



TDCJ Risk Management's Training Circular

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Risk Management Issues

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July Outdoor Safety



Hot summer months pose special hazards for outdoor workers who are exposed to heat, sun, and other hazards. Employers and workers should know the potential hazards in their workplaces and how to manage them.



SUN

Sunlight contains ultraviolet (UV) radiation, which causes premature aging of the skin, wrinkles, cataracts, and skin cancer. There are several ways workers can block harmful rays: Cover up; Use sunscreen; Wear a hat; Wear UV-absorbent shades; and Limit exposure.

HEAT

The combination of heat and humidity can be a serious health threat during the summer months and working outdoors puts workers at risk for heat-related illnesses. Workers are at increased risk for heat-related illnesses when they:

- use improper work methods;

- are not used to hot temperatures / high humidity;
- are over the age of forty;
- are in poor physical condition or overweight;
- use certain medications, such as antihistamines, diuretics, and tranquilizers;
- have had prior heat-related illnesses;
- use drugs or alcohol within 24 hours prior to working in the heat;
- have heat rash or sunburn;
- wear restrictive or too much clothing.

HEAT EXHAUSTION

Heat exhaustion is a mild form of heat-related illness that can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids.



Those most prone to heat exhaustion are elderly workers, workers with high blood pressure, and workers working in hot environments.

Warning signs of heat exhaustion include: paleness; muscle cramps; tiredness; weakness; dizziness; and/or fainting; headache; nausea or vomiting; and/or fainting.

Cooling measures that may be effective include: cool, nonalcoholic beverages; rest; cool shower, bath, or sponge bath; lightweight clothing.

HEAT RASH

Heat rash is a skin irritation caused by excessive sweating during hot, humid weather. Heat rash looks like a red cluster of pimples or small blisters. It is more likely to occur on the neck and upper chest, in the groin, under the breasts, and in elbow creases.

SUNBURN

Sunburn should be avoided because it damages the skin. Although the discomfort is usually minor and healing often occurs in about a week, a more severe sunburn may require medical attention.

Consult a doctor if these symptoms are present: fever; fluid-filled blisters; or severe pain.

Also, remember these tips when treating sunburn: avoid repeated sun exposure; apply cold compresses or immerse the sunburned area in cool water; apply moisturizing lotion to affected areas, not salve, butter, or ointment; and do not break blisters.



HEAT STROKE

Heat stroke occurs when the body is unable to regulate its temperature. The body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. The body temperature of the workers may rise to 106°F or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not provided immediately.

Recognizing Heat Stroke

Warning signs of heat stroke vary, but may include the following: an extremely high body temperature (above 103°F, orally); red, hot, and dry skin (no sweating); rapid, strong pulse; throbbing headache; dizziness; nausea; and unconsciousness.

If a worker shows signs of heat stroke have someone call for immediate medical assistance and cool down the victim. Do the following:

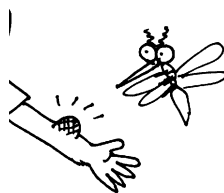
- Get the victim to a shaded area.
- Get medical assistance as soon as possible.
- Cool the victim using whatever methods available.
- Monitor body temperature, and continue cooling efforts until the body temperature drops to 101°-102°F.
- If emergency personnel are delayed call 911 for further instructions.
- Do not give the victim alcohol to drink.

Sometimes a victim's muscles will begin to twitch uncontrollably as a result of heat stroke. If this happens, keep the victim from injuring himself, do not place any object in the mouth and do not give fluids. If there is vomiting, make sure the airway remains open by turning the victim on his or her side.

PREVENTION

Prevention of heat related illnesses includes ample fluid intake during work, proper work-rest cycles, excluding people at high risk from working under conditions of extreme heat and humidity, and maintaining adequate in door conditions, such as access to cool fluids and use of cooling fans, for persons at increased risk for heat related illness.

INSECT BITES AND STINGS



Each year, many workers are stung by insects while on the job.

For most, these stings mean pain and discomfort generally lasting only a few hours. Symptoms may include redness, swelling, and itching at the site of the sting. However, some people are allergic to insect stings. This means that their immune systems overreact to the venom injected by a stinging insect.



After the first sting, the allergic person's body produces an allergic substance called *Immunoglobulin E (IgE) antibody*, which reacts with the insect venom. If the worker is stung again by an insect of the same or similar species, the insect venom interacts with the IgE antibody produced in response to the earlier sting. This triggers the release of histamine and other chemicals that cause allergic symptoms.

Emergency Care for Victims with Mild Reactions

- Move to a safe area to avoid more insect stings.
- Scrape or brush off the stinger with a straight edged object, such as a credit card or the back of a knife. Don't try to pull out the stinger with tweezers or with the fingers; doing so may release more venom.
- Wash the area carefully with soap and water. Do this two

to three times a day until the skin is healed.

- Swab the site with disinfectant.
- To reduce pain and swelling, apply ice or a cold pack.
- Apply 0.5 percent or 1 percent hydrocortisone cream, calamine lotion, or a baking soda paste to the bite or sting several times a day until the symptoms subside.
- Take an antihistamine containing diphenhydramine or chlorpheniramine maleate.



Emergency Care for Victims with Severe Reactions

Severe reactions may progress rapidly. Dial 911 or call for emergency medical assistance if the worker experiences any of the following signs or symptoms:

- difficulty breathing;
- swelling of the lips or throat;
- faintness;
- confusion;
- rapid heartbeat;
- hives; or
- nausea, stomach cramps, and vomiting.

A sting anywhere in the mouth warrants immediate medical attention. That's because stings in the mucous membranes of the mouth can quickly cause severe swelling that may block the airway.

While Waiting for Emergency Transportation

- have the person lie down;
- watch for and treat signs of shock;
- if the person is unconscious and breathing, lay the person on his or her side to allow drainage from the mouth;
- if there's no pulse, begin cardiopulmonary resuscitation (CPR); and
- check to see if the person is carrying an allergy kit containing injectable epinephrine and follow instructions on the kit.

Less severe allergic reactions include mild nausea and stomach cramps, diarrhea, or swelling larger than 2 inches in diameter at the site. Recommend the worker see their physician promptly if they experience any of these signs and symptoms.

Remember that injectable epinephrine is rescue medication only, and the worker must still have someone take them to an emergency room immediately if they are stung. Additional medical treatment may be necessary.



Workers with severe allergies may want to consider wearing a special bracelet or necklace that identifies the wearer as having severe allergies and supplies other important medical information.

Stay out of the "territory" of the stinging insects' nests. These

insects are most likely to sting if their homes are disturbed, so it is important to have hives and nests around the workplace destroyed. Since this activity can be dangerous, a trained exterminator should be hired.



If a worker encounters any flying stinging insects, instruct them to remain calm and quiet, and move slowly away from them. Many stinging insects are foraging for food, so don't smell like a flower—avoid brightly colored clothing and perfume when outdoors. Because the smell of food attracts insects, be careful when cooking, eating, or drinking sweet drinks like soda or juice outdoors. Keep food covered until eaten.

Wear closed-toe shoes outdoors. Also, avoid loose-fitting garments that can trap insects between material and skin.

LAWN EQUIPMENT

Many injuries result from the misuse of power push mowers and power line trimmers (edger). Many accidents involving power lawn equipment result in severe lacerations and often amputations. Wounds caused by these accidents are prone to infection due to the unsanitary conditions of the environment.

Help reduce these accidents by following a few simple safety precautions.

Power Push Mowers

- Read the operator's manual and know how to operate the machine properly.
- Don't disable or bypass safety devices and read all equipment warning labels.
- Protect yourself and others against thrown objects by clearing the work area of rocks, sticks, toys, or any other materials that could become a missile if struck by the mower blades.
- Keep the discharge chute guard or grass catcher in place at all times.
- Keep bystanders, especially children, away from the mowing area.
- Keep hands and feet away from the mower blades while it is running. If the discharge chute clogs or the grass catcher is full, stop the engine before attempting to clear the clog or empty the grass catcher.
- Never leave a running mower unattended and stop the engine before adjusting the wheels of the mower.
- Mow in a forward direction whenever possible.
- Do not walk backwards while pulling the mower toward you. If you trip, the mower could end up on top of your feet or legs.
- Mow across the slope of hill-sides. Do not mow up and down the slope.
- To ensure good footing, wait until the grass is dry before mowing.
- Handle fuel safely. Before



refueling, stop the engine and allow it to cool. Wipe up spilled fuel or allow it to evaporate before starting an engine.

- Never refuel gasoline-powered equipment indoors.

Power Line Trimmers

- Read the operator's manual and get proper instructions before operating a trimmer.
- Never operate the trimmer with the guard removed and clear the work area of objects such as sticks, rocks, wire, etc., before starting work.
- Clear the work area of people and animals for a radius of approximately 35 feet around the operator.
- Always wear eye protection.
- Keep the cutting line or blade away from your feet and legs.
- Position the trimmer away from your body to avoid contact with the muffler or other hot engine parts.
- Move the trimmer in a sweeping motion away from your body.

**Clothing and Maintenance:**

- Wear close-fitting clothes, long pants or slacks, and closed safety-toe shoes with traction soles.
- Protect your eyes with safety glasses or goggles.
- Wear gloves to service or adjust equipment, especially when working on the blades.
- When working on equipment with blade guards removed, take out the spark plug and ground the spark plug wire to

prevent accidental engine start.

**Beat the Heat,
Stay Safe!****REFERENCES:**

- TDI DWC Resource Center
<http://www.tdi.texas.gov/wc/safety/videoresources/index.html>



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