglect your need for potable (drinkable) fluids. Water is not only the most abundant of all compounds found on the earth, it is the most abundant part of you -- actually about 65% of you is water.

On construction sites, exertion and heat dictate the need for plenty of water.

Drink fluids! From a life process standpoint, what fluid intake is doing is keeping you healthy by allowing your body to maintain its core body temperature at its appropriate level. When your brain senses that cooling action is needed, your body circulates blood to your skin to allow it to cool with the outside temperature. If the water used for sweat is not replaced, a water deficit starts to occur. The millions of chemical reactions taking place in your body at every moment can only occur in the presence of water. The fluids in your body transport nourishment, gases, and waste.

Imagine your body as a water based chemical factory that functions only within a narrow temperature range. An average, healthy person, at rest, has an oral temperature of between 98.6°F and 100.4°F. If your body temperature reaches 105.8°F, convulsions may occur. Your whole central nervous system is impaired when your body temperature rises 9°F above normal. At

106.0°F, the thermoregulatory center in your brain fails and, because of damage to your central nervous system, the sweating (cooling) mechanism cuts off when you need it most. It is a vicious circle -- the hotter you get, the more heat you generate through metabolism. In fact, at 107.6°F, cellular metabolism is 50% higher than at normal temperatures.

Without getting too graphic, here are some of the problems associated with extreme water loss: cells will shrink; the skin will lose its elasticity; skin and mucous membrane cells will dry out; eyeballs will become soft; weight loss will occur; the body temperature will rise; apprehension, restlessness, and even coma may occur; urine will become concentrated; renal shutdown will occur; red blood cells will shrink; death.

Stay healthy! Drink water!

Water is truly the stuff of life.

### **Provision of shade**

The supervisor will ensure that employees have access to shade at all times to minimize the risk of heat related illnesses. If natural shade is not available, the supervisor will ensure that sun umbrellas or portable canopies are provided in adequate number. These umbrellas or canopies will be placed in close proximity to the work activity (i.e., no more than 50-100 yards).

At or below temperatures of 85°F, the supervisor will ensure that employees have timely access to shade upon request. For temperatures above 85°F, one or more areas with shade will be provided at all times while employees are present. Shade areas will accommodate at least 25% of employees on the shift at any one time. Any employee who feels the need for shade will protect himself/herself from the sun for a period of not less than 5 minutes.

Lastly, but importantly, persons must provide personal shade in the form of shirts (preferably light colored to reflect the sun). Shirts are required to prevent sunburn, another health hazard.

### **Provision of rest (recovery period)**

While shade and rest often go hand in hand, they are two distinct activities. Any employee who, due to heat, humidity, or exertion under the provisions of this program, may rest for a period of not less than 5 minutes if that employee believes a preventative recovery period is required.

## **Modified work procedures**

The supervisor will make every effort, consistent with our effort to properly perform our job tasks, to modify work procedures. Example would include performing work requiring heavy exertion during the cooler hours of the day, assigning more persons to a job task to lessen the effort required of each, and the use of machinery in lieu of physical effort.

All employees, but new employees in particular, should be allowed to acclimate to hotter weather. It takes a body four to fourteen days to acclimate to hotter weather. Reduced work loads and careful attention to new employees may be required.

## **Procedures for Extremely High Heat**

When the temperature exceeds 95°F, the following high heat procedures will be employed by the supervisor:

1. Effective communication will be established by voice, observation or electronic means.
2. Observation of employees for alertness and signs/symptoms of heat illness.
3. Reminding employees to drink water throughout the shift.
4. Closely supervising employees for their first 14 days of employment.

## **Training**

### **Employee Training**

All employees will read this program and be given interactive training in its provisions. A copy of this program will be kept in our project manual during applicable periods of heat and humidity.

### **Supervisor Training**

All supervisors will receive heat illness training prior to supervision of employees. Supervisor training will include our emergency response procedures (page 2, above) when an employee exhibits symptoms consistent with possible heat illness (page 1, above). The program administrator will ensure that supervisors are well versed in the hazards of, and prevention of, heat related illnesses.

Training will also include reading the below informational items prior to utilization of this program and having the opportunity for discussion and clarification of the below topics as well as the provisions of this program with the program administrator.

### **CDC Working in Hot Environments**

### **The American Red Cross Health & Safety Tips, Heat Related Illness**

Both employees and supervisors are to understand the measures that must be in place to control the effect of environmental factors that can contribute to heat related illnesses. These include air temperature, humidity, radiant heat sources and air circulation.

**Factors to consider when assigning work:**

Supervisor should consider the below factors **prior** to assigning work to employees where possible heat related illnesses may occur:

**Physical Factors that contribute to heat related illnesses:**

1. type of work
2. level of physical activity
3. duration of physical activity
4. clothing color, weight and breathability

**Personal (Employee) Factors that contribute to heat related illnesses:**

1. age
2. fitness
3. weight
4. drug/alcohol use
5. prior heat related illness.