TAILGATE SAFETY TALK

Hazards of Working in Hot Weather

INTRODUCTION
This Tailgate Safety Talk is intended to provide information and guidance for working in hot weather. Common sense and reasonable work practices described in the following can minimize the effects. Four (4) environmental factors can affect working in hot weather: temperature, humidity, radiant heat from the sun, and air movement. Also important are personal characteristics such as age, weight, fitness, medical condition, and acclimatization (getting used to high heat). The body reacts to high external temperature by circulating blood to the skin, increasing skin temperature. This allows the body to give off excess heat through the skin. However, when muscles are being used for physical labor, less blood is available to flow to the skin and release heat. Sweating also helps maintain stable internal body temperature, but is effective only if humidity is low enough to permit evaporation, and if lost fluids and salts are replaced. Salt tablets are not recommended. Electrolyte fluids, which include most sports drinks, contain potassium, calcium, and magnesium salts and are recommended.

PROTECTION FROM HEAT
Most heat-related health problems can be prevented, or risk of developing them reduced, by following basic precautions to lessen the effect of heat on the body.
(1) Work practices - - shielding from the sun (umbrellas on rollers, for example); use of power tools to reduce exertion; and personal cooling devices or protective clothing can reduce the hazards of high heat.
(2) Provide ample drinking water -- as much as a quart per hour can help reduce risk of heat disorder.
(3) Heavier work can be scheduled during cooler periods.
(4) Ample rest in a cool area can help avoid heat-related symptoms.
(5) Acclimatization to heat through initial short exposures, followed by longer periods of work in hot weather, can minimize heat impact.
(6) Awareness is vital - - Replace fluids and salt lost; recognize symptoms; and monitor water weight loss to guard against dehydration. Older, overweight individuals, and those on certain medications, are at greater risk.

HEAT DISORDERS
(1) Heat stroke is caused by failure of the body's internal mechanism to regulate its core temperature. Sweating stops and the body can no longer rid itself of excess heat. Telltale signs include:
(a) Mental confusion, delirium, loss of consciousness, convulsions or coma;
(b) Body temperature of 106 degrees F or higher;
(c) Hot dry skin which may be red, spotted, or bluish. Medical attention must be sought immediately. While awaiting medical help, move the victim to a cool area, apply water with a cloth or sponge, and fan vigorously to increase cooling. Early recognition and treatment of heat stroke are the only means of preventing permanent brain damage or death.
(2) Heat exhaustion results from loss of fluid through sweating and failure to drink enough fluids, and/or take in enough salt. An individual with heat exhaustion experiences extreme fatigue, giddiness, nausea, or headache. Skin is clammy and moist, complexion pale or flushed, and body temperature normal or slightly higher. Treatment is usually simple: rest in a cool place and drink water or, if available, an electrolyte solution to quickly restore potassium, calcium, and magnesium salts. Severe cases of vomiting or loss of consciousness require medical attention.

(3) Heat cramps are painful muscle spasms from drinking large quantities of water without replacing lost body salt. Tired muscles are usually most susceptible to cramps. Cramps may occur during or after exertion and may be relieved by drinking liquids. More serious cases require medical attention. Fainting may be a problem for an individual not acclimatized to a hot environment, who remains still in the heat. Movement reduces possibility of fainting. Seek medical attention if fainting occurs.

(4) Heat rash, also known as “prickly heat”, may occur when sweat does not evaporate from the surface of the skin. Serious heat rash can inhibit sleep and impede performance, and result in temporary disability. It can be prevented by resting in a cool place and allowing skin to dry.

SUMMATION
Heat disorders are considered a serious hazard to health. Use of preventative measures and lessening of the stressful conditions to protect the worker are recommended. Some examples of these measures are as follows:
(1) Schedule strenuous activities during the earlier/cooler times of the day, if possible.
(2) Consider additional workers to perform the task and/or implement a work/rest regimen to alternate workers as well as keep the production pace.
(3) Provide a shaded rest area with plenty of drinking water and electrolyte fluids.
(4) Utilize engineering controls if possible, such as shade umbrellas on paving equipment.
(5) Instruct workers to keep a watchful eye on their co-workers, recognize early signs of heat disorders, point them out to each other, and take rest periods as needed. Alternatively a designated spotter could monitor the workers for heat disorders.

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