

**In this issue of the Environmental Health and Safety (EHS) Listserv, May 26, 2015:**

1. Spring Safety Colloquium Online
  2. Do You Drive Defensively?
  3. Promoting an Academic Safety Culture, Recommendation #9
  4. Biosafety Cabinets: New Information
  5. Decontamination of Laboratory Equipment – NEW SOP
  6. Prevent/Reduce Risk of Heat Illness
  7. Safety Shorts
  8. Revised Safe Operating Procedures
- 

## **1. Spring Safety Colloquium Online**

**“Safety Culture: Perspectives and Practices,”** the Spring Safety Colloquium co-sponsored by EHS and the Office of Research and Economic Development, is available online at <http://ehs.unl.edu/training/Colloquium>. This colloquium is applicable to everyone with a stake in safety.

## **2. Do You Drive Defensively?**

Patrick Barrett, Director of Transportation Services, reports that in calendar year 2014 there were 109 reported crashes and 45 unreported crashes. To assist drivers of UNL vehicles reduce the likelihood of crashing, UNL employees now have access to a defensive driving course through Blackboard. The University of Nebraska-Lincoln's "Driver Safety & Improvement Training" course is designed to teach enrollees the importance of continuous driving education, advise them of safety features of standard vehicles, and educate UNL drivers on how to improve common driving tasks.

The training is taught through a series of selected videos that were produced by the American Automobile Association's (AAA) Public Relations team. The videos were selected based on their relevance to UNL faculty, staff, and students driving needs. After watching every video and achieving a score of at least 80% on the final examination, the course enrollee will be able to download a Certificate of Completion. Course enrollees are encouraged to use their Certificate of Completion to request a discount from their auto insurer.

To access the ***Driver Safety and Improvement Training***, use one of the following browsers: Internet Explorer, Firefox or Safari and login to My.UNL Academic Portal (<https://my.unl.edu>) using your UNL credentials. Your USERNAME is the first part of your email address before the “@” symbol. Your PASSWORD is the same one you use for your email.

Once logged into the My.UNL Academic Portal, select “Courses & Organizations” from the tab along the very top row of selections. This will bring up a screen with “My Organizations” on the right. Enter the word “driver” in the Organization Search box and click “Go.”

If you have trouble accessing Blackboard you can receive assistance through the UNL Help Desk (23970), Option #3 (help with Blackboard) or email [mysupport@unl.edu](mailto:mysupport@unl.edu).

If you are interested in additional training that was not included, the AAA's Public Relations' entire video collection is available on vimeo.com (free) and includes topics such as child seats, teaching a teenager to drive, special interest interviews, and a checklist for inspecting a vehicle's safety features.

### Resources

- My.UNL Academic Portal <https://my.unl.edu/>

## 3. Promoting an Academic Safety Culture, Recommendation #9

Recently the National Research Council (NRC), the principal operating arm of the National Academy of Sciences and the National Academy of Engineering, completed work on a publication titled “**Safe Science: Promoting a Culture of Safety in Academic Chemical Research.**” The recommendations within this report apply beyond chemical laboratories/research.

The shift away from mere compliance and toward promoting a strong, positive safety culture has already yielded benefits in other industries. The hope is that the NRC recommendations help move academic institutions toward the adoption of a culture of safety that goes beyond inspections, standard operating procedures, and safety plans, all with the ultimate goal of protecting the lives and health of the campus community. The ninth and final recommendation is:

*Department leaders and principal investigators, in partnership with environmental health and safety personnel, should develop and implement actions and activities to complement initial, ongoing, and periodic refresher training. This training should ensure understanding and the ability to execute proper protective measures to mitigate potential hazards and associated risks.*

A strong, positive safety culture emphasizes continual learning and an emphasis on safety at all times. A strong safety culture embodies a commitment to ensuring that all those who set foot in the research/work area are aware of the hazards posed by the materials with which they and others are working and knowledge of appropriate hazard mitigation measures. Department leaders, principal investigators, and supervisors play a key role in instilling this knowledge in staff and students that work in their areas. EHS is a resource that stands ready to assist as needed.

Safety is a priority at UNL. Make sure it is a priority in your individual work location, laboratory or otherwise. To this end, consider adopting the following as your personal ethic:

- **Value safety:** Safety is an integral part of what one does, its automatic, and it does not change its priorities- it is never questioned and never compromised.
- **Work safely:** One continues to learn about safety, learns to recognize hazards, assesses the risks of hazards, manages the risks of hazards, and prepares to handle emergencies.
- **Prevent at-risk behavior:** One does not cut corners or bypass safety measures and shares this information with others, as needed.
- **Promote safety:** One encourages and acknowledges others for working safely.
- **Accept responsibility for safety:** One takes steps to work safely, setting a positive example for others, and being accountable for safety.

### Resources

- NRC free download/read online: “**Safe Science: Promoting a Culture of Safety in Academic Chemical Research (2014)**”  
[http://www.nap.edu/catalog.php?record\\_id=18706&utm\\_expid=4418042-5.krRTDpXJQISoXLpdo-1Ynw.0&utm\\_referrer=http%3A%2F%2Fwww8.nationalacademies.org%2Fonpinews%2Fnewsitem.aspx%3FRecordID%3D18706](http://www.nap.edu/catalog.php?record_id=18706&utm_expid=4418042-5.krRTDpXJQISoXLpdo-1Ynw.0&utm_referrer=http%3A%2F%2Fwww8.nationalacademies.org%2Fonpinews%2Fnewsitem.aspx%3FRecordID%3D18706)
- American Chemical Society, Safety Practices and Recommendations (Publications):  
<http://www.acs.org/content/acs/en/about/governance/committees/chemicalsafety/safetypractices.html>
- American Chemical Society, pages 3-6, “**Increasing Safety Awareness: An Academic Imperative**”:  
<http://www.acs.org/content/dam/acsorg/about/governance/committees/training/cptnewsletter/committee-on-professional-training-summer-2014.pdf>
- EHS Virtual Manual <https://scsapps.unl.edu/VirtualManual/>

## 4. Biosafety Cabinets: New Information

In the **Biosafety Cabinets** Safe Operating Procedure (SOP) guidance has been added on decontamination of biosafety cabinets and routine operations conducted in a biosafety cabinet. It is recommended that all laboratory staff using biological safety cabinets read this updated SOP.

### Resources

- **Biosafety Cabinets** SOP <http://ehs.unl.edu/sop/s-bio-cabinet.PDF>

## 5. Decontamination of Laboratory Equipment – NEW SOP

The surface decontamination methods described in the new Safe Operating Procedure (SOP), **Decontamination of Laboratory Equipment**, are appropriate

and required for laboratory equipment used with or exposed to biological materials prior to the equipment's relocation, decommissioning/disposal, or transport for authorized repair. The disinfection method(s) selected for any equipment used with biological agents MUST be based on a risk assessment.

Specific laboratory equipment decontamination guidance in the SOP includes:

- Biosafety Cabinets
- Incubators
- Growth Chambers
- Refrigerators/Freezers
- Bioreactors/Fermenters
- Portable/Tabletop Autoclaves
- Centrifuges
- Miscellaneous Equipment (shaker/rocker platforms, vortex mixers, etc.)

## Resources

- ***Decontamination of Laboratory Equipment*** SOP  
[http://ehs.unl.edu/sop/s-bio-decontamination\\_lab equip.pdf](http://ehs.unl.edu/sop/s-bio-decontamination_lab equip.pdf)

## 6. Prevent/Reduce Risk of Heat Illness

We often associate heat-related illness with outdoor operations such as farm work, landscaping, and research “in the field.” However EHS routinely reviews injury reports from employees working INSIDE an unconditioned building (e.g., warehouse, storeroom) or areas of a building prone to heat build-up (e.g., kitchens, laundry, autoclave rooms, etc.). Nationally, heat kills more people annually than all other weather conditions combined.

Working in the heat stresses the body and can lead to illness or even death in severe cases. Exposure to heat can also increase the risk of other injuries because of sweaty palms, fogged-up safety glasses, dizziness, and burns from hot surfaces. Most heat-related health problems can be prevented, or the risk of developing them can be reduced.

There are two main categories of risk factors the worker should evaluate when contemplating outdoor work:

- **Weather Conditions.** The risk of heat stress is relative to temperature, humidity, sunlight, and wind speed. High temperature, high humidity, direct sunlight and low wind speed make the worst combination. If possible, schedule strenuous work for the cooler parts of the day.
- **Personal Factors and Physical Demands.** The risk of heat stress increases with physical demands. For example, a worker who is walking is at higher risk than a worker who is riding in a vehicle. A worker who is lifting and carrying heavy items is at the greatest risk. Older workers, obese workers, and persons

taking certain types of medication, such as antihistamines, are at a greater risk for heat illness.

It may not always be possible to work only in cooler parts of the day. The risk of heat-related illness can be reduced by:

- **Acclimation.** Build up tolerance to heat by short exposures before undertaking longer periods of work in a hot environment.
- **Appropriate clothing.** Light, loose clothing and a hat are the clothing of choice.
- **Hydration.** Drink 8-16 ounces of water *before* working in the heat. Drink 4-8 ounces of water or electrolytes every 15-20 minutes while working in the heat. AVOID alcohol, coffee, tea, or soda pop, which further dehydrate the body.
- **Adequate Rest Periods.** Work at a steady pace. Take breaks when your body signals you need one, preferably in shaded or cool areas.
- **Education.** Heat stress can manifest as a number of conditions, all to be taken seriously and some requiring medical assistance to avoid permanent aftereffects. Workers should know the signs and symptoms of these conditions so they can take proper action if they or their co-workers are affected.

More in-depth information can be found within the EHS SOP, **Heat Stress**.

OSHA developed a Heat Safety smartphone app that calculates a heat index, identifies the associated risk level and provides reminders about protective measures that should be taken to protect workers from heat-related illness.

Resources:

- OSHA Health and Safety Topics: Occupational Heat Exposure  
<http://www.osha.gov/SLTC/heatstress/>
- OSHA Heat Safety Tool (phone app-English & Spanish)  
[https://www.osha.gov/SLTC/heatillness/heat\\_index/heat\\_app.html](https://www.osha.gov/SLTC/heatillness/heat_index/heat_app.html)
- OSHA Health and Safety Topics: Using the Heat Index  
[http://www.osha.gov/SLTC/heatillness/heat\\_index/index.html](http://www.osha.gov/SLTC/heatillness/heat_index/index.html)
- EHS **Heat Stress** SOP <http://ehs.unl.edu/sop/s-heatstress.pdf>
- National Institute for Health & Safety (NIOSH) Safety & Health Topics: *Heat Stress* <http://www.cdc.gov/niosh/topics/heatstress/>
- National Weather Service, Office of Climate, Water and Weather Services - *Heat: A Major Killer* <http://www.nws.noaa.gov/om/heat/index.shtml>

## 7. Safety Shorts

This series features links to short safety resource(s) each month. Regardless of format - video, PDF, other - these short features cover various topics and are intended as resources for safety committees, faculty/staff/students, as well as individual laboratories/work areas. This month's features are:

- **7 Ways to Beat the Heat – Hot Weather Hazards – Preventing Illness & Deaths in Hot Environments** (Safety Memos, duration 3:28 min.). Ways to keep your core body temperature controlled. <https://www.youtube.com/watch?v=WYnj1G94e6Y>
- **The Dangers of Heat Stress** (OccuNomix, duration 6:00 min.). Information to recognize situations that can lead to heat-related illnesses, what are possible reactions to heat stress, and steps to take should you or a co-worker experience heat stress. <https://www.youtube.com/watch?v=xfRsTNhGv8U>

NOTE: Resources are provided for informational purposes only. Publication does not in any way endorse a particular company or product or affect current UNL policies and procedures.

## 7. Revised Safe Operating Procedures (SOPs)

- **Safety Audit Guidelines for Biosafety Level2 Laboratories**  
Name changed. Updated to reflect the newly revised checklist and to add the chemical survey checklist as it applies to these labs. [http://ehs.unl.edu/sop/s-SAG\\_bio\\_level%201.pdf](http://ehs.unl.edu/sop/s-SAG_bio_level%201.pdf)
- **Safety & Compliance Survey Guidelines for Chemical Laboratories**  
Updated to reflect the newly revised checklist and include information on training by EHS on the survey items listed. [http://ehs.unl.edu/sop/s-SAG\\_chemical\\_lab.pdf](http://ehs.unl.edu/sop/s-SAG_chemical_lab.pdf)
- **Safety Audit Guidelines for Biosafety Level1 Laboratories**  
Name changed. Updated to reflect the newly revised checklist and to add the chemical survey checklist as it applies to these labs. [http://ehs.unl.edu/sop/s-SAG\\_bio\\_level%202.pdf](http://ehs.unl.edu/sop/s-SAG_bio_level%202.pdf)

**Remember...SAFETY IS AN ATTITUDE!**

**Environmental Health and Safety**  
University of Nebraska-Lincoln  
3630 East Campus Loop  
Lincoln, NE 68583-0824  
(402) 472-4925  
<http://ehs.unl.edu>