ALABAMA MUNICIPAL INSURANCE CORPORATION
MUNICIPAL WORKERS COMPENSATION FUND, INC.
Loss Control Division

HEAT STRESS

Date: _____ Time: _____ Department: _____ Person Conducting: _____

Meeting Objective: To train employees to recognize the hazards as well as the signs of heat stress. They should be made aware of personal practices that can reduce individual risk.

Under normal conditions, the brain causes alterations in the rate and amount of blood circulating through the skin when the body's temperature rises above 98.6 degrees Fahrenheit. When this happens, the heart begins to pump harder, blood vessels expand to handle the extra flow, and tiny capillaries in the skin fill with blood. When the blood circulates closer to the surface of the skin, the extra heat is transferred away from the body. If the body temperature continues to rise, the body's sweat glands begin to work. Cooling takes place when sweat evaporates from the skin's surface. Employees are affected by heat stress when the body no longer can release enough heat to maintain normal body temperature. If heat stress goes untreated it can lead to a variety of problems including heat rash, heat cramps, heat exhaustion and heat stroke.

Heat Rash

Heat rash is usually an uncomfortable red skin rash. It may occur in hot and humid environments where sweat is not easily removed from the surface of the skin by evaporation. When it is extensive or complicated by infection, heat rash can be so uncomfortable that it inhibits sleep and impairs an employee's performance; it can even result in temporary disability.

Treatment – Heat rash can be relieved by resting in a cool place and allowing the skin to dry thoroughly between exposures to heat.

Heat Cramps

Heat cramps are often the first signs that the body is having trouble regulating its response to heat. Heat cramps are caused by heavy sweating while a person is not drinking enough liquids or replacing lost electrolytes. This condition often robs blood from the larger muscle groups; such as the stomach and quadriceps. This makes the muscles cramp.

Treatment - Generally, rest and replacement of fluids is sufficient treatment for heat cramps. Give cool water or a commercial sport drink, about 4 ounces every 15 minutes. Also, lightly stretching and gently massaging the affected muscles can be useful in relieving discomfort.

Heat Exhaustion

Heat exhaustion develops as a result of the loss of fluid through sweating, combined with an employee's failure to drink enough fluids. An employee suffering from heat exhaustion still sweats but experiences

extreme weakness or fatigue, giddiness, nausea, or headache. The skin is clammy and moist, and the complexion pale.

Treatment - Once the signals of heat exhaustion begin to appear, a victim can quickly get worse. Immediate treatment is necessary. A victim should rest in a cool place and drink plenty of water. A severe case involving a victim who vomits or loses consciousness may require longer treatment under medical supervision. Salt tablets should NOT be taken. These tablets contain the wrong type of salt, and the concentration is too high for a person to take all at once.

Heat Stroke

Heat stroke is caused by the failure of the body's internal mechanisms to regulate the body's core temperature. Sweating stops and the body can no longer rid itself of excess heat. Signs include mental confusion, delirium, loss of consciousness, convulsions, or coma; a body temperature of 106 degrees Fahrenheit or higher; rapid, weak pulse; rapid, shallow breathing; and, hot, dry skin that may be red, mottled, or bluish. Victims of heat stroke can die unless treated promptly.

Treatment - When an employee appears to be suffering from heat stroke, medical help must be called immediately; prompt first aid can prevent permanent injury to the brain and other vital organs. Remove the victim -immediately from the heat to a cool place and cool them down by applying towels soaked in water and fanning vigorously to increase cooling. Wet towels should be applied to the wrists, ankles, arm pits, groin, and neck to cool the large veins. If a victim is fully conscious, fluids should be replaced as soon a possible. Do not let a victim drink too much too quickly. Give about on 4-ounce glass of water every 15 minutes.

The following are guidelines for the prevention and control of heat disorders:

1. Take breaks to rest and cool down.
2. Employees should drink large amounts of water regularly to avoid dehydration. The fluid intake recommendation for people who work in hot or humid environments is at least 4 to 8 ounces every 15 to 20 minutes. Ample supplies of cold drinking water should be available at all job sites
3. It takes time to acclimatize to heat. New employees should be broken in slowly. The body will in 1-2 weeks.
4. Employees should eat right and get plenty of exercise. Employees who are overweight or in poor health are more susceptible to heat illness.
5. Employees should reduce alcohol consumption. Many cases of heat stroke have occurred the day after a "night on the town"
6. Employees should wear light colored, cotton clothes and keep shirts on. Shirts will retain moisture when sweating and help cool the body. Hats can be worn to shade the head.
7. Work schedules should be adjusted where possible to avoid working during the hottest periods of the day. Employees can be rotated from working in the heat to tasks done where it is cooler.
8. Management can help "beat the heat" through engineering controls. Air conditioning is best in many settings. Local exhaust ventilation can remove heat from machinery or a work process. Fans and blowers can keep an area cool by circulating air. Heat shields or insulation around machinery can reduce radiant heat. A dehumidifier can reduce the effect of heat. Engineering controls are limited outdoors. If feasible, consider building a canopy or other cover to provide shade.

List the types of operations in your company that expose workers to heat. Discuss the precautions that are currently being taken, and what additional precautions can be taken in the future to protect worker from heat disorders.

SIGNATURES OF ALL THOSE IN ATTENDANCE

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NOTE: This document is not intended to be legal advice. It does not identify all the issues surrounding the particular topic. Public agencies are encouraged to review their procedures with an expert or an attorney who is knowledgeable about the topic. Reliance on this information is at the sole risk of the user.[1]

1