Safety Bulletin

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Yale *Environmental Health & Safety*

What's Inside

Beat the Heat with Water, Rest and Shade

With one heat wave already in the books this summer and about two more months of summer weather still to come, it is important to prepare for working in warm temperatures and high humidity. Heat illnesses and deaths are preventable.

Heat-Related Illness

Remember three simple words: water, rest, shade. Drinking water often, taking breaks and limiting time in the heat can help prevent heat-related illness.

Whether working outdoors for your job or at home, competing on the athletic field or simply spending time outside on or off campus, you may be exposed to hot and humid conditions and can be at risk of heat-related illness.

The risk of heat-related illness becomes greater as the weather gets hotter and more humid. This situation is particularly serious when hot weather arrives suddenly, before you've had a chance to adapt. Gradually build up to heavy work or more intense activity in hot conditions. This helps you build tolerance and become acclimated to the heat. Departments with employees who normally work outdoors or in indoor environments without air conditioning need to address heat stress when planning their work. Supervisors should review safety precautions and warning signs with their employees. For further assistance, please contact Yale Environmental Health and Safety (EHS) at 203-785-3550. EHS can also suggest appropriate controls to reduce your risk of heat-related illness.

More than 2,800
workers suffered from heat illness while on the job in 2015. Fatalities also occurred with 90 percent coming between June-September.
Source: U.S. Department of Labor

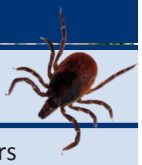
Safety Tips

- Wear light-colored, loose-fitting, breathable clothing such as cotton. Avoid non-breathable synthetic clothing.
- Pace yourself during any activity and gradually build up to heavy work or more intense activity.
- Schedule outdoor work or activities carefully. Try limiting it to the coolest parts of day.
- Take more breaks in extreme heat and humidity. Take breaks in the shade or a cool area when possible.
- Drink water frequently. Drink enough water that you never become thirsty, approximately one cup every 15-20 minutes.
- Avoid alcohol and drinks with large amounts of caffeine or sugar.
- Use a buddy system. When in the heat, monitor the condition of your family, friends and co-workers and have someone do the same for you.

Heat Index App

The U.S. Department of Labor (DOL) and OSHA have developed a tool for your mobile phone. The "Heat Safety Tool" allows you to calculate the heat index in your location and displays a heat-related risk level.

What to Know About Ticks



A necessary part of spending time outdoors in the area is being aware of ticks as Connecticut ranks fifth in the country in cases of confirmed Lyme disease. Ticks are parasites that feed by latching on to an animal host, embedding their mouthparts into the host's skin and sucking its blood. Visit ehs.yale.edu/ticks for more.

Preventing Tick Bites

- Avoid wooded and brushy areas with high grass and leaf litter.
- Use repellents that contain 20 to 30 percent DEET on exposed skin and clothing for protection that lasts up to several hours.
- Bathe or shower as soon as possible after coming indoors to wash off and more easily find ticks.
- Conduct a full-body tick check using a hand-held or full-length mirror to view all parts of your body upon return from tick-infested areas. Remember to also check your pets for ticks.

Removing a Tick

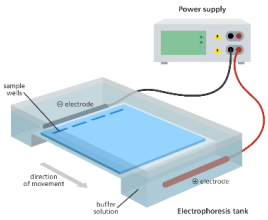
- Use fine-tipped tweezers to grasp the tick as close to the skin's surface as possible.
- Pull upward with steady, even pressure. Don't twist or jerk the tick, which can cause its mouth parts to break off and remain in the skin. If this happens, remove the mouth parts with tweezers.
- After removing the tick, thoroughly clean the bite area and your hands with rubbing alcohol, an iodine scrub or soap and water.
- Dispose of a live tick by submersing it in alcohol, placing it in a sealed bag or container, wrapping it tightly in tape or flushing it down the toilet. Never crush a tick with your fingers.

Symptoms of Tickborne Illness

- Symptoms include fever, headache, fatigue and muscle aches. With Lyme disease, you may also experience joint pain.
- Rashes can develop within days or up to a month after being bitten and can be distinctive shapes based on the illness.
- Early detection and treatment is important. Contact your clinician immediately if you have been bitten by a tick. Tick testing can be performed by the Connecticut Agricultural Experiment Station.

Source: Centers for Disease Control and Prevention

Electrophoresis Safety Guidelines



Electrophoresis is a technique which uses electrical energy to separate molecules such as proteins or nucleic acids by their size, structure and electrical charge. The work may pose potential electrical, thermal, chemical, biological and radiological hazards. These guidelines must be considered to ensure the safe operation of electrophoresis units. The development of procedures and adhering to equipment manufacturer's instructions for use and maintenance is also required.

Hazards

Electrical and Thermal

- Electrophoresis units operate at currents which have the potential to cause an electrical shock if not properly handled. Currents as low as 5 milliamperes can result in strong involuntary reactions, which could lead to injuries.
- Thermal hazards exist when preparing liquified gels.

Chemical, Biological and Radiological

- The materials used may pose a health risk to the operator, bystander or have an environmental impact. The use of potentially hazardous materials requires a careful review to understand the hazards; development of work, emergency and disposal procedures; and training for those using the materials.

General Safe Work Practices

Setup and Preparation

- Obtain and review Safety Data Sheets for all hazardous materials.
- Develop emergency response procedures and ensure they are accurate. Ensure the on/off button is readily accessible and does not require you to reach over the unit.
- Identify required Personal Protective Equipment and ensure it is available.
- Place the equipment away from ignitable materials (such as flammable solvents, absorbents, paper products and other combustibles) and in an area where it or the operator will not be accidently bumped by other personnel.
- Ensure there is adequate clearance around the power supply to provide adequate cooling. Do not block vents.
- Utilize ground fault circuit interrupters (GFCIs) for the power supply. Plug-In GFCIs can be used where outlets are not already protected. The GFCI will "sense" the difference in the amount of electricity flowing into the circuit to that flowing out, even in amounts of current as small as 4 or 5 milliamps. The GFCI reacts quickly (less than one-tenth of a second) to trip or shut off the circuit. Contact Facilities or EHS for guidance.
- Install "Danger—High Voltage" labels to well inform users of the shock hazard.
- All wires, connectors and connected apparatus must be appropriately rated. Consider connectors with retractable safety sleeves if available for the supply voltage.
- Keep equipment clear of unintentional grounding points and conductors (e.g., sinks or other water sources, metal plates, jewelry, aluminum foil, pipes or other electrical/metal equipment). Non-conducting benches and floors (and/or rubber mats) are recommended.

For more information, see the complete Electrophoresis Safety Guidelines.

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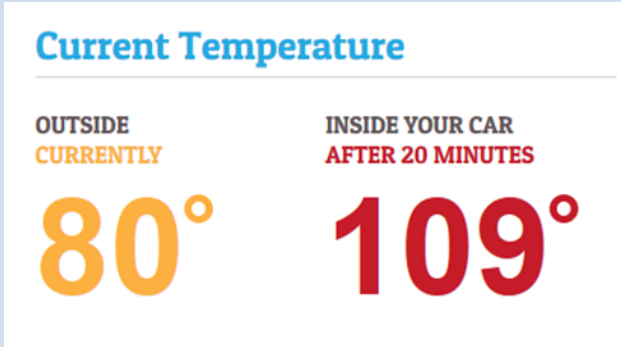
"For safety is not a gadget, but a state of mind." - Eleanor Everet

Look Before You Lock

Since 1998, more than 700 children have died in vehicles from heat stroke in the U.S., with more 70 percent of those deaths occurring in children younger than age 2, according to Where's Baby, a campaign aimed at preventing childhood deaths from being left in a hot car. The campaign is sponsored by Yale New Haven Health, Connecticut Children's Medical Center, the Connecticut Department of Transportation and Safe Kids Connecticut.



The Facts

- Cars heat up quickly. A vehicle can heat up 20 degrees in 10 minutes.
- Cracking the windows or not parking in direct sunlight does not make a car significantly cooler. Heat stroke deaths have occurred even when the vehicle was parked in shade.
- A car can reach 110 degrees when temperatures are only in the 60s. Heat stroke can take place when the outside temperature is as low as 57 degrees.
- The body temperatures of children can increase three to five times faster than adults. Heat stroke begins when the body passes 104 degrees. Reaching an internal temperature of 107 degrees can be deadly.

What You Can Do

- Never leave a child alone in a motor vehicle.
- Make a habit of checking your back seat.
- When strapping a child into a car seat, leave a reminder like a cell phone or even your left shoe in back with them.
- If you see a child unattended in a vehicle, call 911.
- After parking your car, lock it. Children who get inside an unlocked vehicle can become trapped.

A new CT law signed on June 30, 2017, An Act Concerning Legal Protections for Persons Entering Passenger Motor Vehicles to Render Emergency Assistance to Children, provides civil and criminal immunity to individuals who reasonably enter another person's motor vehicle, including by force, to remove a child who he or she believes to be in imminent danger.

For more information, visit wheresbaby.org.