In this issue of the Environmental Health and Safety (EHS) Listserv – January 17, 2019

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1. Safe Snow Shoveling & Snow Blowing

Snow shoveling and use of a snow blower present a number of hazards. Here are some tips to help keep you safe while shoveling snow.

Preparation:

- **Dress appropriately**. Wear water-repellent clothing, layered to allow removal of a layer to prevent overheating. Cover your head, hands, and feet with weather-appropriate gear. Wear shoes/boots with slip-resistant soles.
- **Timing matters**. Start snow removal when there is a light covering and repeat. Do not wait for the snow to stop/accumulate. Do not plan to shovel immediately after eating and avoid caffeine before beginning.
- **Clear vision is important**. Be sure your cold weather clothing does not obstruct your vision so you can watch for icy spots/uneven surfaces. Maintain awareness of your surroundings so you do not inadvertently find yourself in a traffic path as vehicles may not have good traction on the snow/ice.
- **Prepare yourself**. Shoveling snow can raise your heart rate and blood pressure. Warm up before shoveling, stretching as you would for any workout. Walking a few minutes or marching in place is one suggestion for a 'warm-up." Cold, tight muscles are more likely to result in a sprain or strain. If you have a history of heart or other medical problems or do not exercise regularly, check with your doctor before shoveling.

While shoveling:

- **Pace yourself**. Snow shoveling is an aerobic activity. Take frequent breaks and drink plenty of water to prevent dehydration. STOP shoveling immediately if you experience pain or difficulty breathing or become fatigued.
- **Use proper equipment**. Use a shovel comfortable for your height and strength. Sometimes a smaller blade is better as it avoids the risk of trying to pick up too much snow at once.
- **Use proper technique**. When gripping the shovel position your hands 12 inches apart. This increases leverage and reduces the strain on

your body. If possible, push the snow rather than lift to avoid back strain.

- **Push the snow, if possible. Lift only when necessary. If you must lift, lift properly**.
    - Lift with your legs and tighten your stomach muscles.
    - Keep your back straight and do not bend at the waist.
    - Scoop small amounts and walk to where you want to dump the snow.
    - Never remove deep snow all at once, rather shovel an inch or two and repeat.
    - Do not twist your body to shovel or empty the load. Never throw snow over your shoulder.

If possible, use a snow blower instead of shoveling by hand. However, recognize that a snow blower presents unique hazards. These are a few tips to help prevent injury:

- **Never wear loose pants, jackets, or scarves**. Loose clothing can become entangled in moving parts and pull you in with them.
- **Operate snow blowers only when there is good visibility**.
- **NEVER stick your hands in the snow blower!** To resolve jams, shut-off the engine and wait more than five seconds. Use a solid object to clear the chute.
- **Do not leave the snow blower unattended.** Shut off the engine if you must walk away.
- **Add fuel before starting the machine, never while the engine is running or hot.** Be sure to fuel the snow blower outside not in a garage, shed or another enclosed area. Do not operate in an enclosed area to avoid being overcome by engine fumes (carbon monoxide).
- **Avoid the engine.** The engine becomes hot during use and can burn unprotected flesh.
- **Use the pull-cord safely.** Hold cord firmly, stand with feet wide apart. Do not force cord if it does not move freely. Sharply pulling can cause upper body/back injury.
- **Watch the power cord.** For electric snow blowers, remain aware of power cord location. Entangled/severed power cords can lead to shock or electrocution.
- **Do not remove safety devices and keep hands and feet away from moving parts.** Safety devices, shields, guards, and interlocks are there for operator protection.
- **Watch out for motor recoil.** After the machine is turned off there is a brief recoil of motor and blades.
- **Keep others away, including children.** Snow blowers can pick up and shoot objects such as rocks and other debris with significant force. Take care to properly position the discharge chute.

- **Wear earplugs.** Gas-powered models typically run about 85 decibels so protect your hearing.
- **Wear goggles.** Protect your eyes from small stones or other items that can be thrown up by a snow blower.
- **Understand the machine.** Read the instruction manual prior to use and be familiar with all features. Do not attempt to repair or maintain the snow blower without reading the instruction manual.

Resources

- National Safety Council *"Why do People Die Shoveling Snow?"* https://www.nsc.org/home-safety/tools-resources/seasonal-safety/winter/snow-shoveling
- Snow and Ice Management Association *"Safe Snow Shoveling"* http://www.sima.org/discover-sima/public-safety/safety-tips/safe-snow-shoveling
- American Association of Orthopedic Surgeons *"Orthoinfo: Prevent Snow Shoveling and Snowblowing Injuries"* http://orthoinfo.aaos.org/topic.cfm?topic=A00060
- Consumer Reports "Commensense tips for safer snow blowing" http://www.consumerreports.org/cro/news/2013/12/common-sense-tips-for-safer-snow-blowing/index.htm
- Canadian Centre for Occupational Health and Safety "Landscaping – Snow Blower" https://www.ccohs.ca/oshanswers/safety_haz/landscaping/snow_throwers.html

2. Safety Shorts – Snow Blower & Snow Shoveling Safety

This series features links to short safety resource(s) each month. Provided this month are resources related to snow shoveling safety.

- **Snow Shoveling Safety** (Cleveland Clinic, 2:06 minutes) https://www.youtube.com/watch?v=-IMXSEIabMM

- **Easy Snow Shoveling Techniques – LSTraining.com** (LS Training System, 2:26 minutes) https://www.youtube.com/watch?v=hX6uaTivlcQ

- **Snowblower Safety** (Grabow Hand to Shoulder Center, 2.47 minutes) https://www.youtube.com/watch?v=G00z3F_ImeY

- **Snow Blower Safety** (Cleveland Clinic, 1.33 minutes) https://www.youtube.com/watch?v=DbgHyC3Z85s

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 – Break the Habit

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 whatever situations you may encounter at UNL while driving, bicycling or walking.

Smartphones became readily available about 10 years ago and people started using them while driving at the same time. Crash numbers have continued to rise despite various campaigns to deter use of cell phones when driving, whether hands-free or not. Despite efforts of many entities to raise awareness of the dangers of distracted driving and to curb phone use while driving, drivers use cell phones on "roughly 88% of all trips"

It is hypothesized that drivers continue to use their phones because they are not convinced that it's very dangerous. Humans evaluate risk using what they consider common sense and experience. If we text a few times, engage in phone conversations, eat, fiddle with electronics such as radios, put on makeup, and do not have an adverse incident we figure it must be OK to continue. We are convinced that we will notice what we need to such as a vehicle or person in an unexpected location. We think we can jump focus between the phone/in-car activity and the road.

These notions are wrong. Studies have shown that, when engaged in something interesting, our focus is not easily/rapidly switched. This applies to cell phone use, conversations, managing in-car electronics and other activities while driving. Even texting or doing a task at a stop light is dangerous. When we put down our phones or stop the distracting activity to resume driving, it can "take almost half a minute for our brains to reorient and resume processing what are eyes are looking at."

Let's break the habit! Each of us can commit to the fact that our brains do not switch on and off like a lightbulb. Our experience and what we are perceiving as common sense are fallible. To reinforce the commitment, make a conscious effort to being doing the following today to eliminate distractions, cell phone or otherwise:

- Put your phone out of reach when entering your vehicle. Before entering silence the ringer to avoid the temptation to 'answer just this once.'

- Get up five minutes earlier to complete personal grooming before getting into the vehicle.
- Set the radio, activate the GPS and perform other in-car distractive tasks before starting to drive.
- Let others in the car know that you will be concentrating on driving so you won't be participating in conversations or refereeing children. If need be you will stop the car to handle in-car situations that require your input.

Resources

- Casner, Steve. "Why We Can't Stop Texting and Driving." *Time Ideas*, Time, 18 Dec. 2017, http://amp.timeinc.net/time/5059457/stop-texting-and-driving.

4. Safety Posters – We Can Do Better

EHS has developed a number of safety posters of relevance to the campus community. In January thoughts turn to resolutions to do better. Does your chemical inventory/list need updating? Are you properly managing your time-sensitive chemicals? Do you have containers with compromised integrity? Are there chemicals in your work area that are very old or will no longer be used? Here is a poster you can get free for the asking to post as reminder for all in the work area:

For information on peroxide-formers, a common time-sensitive group of chemicals, refer to the Safe Operating Procedure, ***Use and Storage of Peroxide-Forming Chemicals***, https://ehs.unl.edu/sop/s-peroxides.pdf.

Very old chemicals or those that will no longer will be used, for example, due to change in research focus, should be disposed through EHS. More information is available within the Safe Operating Procedure, ***Hazardous/Radioactive Materials Collection Procedures***, https://ehs.unl.edu/sop/s-chem_collection_procedures.pdf.

Review the wide variety of posters available and order your FREE poster(s) today. Contact ehs@unl.edu or 402-472-4925 with your name, campus mailing address, specific poster(s) you would like and quantity desired.

Resources

- Safety Posters http://ehs.unl.edu/safety-posters

5. 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. EHS also has available business-card size handouts containing the URL to report. NOTE: The URL has changed recently so if you have these small handouts contact us for replacement. Please consider requesting a number of these Near Miss/Close Call reporting informational cards to share with those in your area. To request any quantity of these business-card size handouts contact EHS at 402-472-4925 or ehs@unl.edu.

Resources

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

6. Revised (Mostly Biosafety) Safe Operating Procedure

After careful review of the list below, be sure to review the documents that are applicable to your work as there have been significant changes in many instances.

- ***Autoclave Operation and Performance Testing***
  https://ehs.unl.edu/sop/s-bio-autoclavesafety.pdf
  Removed specific information about routine maintenance and referred users to the Owner's Manual for their specific autoclave. Edited procedure for autoclaving sharps containers.

- ***Biological Decontamination of Laboratory Equipment***
  https://ehs.unl.edu/sop/s-bio-decontamination_lab_equip.pdf
  Title changed from "Decontamination of Laboratory Equipment." Changed decontamination procedure involving authorized use of radioisotopes. Updated references. Clarified decontamination procedures for various pieces laboratory equipment.

- ***Biosafety Cabinets*** https://ehs.unl.edu/sop/s-bio-cabinet.PDF
  Added information about new Class II, Type C1 cabinets. Updated information per 2016 NSF 49 revisions. Included new guidance on use of open flames and heat sources in the biosafety cabinet. Specified when cabinet certification is required.

- ***Biosafety Containment Levels*** https://ehs.unl.edu/sop/s-bio-containment_levels.pdf
  Added emergency eyewashes to facility requirements for BSL-2 and ABSL-2 containment levels.

- ***Cleaning Up Spills of Bloodborne Pathogens***
  https://ehs.unl.edu/sop/s-cleanbbp.pdf
  Changes were wording or grammar related as well as edits of names of referenced SOPs that changed.

- ***Handling Laundry Potentially Contaminated with Bloodborne Pathogens*** https://ehs.unl.edu/sop/s-bio-laundry.pdf
  Added section on disposal of contaminated laundry.

- ***Pathogen Inventories*** https://ehs.unl.edu/sop/s-bio-pathogen_inventories.pdf
  Changed procedure for submitting inventory updates: An email will be sent to all faculty who have submitted an inventory on an annual basis and a response will be requested either to confirm no changes or to provide an updated inventory. The email will be sent the same month for all PIs.

- ***Safety Audit Guidelines for Offices, Conference Rooms and Similar Locations*** https://ehs.unl.edu/sop/s-SAG_offices_confrooms_similar_loc.pdf
  Added instruction on not using power strips for high amp devices.

- ***Spill & Exposure Response for Biohazardous Materials (Including Recombinant and Synthetic Nucleic Acids)***
  https://ehs.unl.edu/sop/s-bio-spill_%26_exposure_response.pdf
  General spill procedures revised slightly. Additional steps added to the procedure for spills in a biosafety cabinet. Procedure for biological toxin spill clean-up revised. Guidance for creating a spill kit rewritten to specify essential vs. optional components.

Remember...SAFETY IS AN ATTITUDE!

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