



CONN-OSHA QUARTERLY

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Occupational Heat Exposure- Recognition and Prevention of Heat Related Injuries and Illnesses *By: Brian Sauvageau, Occupational Hygienist*

Across the nation we have been experiencing an extraordinarily hot summer season. Although OSHA does not have a compliance standard, occupational heat exposure remains a known and recognized hazard.

Many people are exposed to heat on the job outdoors, and in hot indoor environments. Operations conducted in these environments require careful attention. Each year thousands of workers are injured from occupational heat exposure with life threatening and sometimes fatal results.

The human body regulates temperature by shedding excess heat through circulating blood to the skin's surface, which stimulates sweating, thus cooling the blood being carried to the brain and internal organs. When air temperatures are near our normal body temperature this cooling mechanism becomes more difficult. When humidity is high the evaporative cooling process of sweating is reduced significantly because sweat can't evaporate fast enough in moisture saturated air (high humidity.) With physical activity and exertion in this environment, methods to prevent and control adverse heat exposures must be implemented to protect workers from this hazard.

The two types of heat illnesses, which can become life-threatening, are "Heat Exhaustion," and "Heat Stroke."

Heat exhaustion requires immediate first aid. The signs and symptoms of heat exhaustion will include dizziness, headache, profuse sweating, rapid heartbeat, nausea, vomiting, weakness, and muscle cramping. First aid includes immediate removal from heat with rest in a cool place and taking sips of cool water. Cold packs and wet cloths should be available. If relief is not observed within a few minutes a medical emergency is possible and 911 should be called. The worker should not return to the work shift.

If untreated, heat exhaustion can lead to heat stroke, a *true 911 emergency*. In this condition, the body can no longer regulate body heat; it does not sweat and the skin becomes red, hot, and dry. The body's temperature is going up and the victim might become confused, or they might faint, become unconsciousness and/or suffer convulsions. If untreated, unconsciousness and convulsions may be followed by death or a permanent brain injury.

Methods for prevention and control of heat illness are 'WATER, REST, SHADE.' Cool drinking water should be available. Workers should be both trained and encouraged to drink water every 15 minutes with or without being thirsty. Frequent rest breaks should be scheduled. These can be based on estimating work rates or loads. Rest areas should be previously identified and provided. This all comes together after careful planning and training.

A useful tool is available to all employers and workers on OSHA's on-line web site. This is OSHA's Campaign to Prevent Heat Illness in Outdoor Workers. This information is just as useful for indoor occupational settings. Go to <https://www.osha.gov/SLTC/heatstress/>

You can go to this site to obtain the tools and information to develop your workplace heat illness awareness and prevention plan. The site provides a National Oceanographic and Atmospheric Administration (NOAA) National Weather Service Heat Index with information and guidance for preventing heat illness. It also provides a downloadable heat safety application for android and iPhones that assesses risk levels in your geographical location.

The campaign provides information on:

- Training and prevention
- Preparing and responding to heat related emergencies
- A planning checklist for working in high heat
- Estimating work rates and loads in high heat environments
- Work and rest schedules
- Monitoring guidelines

For questions concerning Occupational Heat Exposures in Connecticut, public sector employers and employees may call CONN-OSHA at 860-263-6900. Depending on your geographic location in Connecticut, private sector employers and employees may call the Federal OSHA Hartford area office at (860) 240-3152, or the Bridgeport area office at (203) 579-5581.

Remember, high heat is a known and recognized occupational hazard. Heat illnesses can be prevented. Heat Exhaustion requires immediate first aid. Heat Stroke is a life threatening emergency. Call 911.



The work can't get done without them.

The Occupational Safety and Health Administration's Data & Statistics website

Want to know if OSHA conducted an inspection at a particular establishment?

Curious as to which establishments had OSHA inspections conducted within a particular industry group?

Need to find out which enforcement cases led to initial penalties of \$40,000 or more?

Looking for specific text within Accident Investigation Summaries which resulted from OSHA accident inspections?

All this and more is available from the Occupational Safety and Health Administration's Data & Statistics website located at <https://www.osha.gov/oshstats/index.html>

Zika Virus Infection in Humans

Current science-based evidence suggests that approximately one out of five people develops symptoms of Zika virus, usually beginning 2-7 days after the bite of an infected mosquito. Symptoms are usually mild and can last 2-7 days. The most common symptoms of Zika virus infection are fever, rash, joint pain and red or pink eyes. Other symptoms include myalgia (muscle pain) and headache. These symptoms are similar to those of dengue fever or chikungunya. Neurological and autoimmune complications are infrequent but have been described in outbreaks in Polynesia and, more recently, Brazil.

During the first week of infection, Zika virus can be detected in the blood and is capable of being spread from an infected person to a mosquito that feeds on that person. Infected mosquitoes can then spread the virus to other people through bites. In some instances, having direct contact with infectious blood or other body fluids (such as semen through sexual transmission) of an infected person may result in transmission of the virus.

Zika virus can be spread from a pregnant woman to her fetus and has been linked to a serious birth defect of the brain called [microcephaly](#) in babies of mothers who had Zika virus while pregnant. Other problems have been detected among fetuses and infants infected with Zika virus before birth, such as absent or poorly developed brain structures, defects of the eye, hearing deficits, and impaired growth. CDC recommends special precautions for women who are or may become pregnant.

Control & Prevention

In areas affected by Zika virus transmission, protect yourself and others from possible exposure to Zika virus by always taking steps to prevent mosquito bites. There is no vaccine to prevent Zika virus and there is no specific treatment for individuals who become infected.

Although Zika virus is generally spread by the bites of infected mosquitoes, exposure to an infected person's blood or other body fluids (such as semen through sexual transmission) may also result in transmission. Employers should train workers about their risks of exposure to Zika virus through mosquito bites and direct contact with infectious blood and other body fluids and how to protect themselves. Employers should also provide information about Zika virus infection, including modes of transmission and possible links to birth defects to workers who are pregnant or may become pregnant or whose sexual partners are or may become pregnant.

Zika virus is primarily spread through the bites of infected mosquitoes. Getting rid of sources of standing water (e.g., tires, buckets, cans, bottles, barrels) whenever possible can reduce or eliminate mosquito breeding areas.

Outdoor workers may be at the greatest risk of exposure to Zika virus. Some workers, including those working with insecticides to control mosquitoes and healthcare workers who may be exposed to contaminated blood or other potentially infectious materials from individuals infected with Zika virus, may require additional protections (e.g., certain types of personal protective equipment (PPE)). Employers must comply with universal precautions for potential blood borne pathogens (BBP) exposures, as described in OSHA's BBP standard ([29 CFR 1910.1030](#)), and any applicable requirements in OSHA's PPE standards ([29 CFR 1910 Subpart I](#)), among other OSHA requirements.

Consult the [CDC Zika website](#) for the most up-to-date information to help employers implement effective worker protections.



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U.S. DOL OSHA Penalty Adjustments to Take Effect August, 2016

In November 2015, Congress enacted legislation requiring federal agencies to adjust their civil penalties to account for inflation. As a result of this legislative change, the U.S. Department of Labor is adjusting penalties for its agencies, including the Occupational Safety and Health Administration (OSHA).

OSHA's maximum penalties, which were last adjusted in 1990, will increase by 78%. Going forward, the agency will continue to adjust its penalties for inflation each year based on the Consumer Price Index.

The new penalties will take effect after August 1, 2016. Any citations issued by OSHA after that date will be subject to the new penalties if the related violations occurred after November 2, 2015.

Type of Violation	Current Maximum Penalty	New Maximum Penalty
Serious or Other-Than-Serious	\$7,000 per violation	\$12,471 per violation
Failure to Abate	\$7,000 per day beyond the abatement date	\$12,471 per day beyond the abatement date
Willful or Repeated	\$70,000 per violation	\$124,709 per violation

Adjustments to Penalties

To provide guidance to field staff on the implementation of the new penalties, OSHA will issue revisions to its *Field Operations Manual* by August 1. To address the impact of these penalty increases on smaller businesses, OSHA will continue to provide penalty reductions based on the size of the employer and other factors.

State Plan States

The OSH act of 1970 allows the states to operate their own health and safety program as long as their program is as effective as Federal OSHA. The Connecticut Department of Labor enforces state occupational safety and health regulations as they apply to state and municipal employees. Connecticut will not be increasing their civil penalties at this time.

For More Assistance

OSHA offers a variety of options for employers looking for compliance assistance.

- The [On-site Consultation Program](#) provides professional, high-quality, individualized assistance to small businesses at no cost. If you are interested in using the CONN-OSHA On-Site Consultation Program and are a public sector employer, call 860-263-6922 and speak with James Pierce. Employers that operate in the private sector should call 860-263-6925 and speak with John Rosa.
- OSHA also has compliance assistance specialists in most of our 85 Area Offices across the nation who provide out-reach and education programs for employers and workers.

For more information, please contact the [Regional or Area Office](#) nearest you.

**U. S. OSHA offices: Hartford Area Office 860-240-3152
Bridgeport Area Office 203-579-5581**

Connecticut OSHA Wethersfield 860-263-6900

Fatality & Casualty Reporting

State & Town: CONN-OSHA (860) 263-6946 (local) or 1-866-241-4060 (toll-free)
Private Employers: Report to Federal OSHA at 1-800-321-OSHA(6742)

Hazard Corner....

A 23-year-old landscaper died after overheating on Friday, July 22, 2016.

According to the Occupational Safety and Health Administration, the victim was working on the ground, flagging traffic, chipping limbs and stacking brush during tree trimming work. He became overheated at around 4:30 p.m. when the heat index reached about 110 degrees. The victim had been working in the heat since his shift started at around 7 a.m.. He was hospitalized with a core temperature of more than 108 degrees and died on Saturday, July 23.

A review of heat-related deaths reveals that a large majority of these workers were newly employed or new to the position and had just started working on that job and frequently it was their first day on the job. They did not have a chance to become acclimated to the heat and sun

When temperatures are expected to climb into the 90s or higher, especially for an extended period, OSHA would like to remind employers to protect workers that may be exposed to extreme heat while working outdoors or in hot indoor environments.

OSHA released the following tips to prevent heat-related illness and deaths:

- Drink water every 15 minutes, even if you are not thirsty
- Rest in the shade to cool down
- Wear a hat and light-colored clothing
- Learn the signs of heat illness and what to do in an emergency
- Keep an eye on fellow workers

- "Easy does it" on your first days of work in the heat. You need to get used to it.

According to OSHA, the risk of heat stress increases for workers 65 years of age or older, are overweight, have heart disease, high blood pressure or take medications.

Those employed in hot indoor environments such as firefighters, bakers, factory and boiler room workers are also at risk when temperatures rise.

OSHA recently developed and launched a heat related APP that allows workers and supervisors to calculate the heat index for their worksite, and, based on the heat index, displays a risk level to outdoor workers. Then, with a simple "click," you can get reminders about the protective measures that should be taken at that risk level to protect workers from heat-related illness-reminders about drinking enough fluids, scheduling rest breaks, planning for and knowing what to do in an emergency, adjusting work operations, gradually building up the workload for new workers, training on heat illness signs and symptoms, and monitoring each other for signs and symptoms of heat-related illness.

Working in full sunlight can increase heat index values by 15 degrees Fahrenheit. Keep this in mind and plan additional precautions for working in these conditions.

The OSHA Heat Tool is available in Spanish for Android and iPhone devices. To access the Spanish version on the iPhone, set the phone language setting to Spanish before downloading



CONN-OSHA~ Training Update...

Confined Space Safety **September 21, 2016 from 9:00 a.m. to noon** This workshop discusses the basic requirements and procedures involved with permit-required confined spaces as detailed in 29 CFR 1910.146 and 1926.1200 – Subpart AA. **Please note the start time for this class.**

OSHA Recordkeeping **November 2, 2016 from 9:00 a.m. to noon** At this workshop, you will learn how to fill out the OSHA 300 Log of Work-Related Injuries and Illnesses accurately and correctly. **Please note the start time for this class.**

Please watch our [website](#) as we will be adding additional classes soon.

Breakfast Roundtable This discussion group meets the third Tuesday of every month from 8:15 am to 9:45 am. Pre-registration is required. Visit our web page for more information: <http://www.ctdol.state.ct.us/osha/Breakfast/index.htm> To be placed on the e-mail distribution list, contact John Able at John.able@ct.gov

Classes are free and are held at 200 Folly Brook Boulevard, Wethersfield, CT in Conference Room A/B (unless otherwise noted). To register, contact Catherine Zinsser at catherine.zinsser@ct.gov Pre-registration is required. A Photo I.D. is also required to allow entry into a public building. For more training information, visit the CONN-OSHA web site www.ConnOsha.com