

In this issue of the Environmental Health and Safety (EHS) Listserv, May 21, 2012:

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1. Did You Know? Confined Space Awareness Training

Confined Space Awareness is a web-based "general awareness" training which should be taken by any UNL employee who has access to areas that are or may contain confined spaces. Some examples of potential confined spaces are: trash compactors, cardboard balers, steam tunnels, cooling towers, air supply/handling equipment, water treatment tanks, under-floor manure pits, grain silos, crawl spaces, elevator pits and more.

Employees who might need this training include maintenance and custodial employees, electricians, utility workers, groundskeepers, agricultural employees, and employee who work with confined animals in areas with deep pit systems.

NOTE: This is a GENERAL AWARENESS training only. Those who enter permit-required confined spaces MUST receive specific training. Contact EHS if you have employees who enter permit-required confined spaces to determine appropriate additional training requirements.

If you have trouble determining whether you/your employees need this training, contact Lisa Mensah (402-472-6513 or lmensah2@unl.edu) for consultation.

Resources:

- EHS Web-based **Confined Space Awareness** training
<http://ehs.unl.edu/onlinetraining/>
- **Grain Bin Safety** Safe Operating Procedure (SOP)
http://ehs.unl.edu/sop/s-grain_bin_safety.pdf

2. Personal Protective Equipment (PPE) – Eyes and Face

Estimates are that every day approximately 1,000 eye injuries occur in American workplaces. According to Prevent Blindness America, the nation's leading volunteer eye health and safety organization, as many as 90 percent of these injuries could have been prevented had the workers been wearing the proper eye protection.

The Occupational Safety and Health Administration (OSHA) requires that personal protective equipment for eyes and face must be provided whenever necessary to protect against eye and face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation. In addition, State law (Nebraska Revised Statute Section 85-901) requires use of ANSI-approved eye protection by students, faculty, staff, and visitors at UNL who participate in vocational, technical, industrial arts, chemical, or chemical-physical course of instruction presenting an eye hazard.

Selection of appropriate ANSI-approved eye and face protection is determined by evaluation of work tasks and work environment as part of a comprehensive risk assessment. EHS has developed a **Job Safety Assessments** SOP to assist supervisors with identifying existing and potential work area hazards toward the goal of determining appropriate PPE, for circumstances where engineering and work practice (administrative) controls do not fully control the hazard. In all cases, the protective eye and face protection must be ANSI-approved. Regular prescription eyeglasses, sunglasses, etc. are not a substitute for ANSI-approved devices.

Once hazards are assessed and appropriate eye and/or face PPE is selected, the employer is responsible to provide training to employees using eye & face PPE so that they know:

- When the eye and/or face PPE is necessary;
- What specific eye and/or face PPE is necessary;
- How to properly put on, take off, adjust, and wear assigned eye/face PPE;
- The limitations of the assigned PPE;
- The proper care, maintenance, useful life and disposal of the assigned eye/face PPE.

With regard to payment for eye protection:

- With regard to students, departments have the option of providing eye protection for students, purchasing eye protection and selling it to students at cost, making eye protection available for a moderate rental fee, or requiring students to provide their own (but it must be ANSI approved).
- With regard to employees (including student employees), departments are required to provide employees with appropriate eye protection at no cost to the employee. Departments must provide persons whose vision requires the use of prescription lenses with either protective devices fitted with prescription lenses or protective devices designed to be worn over regular prescription eyewear. If a department provides protective

eyewear fitted with prescription lenses, the department is not responsible for costs associated with eye exams.

General instruction on all these items is contained within the EHS web-based training, **Personal Protective Equipment (PPE)**. Instruction on specific assigned eye/face protection must be provided to workers by the supervisor or their designee.

Over the past 12 months at UNL, there have been quite a number of serious injuries to eyes/face where the primary or secondary causal factor was improper or defective eye/face PPE, PPE needed but not available, PPE available but not used, or PPE used improperly. We only get one set of eyes. Protect them.

Resources:

- EHS Web-based **Personal Protective Equipment (PPE)** training
<http://ehs.unl.edu/onlinetraining/#PPE>
- **Job Safety Assessments** SOP <http://ehs.unl.edu/sop/s-JSA.pdf>
- Welding Lens Shade & Personal Protective Equipment (PPE) Selection
http://ehs.unl.edu/sop/s-welding_lens_and_ppe.pdf
- **Personal Protective Equipment (PPE) – Eyes and Face** SOP
http://ehs.unl.edu/sop/s-PPE_eyes-face.pdf
- OSHA Safety and Health Topics: *Eye and Face Protection*
<http://www.osha.gov/SLTC/eyefaceprotection/index.html>
- OSHA Standards - Personal Protective Equipment: Eye and face protection (29 CFR 1910.133)
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9778

3. Don't Let the Heat "Stress" You.

We often associate heat-related illness with outdoor workers. Last year at UNL a worker INSIDE a building at UNL suffered heat exhaustion. Be aware workers may be subject to heat stress in any area where there is heat build-up due to low levels of cooling or no air conditioning, for example, inside warehouses, storerooms, etc.

The Occupational Safety and Health Administration (OSHA) again in 2012 is undertaking a nationwide effort to educate workers about the hazards of working in high heat, in particular information on how to prevent heat-related illnesses. OSHA's web site includes a page of industry-specific educational materials and resources.

Working in the heat stresses the body and can lead to illness or even death in severe cases. An estimated 4,200 workers suffered heat illnesses last year, 40 of which resulted in death. There may have been many more deaths where the role

of heat was not recognized and “heat stress” not identified, but actually was the cause. However, heat illnesses are preventable. The EHS SOP, **Heat Stress**, provides guidance on recognizing the signs and symptoms of and avoiding heat stress and illnesses.

There are two main categories of risk factor 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 heavy 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. Mitigation, or reducing risk of heat-related illness, can be accomplished by:

- **Acclimation.** Acclimation means “become accustomed to.” If possible build up tolerance to heat by short exposures followed by 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. Consume 4-8 ounces of water or electrolytes drink 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 be able to recognize 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 on the above five mitigation suggestions, including signs/symptoms and treatment information on six possible results of heat stress may be found within the EHS SOP, **Heat Stress**.

OSHA recently has developed a Heat Safety smart phone app so workers and supervisors can calculate the heat index for their worksite and, based on the heat index, see a display of risk level associated with the particular heat index. The app also provides reminders about protective measures that should be taken at

the indicated risk level to protect workers from heat-related illness, for example, reminders about drinking enough water, recognizing signs and symptoms of heat-related illness, planning for and knowing what to do in an emergency.

Resources:

- OSHA Occupational Heat Exposure
http://www.osha.gov/SLTC/heatstress/industry_resources.html
- OSHA Heat Safety Tool (phone app-English & Spanish)
http://www.osha.gov/SLTC/heatillness/heat_index/heat_app.html
- 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>

4. Revised Safe Operating Procedure

- Abrasive Wheels/Grinders – Bench, Floor, and Hand
<http://ehs.unl.edu/onlinetraining/#PPE>
Removal of glove recommendation

Remember...SAFETY IS AN ATTITUDE!

Environmental Health and Safety

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