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1. Your Chance to Speak Up!

The Chancellor's University Safety Committee (CUSC) advises University of Nebraska-Lincoln (UNL) administration on methods and means of minimizing safety and health hazards at UNL. The CUSC meets quarterly from 3:00 – 4:30 p.m., with the April and October meetings including an Open Forum.

The Open Forum is an opportunity for faculty, staff or students to bring their safety concerns and questions to the CUSC. Join the CUSC for an open discussion of your concerns, suggestions, and questions. Your next opportunity is April 19, 2011. This CUSC meeting will be held in the East Campus Union (room posted day of event)

If you cannot attend, e-mail your questions/concerns to CUSC Chair Dave Morgan (dmorgan1@unl.edu).

2. Colloquium Online, Listserv Archives, EHS Training April-June 2011

- The February Laboratory Safety Colloquium, "**Flammable, Pyrophoric, Corrosive & Toxic Gas Safety**" is now available online, along with previous colloquia at:

Office of Research & Economic Development web site

http://research.unl.edu/ljsi_9-06.shtml

Environmental Health & Safety web site <http://ehs.unl.edu/training/#colloquium>

- Archives of previous Listserv editions are now available through the EHS web site, <http://ehs.unl.edu>. Select "EHS ListServ" from the top navigation menu and follow the link to view past issues.
- The schedule for EHS instructor-led training sessions between April and June 2011, is posted on the EHS web site for:
 - Shipment of Hazardous Materials/Dangerous Goods (IATA/DOT);
 - Work with radioactive materials or X-ray producing devices;
 - Core-Injury & Illness Prevention Plan, Core-Emergency Preparedness and Chemical Safety (only for those who work with chemicals). These are also available as web-based modules;

- Bloodborne Pathogens training (also available in a web-based format).

3. Shedding Light on Bulbs

Many of the light bulbs in use at UNL contain small amounts of mercury sealed within the glass. Some examples of these bulbs are:

- fluorescent bulbs, including linear, compact fluorescent, U-tube and circle fluorescent tubes, bug zappers, tanning bulbs, black lights, germicidal bulbs, high-output bulbs and cold-cathode fluorescent bulbs;
- high intensity discharge bulbs, which include metal halide, ceramic metal halide, high pressure sodium, and mercury vapor;
- mercury short-arc bulbs; and
- neon bulbs.

When such bulbs are spent or no longer wanted, they **MUST** be deposited in the appropriate EHS collection container located in your building. If there is no collection container or you are unsure of its location, call EHS (402-472-4925) for the collection location or to request EHS pick-up of unwanted/spent bulbs.

If a bulb breaks, it is important to clean-up the spill residues, and place the residues/bulb fragments, as well as clean-up materials, in a sealed container for pick-up by EHS. Start the clean-up by putting on a pair of disposable gloves. Use two dustpans, pieces of rigid cardboard or something similar to carefully scoop up large pieces of glass.

Slightly dampen a few paper towels. With the damp paper towels, carefully wipe up any white powder and smaller glass pieces. All of the debris, including disposable gloves and paper towels, should be placed into the small sealable container. Put the container lid back on or duct tape the box closed. This sealed container is what you deposit into the EHS collection container designed for that purpose.

NOTE: If a large number of bulbs are broken at the same time, leave the room, shut the door, and call EHS for assistance with clean-up.

If you have questions about hazardous waste disposal at UNL, contact Tony Lloyd, 402-472-4942 or alloyd4@unl.edu.

Resources:

- EHS SOP ***Fluorescent and Other Non-Incandescent Lamps, Light Bulbs, and Ballasts*** <http://ehs.unl.edu/sop/s-flotube.pdf> .

4. Be Wise. Safeguard Your Eyes.

The National Safety Council has declared March as Workplace Eye Wellness Month. Eye injuries in the workplace are common. According to Prevent Blindness America, more than 2000 people injure their eyes at work every day. 10-20% of these injuries

cause temporary or permanent vision loss. We only get one set of eyes, so we **MUST** safeguard them!

The Bureau of Labor Statistics (BLS) reports that approximately three out of every five workers injured were either **not** wearing eye protection at the time of the accident or wearing the **wrong** kind of eye protection for the job. To be effective, eyewear must fit properly and be designed to protect workers from the specific hazards present.

Let's investigate some hazards that can lead to eye damage. Common causes of eye injury are flying objects, particles, chemicals, and radiation (UV light, lasers, etc.).

ULTRAVIOLET (UV) LIGHT is used in a number of applications at various areas at UNL. One use is to analyze the results of gel electrophoresis by visualizing the gel with UV light and a gel imaging device. This is used in forensics, molecular biology, genetics, microbiology and biochemistry. Ultraviolet lamps are used to sterilize work spaces and tools in biology laboratories. UV light in the workplace is also emitted by electric arcs used for welding and plasma cutting.

High intensities of UVB light exposure are hazardous to the eyes. Exposure can cause photokeratitis (a burn of the cornea, the clear front surface of the eye) and may lead to cataracts and other conditions. Damage from UV light exposure, like the sunburn you get when you are stay outdoors too long with unprotected skin, may not be apparent until 6-12 hours after the exposure has occurred.

Persons using devices with high intensity UV emissions must follow the manufacturer's recommendations for shielding the eyes and exposed skin. This may involve specific shielding and or/specific eye and face protection.

Appropriate eye and face protection is of utmost importance when conducting welding and cutting operations to protect against flying debris, sparks, heat, and optical radiation hazards. Welding, cutting, and brazing eye protection is not just for the welder, but also to be used by helpers and attendants. Because the optical radiation varies with the type and characteristics of the welding operation, the protective shade rating must be matched to the operation. EHS has included guidance on the minimum shading necessary to provide adequate eye protection within the SOP ***Welding Lens Shade & Personal Protective Equipment (PPE) Selection***.

MODERATE TO HIGH-POWERED LASERS are potentially hazardous because they can burn the retina of the eye. To help control this potential for injury, various regulations prescribe required safety measures, such as labeling lasers with specific warnings, and wearing laser safety goggles when operating certain lasers. Be sure that protective eyewear is of the proper optical density for the laser you are using.

Now, let's look at the hazards of **FLYING OBJECTS, PARTICLES, AND CHEMICALS**. A BLS study found that almost 70% of eye injuries occur from falling or flying objects, or sparks striking the eye. Injured workers estimated that nearly three-fifths of the objects

were smaller than a pin head, with most of the particles traveling faster than a hand-thrown object when the accident occurred. Contact with chemicals caused one-fifth of the eye injuries. Other accidents were caused by objects swinging from a fixed or attached position, like tree limbs, ropes, chains, or tools which were pulled into the eye while the worker was using them.

What is the best defense against an eye injury? There are four things you can do to help prevent an eye injury

- **Know the eye safety dangers at work.** The appropriate ensemble of face and eye protection is determined through a hazard assessment. The hazard assessment must consider multiple and simultaneous hazards that may be present.
- **Eliminate hazards before starting work.** Use machine guarding, work screens, chemical fume hoods, or other engineering controls.
- **Use the proper eye protection.** Hazard assessment and protection selection guidelines may be found in the EHS SOP **Personal Protective Equipment (PPE) – Eyes and Face. WEAR the eye protection.** PPE does not protect your eyes when sitting on the bench!

Better training and education can help reduce eye injuries. The BLS reported that most workers were hurt while doing their regular jobs. Workers injured while not wearing protective eyewear most often said they believed it was not required by the situation. About 40% of the workers had received no information on where and what kind of eyewear should be used.

Proper maintenance is important. Scratched and dirty eye protection devices reduce vision, cause glare, and may actually contribute to accidents.

Resources:

- EHS Laboratory Colloquium, **Laser Safety: Hazards, Bioeffects, and Control Measures** <http://ehs.unl.edu/training/Colloquium/>
- Choosing (Laser) Eyewear: Questions for Optical Density Calculations http://ehs.unl.edu/training/Colloquium/Sperian_optical_density_form.pdf
- EHS SOP **Welding Lens Shade & Personal Protective Equipment (PPE) Selection** http://ehs.unl.edu/sop/s-welding_lens_and_ppe.pdf
- EHS SOP **Personal Protective Equipment – Eyes and Face** http://ehs.unl.edu/sop/s-PPE_eyes-face.pdf
- Prevent Blindness America www.preventblindness.org
- Occupational Safety & Health (OSHA) Fact Sheet 93-03, **Eye Protection in the Workplace** http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FACT_SHEETS&p_id=142

4. Revised Safe Operating Procedures

- Respiratory Protection - Air Purifying Respirators; Cartridge Change Schedules http://ehs.unl.edu/sop/RPP_SOP_Cartridge_Change_Log.pdf
- Respiratory Protection - Use and Maintenance of PAPR (Powered Air Purifying Respirators) http://ehs.unl.edu/sop/RPP_SOP_PAPR.pdf
- Respiratory Protection - Use and Maintenance of Supplied Air Respirators (Air-Line) http://ehs.unl.edu/sop/RPP_SOP_SAR.pdf

Remember...SAFETY IS AN ATTITUDE!

Environmental Health and Safety

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