Extreme Heat

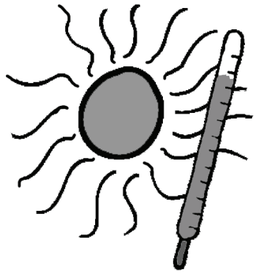
What Outdoor Workers Must Know
To Protect Their Health
When Temperatures Soar

A Life-Saving Guide to Heat Stress
From CWA's Occupational Safety and Health Department

CWA
SAFETY & HEALTH
ACTIVIST
The Union for the Information Age

This Health and Safety Fact Sheet was prepared by the Communications Workers of America, 2010.

CWA SAFETY & HEALTH



Heat Stress

Heat stress is a risk for tens of thousands of CWA members whose jobs always or frequently require them to work outdoors, even in extremely hot weather. Telecom technicians, camera operators, traffic enforcement agents, highway crews and others who work outside need to be aware of the risks and know how to protect themselves.

Exposure to extreme heat can cause heat rash, cramps, dizziness, fainting, exhaustion, heat stroke and even death. Since 2004, two CWA members have died while working on extremely hot days, fatalities that might have been prevented by protective practices and policies.

Too many employers have failed to recognize the seriousness of high heat exposure. As employers cut jobs, many workers say they are being pressured to squeeze more work into a single day. For outdoor assignments, that can add up to long hours in high heat without adequate breaks to cool down.

CWA's Occupational Safety and Health Department has received numerous reports from locals nationwide describing heat-related illnesses and injuries. We take these and all threats to our members' health very seriously and hope this publication will help local leaders start or renew a dialogue with their employers. In addition, CWA leaders should use and share the information contained within this booklet with co-workers, friends, and acquaintances- including those involved in CWA's organizing efforts at non-union telecommunications, cable, and satellite companies. In turn, information about organizing opportunities should be shared with local union organizing committees.

Death on the Job in Indiana and California

The heat-related deaths of two CWA members are a tragic reminder that high temperatures are a serious health risk.

Dennis Miller, 55, was found dead in July 2006, hanging by his body belt from a telecom pole on a very hot day. The heat index was 100 degrees. A member of CWA Local 4818 in Bloomington, Ind., Dennis was an AT&T installation and repair technician. Although his bosses knew he had medical problems, they assigned Dennis to perform the work in violation of AT&T policy and OSHA's Heat Stress Guidelines. Significantly, Dennis was working alone at the hottest time of day. A work partner or an early morning job assignment might have saved his life.

An important tool for all members and locals is CWA's Occupational Safety and Health website at:

www.cwasafetyandhealth.org

For further help or information, CWA members can contact:
Occupational Safety and Health Director Dave LeGrande
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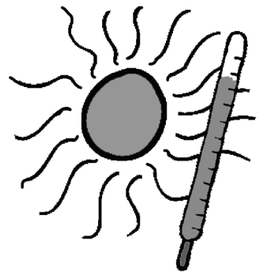
Resources

Occupational Safety and Health Administration (OSHA): "HeatStress Guidelines" and "Heat Stress Quick Card" (www.osha.gov).

National Institute for Occupational Safety and Health (NIOSH): "Working in Hot Environments" (www.cdc/niosh.gov).

California: "Heat Illness Prevention in Outdoor Places of Employment Standard" (www.dir.ca.gov/Title8/3395.html).

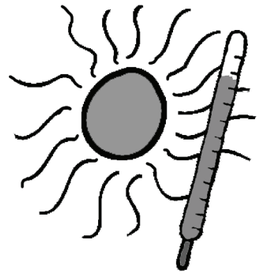
Washington: "Outdoor Heat Exposure Standard" (www.lni.wa.gov/safety/).



Heat Stress Standards and Recommendations

OSHA has not yet established a heat stress/illness standard. However, the agency has issued guidelines based on heat stress recommendations from the National Institute for Occupational Safety and Health (NIOSH). CWA leaders, occupational safety and health activists and affected workers should use the NIOSH guidelines to ensure their employers are providing safe and healthful working conditions. Find them online at www.cdc.gov/niosh/topics/heatstress.

At the state level, California and Washington have established comprehensive heat stress/illness standards. CWA members in these states should refer to the standards' protective provisions and make sure their employer is adhering to them. The California standard is online at www.dir.ca.gov/Title8/3395.html. The Washington standard can be found at *www.lni.wa.gov/rules/AO06/40/0640Adoption.pdf*.



What Can You Do?

The key to a safe workplace for all CWA members is strong, active local safety and health committees. Any members with concerns about dangerous conditions at work should bring them to their committee's attention. The committees can investigate and discuss the problems with management. If an employer refuses to cooperate, the committee can request an OSHA inspection. Committees should always coordinate their activities with local officers, CWA representatives and negotiated union-management safety and health committees.

In addition, CWA leaders should use and share this information on heat stress with co-workers, colleagues, and friends. This can be achieved through personal discussions and various local union activities including organizing, legislation and politics, as well as community service.

Scott Hamilton was just 38 years old when he died on the job in Escondido, Calif., in July 2004. A member of CWA Local 9511, Scott was an AT&T cable splicer. He suffered fatal heat stroke while replacing a telecom cable in hot, arid, desert-like conditions. As in Dennis's case, the company knew that Scott had medical issues but failed to take adequate steps to protect him.

How High Heat Affects Your Body

Up to a certain point, a healthy body can rid itself of excess heat and keep its internal temperature within safe limits.

The body does this by managing its rate and depth of blood circulation, which leads sweat to evaporate through the skin: As the heart begins to pump more blood, blood vessels expand to accommodate the increased flow. The blood circulates to the surface of the body and excess heat is lost into the cooler atmosphere. This is the evaporation of sweat, the most effective and important way to expel excess body heat.

But as air temperatures approach normal skin temperature, it's harder for the body to cool itself. High humidity makes the problem worse, and makes hard physical work more difficult. Under these conditions, on-the-job accidents, illnesses and fatalities increase, and workers' efficiency and job performance decline.

Within limits, your body will adjust to a hot work environment in about a week. At that point, the amount of strain on the body is reduced. A worker who has become acclimatized will have a lower heart rate, lower body temperature, higher sweat rate, and, therefore, have more stamina for work in hot environments.

But not everyone adjusts as well or at the same rate. People with medical conditions can be at risk no matter how long they've worked in high heat.

Heat Stress and Related Health Problems

What exactly is heat stress? It's the sum of the environmental and physical work factors that equal the total heat load placed on the body. These factors include the source of the heat, the physical demands of the work, a body's level of acclimatization and atmospheric conditions including temperature, humidity and wind.

Heat-related disorders include heat rash, heat cramps, heat syncope, heat exhaustion and heat stroke.

Heat Rash

Commonly known as “prickly heat,” heat rash is a skin irritation caused by excessive sweating during hot, humid weather. The sweat ducts become blocked and sweat glands inflamed leading red clusters of pimples or blisters to develop. An extremely uncomfortable condition, heat rash can be prevented by working in cooler, less humid environments, taking periodic breaks and practicing good personal hygiene.

Heat Cramps

Heat cramps are painful, intermittent muscle spasms that occur during or after hard physical work in hot conditions. The spasms result from excessive salt loss through sweating, without adequate replacement. Drinking water alone is not necessarily enough to prevent spasms. Salted liquids and salted food are more effective. Workers with heart problems or on a low sodium/salt diet should notify their employer and/or supervisor of their medical condition. Affected workers should also contact their physician.

Heat Syncope

Heat syncope is a fainting episode, dizziness or light-headedness that usually occurs as a result of prolonged standing or suddenly rising from a sitting or lying position. Lack of acclimatization and dehydration may also contribute. Workers who experience heat syncope should sit or lie down in a cool place and slowly drink water.

Heat Exhaustion

Heat exhaustion is caused by the loss of body fluids and/or salt through sweating. It is characterized by profuse sweating, giddiness, weakness or fatigue, headaches, nausea, rapid and weak pulse, fainting and, in more serious cases, vomiting and loss of consciousness. Workers suffering from heat exhaustion will have cool, moist skin and a pale, flushed complexion with a normal or slightly higher than normal temperature. Affected workers should rest in a cool location and be provided plenty of fluids to drink. With such treatment, mild cases may result in spontaneous recovery. Severe cases may require more extensive medical care. Workers with heart problems or a low-sodium diet should inform their employer and supervisor of their medical condition. They should also consult their doctor before working in hot environments.

Heat Stroke

Heat stroke is the most serious illness associated with work in hot environments. It occurs when the body’s heat regulation mechanisms break down. The characteristics of heat stroke are high body temperature (105 degrees or more), little or no sweating and hot, dry flushed skin. In addition, workers

suffering from heat stroke may become delirious, confused, convulsive or comatose. Of ultimate concern, heat stroke may be fatal.

Heat stroke victims need urgent medical aid to begin lowering their body temperature. Move them to a cool area, soak their clothes with water and fan their bodies. If possible, immerse them in ice and wrap in cold, wet sheets. If an ambulance is not already en route, victims should be taken to the nearest hospital or clinic for additional treatment. Because severe heat stroke can result in brain damage, early recognition and treatment are essential.

Controlling the Hazard

Because heat stress and the resulting health hazards depend on how much heat the body produces while performing a job, reducing the physical energy required or shortening the time spent in high heat can reduce the risk.

That means adequate rest breaks are essential. Breaks allow the body to rid itself of excess heat, reduce the production of internal body heat and improve blood circulation to the skin.

Employers can help protect their workers by rethinking the way the workload is distributed and breaking long periods of work into shorter work/rest cycles. As much as possible, the most strenuous work should be performed during the coolest times of day. These are good practices at any time, but are especially important during conditions of extreme heat and humidity.

Employers should also provide appropriate clothing. In strong sunlight, loose-fitting clothes that shade the skin but allow air to circulate are necessary. In low humidity/strong sunlight, less clothing is needed but workers must take care to avoid sunburn.

Workers also should be provided adequate supplies of water and sports-type liquids that replace lost salt and body fluids. Workers should be drinking enough water that they don’t become thirsty. Replacement fluids should be 40 degrees Fahrenheit, or cool enough to be acceptable to workers’ tastes. Drinks containing alcohol, caffeine or large amounts of sugar should be avoided. Of importance, workers should monitor their physical condition as well as that of their co-workers and encourage each other to stay hydrated.

Employer-provided safety and health training is essential for all CWA members who work in hot environments. Training sessions must look at environmental and personal risk factors, the types of heat stress, adaptation to hot environments and hazard control methods including first aid and cardiopulmonary resuscitation (CPR).