

## In this issue of the Environmental Health and Safety (EHS) Listserv – July 1, 2020

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### 1. Are You Prepared for Severe Weather?

Whether you work on campus or in the field, do you know what to do in the event of severe weather? Unless you recently have taken the EHS web-based **Emergency Preparedness** training, now would be a good time to review that online module and related resources including UNL’s Emergency Planning and Preparedness website.

A number of areas have established Emergency Action Plans. Does your building have one? If not, now might be a good time to set one up. You can download a template from UNL’s Emergency Preparedness website. Assistance/consultation regarding completion is only an email away from [preparedness@unl.edu](mailto:preparedness@unl.edu). If your area does have an Emergency Action Plan, review it now to be sure you are familiar with the components.

The EHS Safe Operating Procedure **Communication of Work Area Safety Information** contains a checklist with various items including a section on “Emergency Preparedness.” The checklist assists both workers and supervisors by identifying relevant action items for new and current workers.

The National Oceanic and Atmospheric Administration, the National Weather Service, and Occupational Safety and Health Administration have a number of useful resources covering a variety of weather hazards.

### Resources

- EHS web-based **Emergency Preparedness** training  
<https://ehs.unl.edu/web-based-training#EP>

- UNL Emergency Planning and Preparedness website  
<https://emergency.unl.edu/>
- National Weather Service Lightning Safety Tips and Resources  
<https://www.weather.gov/safety/lightning>
- OSHA Factsheet “*Lightning Safety When Working Outdoors*”  
<https://www.osha.gov/Publications/OSHA3863.pdf>
- NOAA “*The Online Tornado FAQ*”  
<https://www.spc.noaa.gov/faq/tornado/>
- Occupational Safety & Health Resources
  - Tornado Preparedness and Response  
<https://www.osha.gov/dts/weather/tornado/index.html>
  - Flood Preparedness and Response  
<https://www.osha.gov/dts/weather/flood/index.html>
  - Fact Sheet: Lighting Safety When Working Outdoors  
<https://www.osha.gov/Publications/OSHA3863.pdf>
- Great ShakeOut Earthquake Drills  
<https://www.shakeout.org/dropcoverholdon/>
- EHS Safe Operating Procedure **Communication of Work Area Safety Information** <https://ehs.unl.edu/sop/s-workareasafety.pdf>

## 2. Safety Shorts – Be Prepared

This series features links to short safety resource(s) each month. Provided this month are resources related to various types of severe weather:

- **Lightning Safety for the Deaf and Hard of Hearing Community (with voice too)** (usweatherv, 1:15 min.)  
<https://www.youtube.com/watch?v=uU1IO1S15e4>
- **Immersive Mixed Reality: Surviving the Tornado** (The Weather Channel, 1:59 min.) <https://www.youtube.com/watch?v=IUlsx0LdO5k>
- **Great ShakeOut Earthquake Safety Video Series** (Great ShakeOut Earthquake Drills, seven videos of various situations)  
<https://www.youtube.com/playlist?list=PLs1gMujRSBY2t7JB4VS-AymFwN-6Lvq20>

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.

### 3. Situational Preparedness – A Safe Drive

Situational preparedness is so important that we will be looking at various aspects over time, as well as providing resources to assist you to “be prepared” for situations you may encounter at UNL while driving, bicycling or walking.

The National Safety Council (NSC) reports that motor vehicle crashes are the leading cause of workplace death. The NSC suggest the following best practices:

- Adjust your mirrors to limit your blind spots.
- Program your GPS before you leave.
- Set your cellphone to “Do Not Disturb” and put it and any other distracting devices or items away.
- Adjust your seat so you can reach any knobs and switches.
- Have an emergency kit stocked and stored in your vehicle. Inspect it before setting off.
- Make sure you’re in the right head space to drive – free of impairment, distraction and frustration.
- Obey all traffic signs and posted speed limits.
- Use your signals and lights when driving.
- Give pedestrians the right of way.
- Don’t drive if you’re tired. Try to take a nap before getting behind the wheel.
- Drive slowly and cautiously in parking lots and garages.
- Check the potential side effects of your medications before getting behind the wheel.
- Stop for breaks on long driving trips.
- Buckle up.
- Leave yourself enough time to safely reach your destination.

Have a safe drive so you don’t become a statistic!

#### Resources

- National Safety Council. “A Safe Drive.” *Safety+Health Magazine*, Safety+Health Magazine, 26 May 2020, [www.safetyandhealthmagazine.com/articles/19886-a-safe-drive?utm\\_source=june2nd](http://www.safetyandhealthmagazine.com/articles/19886-a-safe-drive?utm_source=june2nd).

### 4. Ventilated Cabinet Safety Highlights – Back to the Lab

Restarting research on campus provides an opportunity to remind lab staff about proper use of containment devices like ventilated cabinets (e.g. fume hoods and biosafety cabinets). The fume hood is an essential part of any lab that works with hazardous chemicals.

Whether someone has worked with a fume hood for years or is fairly new to their need, it is good to review how to properly use a fume hood. Fume hood manufacturer Labconco provides “Fume Hood Basics: 5 Best Practices” as a tool to ensure the best containment and performance from the lab’s fume hood. The EHS SOP **Laboratory Hood/Cabinet Identification and Use** is an excellent resource to identify the type of ventilated cabinet in the lab, as well as requirements and best practices for proper use.

Biosafety cabinets (BSCs) are usually only found in biological research labs, so not every researcher has seen one or is familiar with how they work. One feature that many BSCs have is a UV (ultraviolet) lamp that can assist with decontamination of surfaces inside the working area of the cabinet. With everyone acutely aware of the importance of disinfecting surfaces during the continuing COVID-19 pandemic, it is imperative to understand what these UV lamps can do and even more importantly what they **cannot** do. The article, “2 Biosafety Cabinet UV Lamp Rules,” by BSC manufacturer Labconco clearly explains the benefits and limitations of UV lamps in BSCs.

The EHS SOPs **Working in a Biosafety Cabinet** and **Ultraviolet Radiation** have additional important information about the benefits, hazards and uses of UV light. The take-home message is that UV lamps in BSCs are very effective in eliminating unwanted nucleic acid molecules in a BSC, but cannot be relied on as the sole means of disinfection inside a BSC as many variables impact the effectiveness of the UV light in decontaminating surfaces.

## Resources

- Mankameyer, Beth. “Fume Hood Basics: 5 Best Practices.” *Labconco Articles*, Labconco, 17 Dec. 2018, [www.labconco.com/articles/fume-hood-basics-5-best-practices](http://www.labconco.com/articles/fume-hood-basics-5-best-practices).
- **Laboratory Hood/Cabinet Identification and Use** [https://ehs.unl.edu/sop/s-lab\\_hood\\_use.pdf](https://ehs.unl.edu/sop/s-lab_hood_use.pdf)
- Brian Garrett. “2 Biosafety Cabinet UV Lamp Rules.” *Labconco Articles*, Labconco, 29 Aug. 2019, [www.labconco.com/articles/2-uv-lamp-rules](http://www.labconco.com/articles/2-uv-lamp-rules).
- **Working in a Biosafety Cabinet** [https://ehs.unl.edu/s-bio-working\\_bio\\_cabinet.pdf](https://ehs.unl.edu/s-bio-working_bio_cabinet.pdf)
- **Ultraviolet Radiation** [https://ehs.unl.edu/sop/s-ultraviolet\\_rad.pdf](https://ehs.unl.edu/sop/s-ultraviolet_rad.pdf)

## 5. “Back to Campus” Self-Audit

As research at UNL begins to restart after being suspended at the end of March, EHS recommends that supervisors and lab staff walk through lab spaces, identify any potential safety issues, and make sure they are addressed prior to restarting experiments. “Self-audits” like this are required to be conducted by supervisors on a routine basis according to **UNL’s Injury and Illness Prevention Plan**. Due to the current pandemic, EHS has temporarily

suspended laboratory audits. This contributes to the importance of self-audits by laboratory workers.

The EHS SOP, ***Safety & Compliance Survey Guidelines for Laboratories***, was recently updated and provides a checklist of various safety and compliance issues in categories including chemical safety, electrical safety, compressed gas cylinder safety, hazardous waste management, ventilated cabinets, PPE, lab and engineering controls and biosafety.

Labs are encouraged to note additional safety concerns that may not be covered on the checklist and reach out to EHS for guidance and assistance with correcting any safety issues or potential concerns identified during the “self-audit” of your laboratory spaces. Contact EHS at [ehs@unl.edu](mailto:ehs@unl.edu) or call 402.472.4925.

## Resources

- ***Safety & Compliance Survey Guidelines for Laboratories*** SOP [https://ehs.unl.edu/s-SAG\\_chemical\\_lab.pdf](https://ehs.unl.edu/s-SAG_chemical_lab.pdf)
- ***Injury and Illness Prevention Plan*** <https://ehs.unl.edu/programdocuments/iipp.pdf>

## 6. Need Training Records?

Workers can check their own EHS-Related Training completion by logging into EHS web-based training. At the top of the *Web Based Training Courses* selection page, under “Trainee Information” is a blue box titled Training Records.” By clicking that box, any worker can view all EHS web-based training they have successfully completed.

Departments can request training records for their workers by contacting [ehs@unl.edu](mailto:ehs@unl.edu) with their department name, the EHS training courses for which they would like a record, and the preferred format (PDF or Excel).

## Resources

- EHS ***Web-Based Training*** <https://ehs.unl.edu/web-based-training>

## 7. NEW SOP: Working in a Biosafety Cabinet

EHS has developed a ***Working in a Biosafety Cabinet*** Safe Operating Procedure. This SOP details the accepted practices and procedures for working safely in a Biosafety Cabinet, including new guidance on site assessment and placement of BSCs based on NSF/ANSI-49 – 2018. This new document should be reviewed by all who work in a laboratory space at UNL or affiliated campus that use a biosafety cabinet

## Resources

- **Working in a Biosafety Cabinet** SOP [https://ehs.unl.edu/s-bio-working\\_bio\\_cabinet.pdf](https://ehs.unl.edu/s-bio-working_bio_cabinet.pdf)

## 8. Significant Revision: UNL Biosafety Guidelines

The UNL Biosafety Guidelines, the main compliance document describing oversight of biological research at UNL, recently received several significant revisions as described below. If you keep a printed or electronic version of this document for reference in your lab, please go to the EHS website to download the new version.

- Revisions to Section 4 related to an April 2019 update to the NIH Guidelines for Experiments Involving Recombinant or Synthetic Nucleic Acid Molecules related to elimination of RAC review of experiments that fall in Section III-A and III-C of the NIH Guidelines.
- Added information to Section 4.1.4 about registration of experiments involving cloning of genes that code for certain biological toxins with LD50 of less than 100 micrograms/kilograms.
- New information, definitions and the UNL compliance framework for review of Dual Use Research of Concern (DURC) to ensure compliance with the U.S. government Policy on Institutional Oversight of Dual Use Research of Concern.
- Added new role and responsibility section for UNL Research Compliance Services as that office will be involved in review of DURC research on campus.
- Clarification of the types of work covered by the UNL Biosafety Guidelines in Sections 1.1 and 4 of the document. These sections now clarify that any use, growth, manipulation or other handling of any pathogen or genetically-modified organism is subject to oversight by the UNL IBC and must be described in a research protocol submitted through NUgrant.
- Updated Section 5.2.2 about required training with new training module names, requirements for training when working at BSL-3/ABSL-3, and updated options and links for refresher training.
- Clarified requirements for registration of work involving sampling of wild animals.
- In Section 5.3, added language clarifying that a department head/chair cannot sign off on their own IBC protocol. A Dean or Director must be specified on the protocol as the departmental official supporting the proposed research.

## Resources

- **UNL Biosafety Guidelines**  
[https://ehs.unl.edu/Biosafety\\_Guidelines.pdf](https://ehs.unl.edu/Biosafety_Guidelines.pdf)

## 9. Two NEW Posters: Handwashing and Glove Removal

EHS recently developed two new posters. “How to Properly Wash Your Hands” provides a reminder for thorough handwashing. The “Beak Method of Glove Removal” shows a proper glove removal technique for workers who wear gloves while completing their job tasks.

These new posters, along with other laboratory safety posters, can be viewed through the EHS website. EHS posters now are categorized as Biosafety, Chemical Safety, Laboratory Safety, Safety for Everyone, and Weather Safety to facilitate the process of finding a safety poster for a specific purpose/use.

Remove Your Gloves Safely

“BEAK METHOD” GLOVE REMOVAL STEPS



**Step 1**  
Using one gloved hand, pinch and pull the base of the other gloved hand.



**Step 2**  
Use the middle finger to scoop the cuff of the glove.



**Step 3**  
Pull the glove inside out over all the fingers and thumb to form a “Beak.”



**Step 4**  
With the beaked hand, pinch the opposite glove at the wrist and pull the cuff.



**Step 5**  
Pull the glove inside out and off the hand. Let it drop into the trash.



**Step 6**  
With the ungloved hand use the index finger to pull the beaked glove off at the base of the beak and dispose into the trash.

ALWAYS WASH YOUR HANDS AFTER GLOVE REMOVAL!

How to Properly Wash Your Hands



**0**  
Wet hands with water;



**1**  
Apply enough soap to cover all hand surfaces;



**2**  
Rub hands palm to palm;



**3**  
Right palm over left dorsum with interlaced fingers and vice versa;



**4**  
Palm to palm with fingers interlaced;



**5**  
Backs of fingers to opposing palms with fingers interlocked;



**6**  
Rotational rubbing of left thumb clasped in right palm and vice versa;



**7**  
Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



**8**  
Rinse hands with water;



**9**  
Dry hands thoroughly with a single use towel;



**10**  
Use towel to turn off faucet;



**11**  
Your hands are now safe.

Steps 2-7 should take at least 20 sec to complete.  
Singing “Happy Birthday” through twice takes 20 sec.

CLEAN HANDS KEEP YOU HEALTHY!

Follow the QR code for a video demonstration of this technique.

UNIVERSITY of NEBRASKA-LINCOLN      Contact EHS for questions or comments:  
Environmental Health & Safety      402.472.4925

Follow this QR code to learn more about washing your hands from WHO.

UNIVERSITY of NEBRASKA-LINCOLN      Contact EHS for questions or comments:  
Environmental Health & Safety      402.472.4925

For a FREE poster(s) contact [ehs@unl.edu](mailto:ehs@unl.edu) or 402.472.4925 with your name, campus mailing address including Zip+4, and quantity desired. All EHS safety posters are available through the UNL Digital Content Library for display on digital signage or upon request to [ehs@unl.edu](mailto:ehs@unl.edu).

### Resources

- Safety Posters <https://ehs.unl.edu/safety-posters>



## 10. NEW Training: Covid-19 Awareness – Campus Procedures & Self-Care

The new ***Covid-10 Awareness – Campus Procedures & Self-Care*** web-based training is designed to provide awareness for the entire campus community. A variety of topics are covered, such as:

- Limiting risk of SARS-CoV-2 exposure
- Social-distancing concepts and practices
- Personal care protocols, procedures, and etiquette
- Procedures for putting on and taking off appropriate PPE and facial coverings
- Self-care resources to manage mental health.

### Resources

- ***Covid-19 Awareness – Campus Procedures & Self-Care*** web-based training <https://ehs.unl.edu/web-based-training>

## 11. Near Misses Matter

A campus-wide initiative, led by the Chancellor's University Safety Committee (CUSC), is underway to encourage all UNL employees to report unsafe practices and near misses. A near miss is an incident where no property was damaged and no personal injury sustained, but where, given a slight shift in time or position, damage and/or injury or illness easily could have occurred. This type of situation is often thought of as a "close call." The purpose of such reporting is to identify and abate contributing factors before they result in personal injury/illness or property damage.

By reporting these circumstances, you are contributing to a safer and healthier campus environment. Information reported is shared throughout the University for educational/awareness purposes. Specific identifying information (e.g., names, departments, etc.) is removed before reporting on an incident. We appreciate your participation and assure you that there is no risk of repercussions for reporting a situation or hazard.

To support this effort, the EHS "*Near Miss/Close Call Incident Reporting Form*," revised to include unsafe practices, is online through the EHS website.

### Resources

- Near Miss/Close Call Incident Reporting Form <https://ehs.unl.edu/near-missclose-call-incident-reporting-form>



## 12. Revised Safe Operating Procedures

➤ **Biosafety Training** <https://ehs.unl.edu/sop/s-bio-training.pdf>

Updated the name of Biosafety Research Compliance training module to Biosafety 100: Research Compliance. Added references to EHS online resource videos on Biosafety Cabinet Operations and Autoclave Operation and Use. Updated references to SOPs that have changed names. The web link for the curated YouTube list of biosafety videos was updated and a QR code added.

➤ **Cleaning Up Spills of Bloodborne Pathogens** <https://ehs.unl.edu/sop/s-cleanbbp.pdf>

Minor wording changes

➤ **Mammalian Cell and Tissue Culture Biosafety**  
[https://ehs.unl.edu/sop/s-bio-cell\\_tissue\\_cultures.pdf](https://ehs.unl.edu/sop/s-bio-cell_tissue_cultures.pdf)

Revised to add guidance related to various types of culture contamination, tumorigenicity of cells, and relevant references for that guidance. A reference was also added to the new EHS video on Biosafety Cabinet Operations.

## 13. Revised Bloodborne Pathogens Program Document, Forms, Checklist

**Exposure Control Plan** <https://ehs.unl.edu/programdocuments/BBP.pdf>

Added new section 1.1.1 about the applicability of the Exposure Control Plan to non-employees of UNL. Added Table 1 as a guide for PPE selection when conducting certain at-risk tasks and procedures. Added language to reinforce site-specific training requirements and PI/supervisor responsibilities in conducting this training as well as documentation requirements for the training in sections 2.6 and 2.9. Updated that names of medical providers throughout the document due to institutional name changes.

**EHS-BBP-02** <https://ehs.unl.edu/ehs-bbp-02.PDF>

Updated to add checkbox to decline vaccination if previously received.  
Updated to new template format.

**EHS-BBP-03** <https://ehs.unl.edu/ehs-bbp-03.pdf>

Updated to new template, changed name of medical office locations and updated phone numbers. Added questions about first aid rendered and source material description to questionnaire.

**EHS-BBP-04** <https://ehs.unl.edu/ehs-bbp-04.pdf>

Changed name of form. Added information about BBP not applying to unpaid and student workers. Revised second page to be a Site-Specific Training Form instead of an enrollment checklist. Also changed requirement to send training roster to EHS and instead that PIs/Supervisors keep a copy.

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

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