

## In this issue of the Environmental Health and Safety (EHS) Listserv – January 10, 2024

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### 1. Safely Removing Snow

Nationwide, snow shoveling is responsible for thousands of injuries and as many as 100 deaths each year. Snow shoveling and/or use of a snow blower present a number of hazards. Here are some tips to help keep you safe while moving 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. Snow shoveling is an aerobic activity. 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.** Take it slow and stretch before you begin. 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 that is 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.
- **Push the snow, if possible. Lift only when necessary. If you must lift, lift properly.**
  - Lift a shovel of snow with your legs and tighten your stomach muscles.
  - Keep your back straight and do not bend at the waist.
  - Scoop small amounts. 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 thrower presents unique hazards. These are a few tips to help prevent injury when using a snow thrower:

- **Never wear loose pants, jackets, or scarves.** Loose clothing can become entangled in moving parts and pull you in. Wear boots with good traction.
- **Operate snow blowers only when there is good visibility.**
- **Keep your hands away from moving parts!** To resolve jams, shut-off the engine and wait more than five seconds to ensure all moving parts are still. 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 the 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 the 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 to avoid directing snow into the path of others in the area.
- **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 operate, repair, or maintain the snow blower without reading the instruction manual.

Use of a snow blower does not make snow removal either effortless or risk-free. Using a snow blower is still physical labor done outdoors in snow and cold. Follow these tips for snow shoveling and using a snow blower to stay safe removing snow.

### General Resources

- Lassen, R. (n.d.). *Snow removal*.  
<https://nesafetycouncil.org/index.php/safety/seasonal-safety/2-uncategorised/270-snow-removal>
- National Safety Council “*Why do People Die Shoveling Snow?*”  
<https://www.nsc.org/home-safety/tools-resources/seasonal-safety/winter/snow-shoveling>
- *Prevent snow shoveling and snowblowing injuries - OrthoInfo - AAOS.* (n.d.). <https://orthoinfo.aaos.org/en/staying-healthy/prevent-snow-shoveling-and-snowblowing-injuries/>
- Consumer Reports “*Commonsense 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\\_thrower\\_s.html](https://www.ccohs.ca/oshanswers/safety_haz/landscaping/snow_thrower_s.html)
- OSHA Winter Weather Hazards/Precautions  
<https://www.osha.gov/winter-weather/hazards>
- OSHA Protecting Workers from Cold Stress  
<https://www.osha.gov/Publications/OSHA3156.pdf>

## Video Resources

- **Snow Shoveling Safety** (Cleveland Clinic, 2:06 minutes)  
<https://www.youtube.com/watch?v=-IMXSElabMM>
- **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\\_lmeY](https://www.youtube.com/watch?v=G00z3F_lmeY)
- **Snow Blower Safety Tips** (Toro, 3:14 minutes)  
<https://www.youtube.com/watch?v=qLp75kUdRDw>

## 2. Safety Spotlight: Chemical Labeling & Storage

EHS is shining a “spotlight” on the top 10 safety and compliance deficiencies in 2023. The first two, related to proper waste management, were reviewed in the November 2023 listserv. In this issue the spotlight shines on requirements for proper chemical labeling and chemical storage.

**Chemical Labeling.** Chemical containers at UNL must be labeled to identify contents and associated hazards. Exceptions to labeling exist for items like consumer products and labeled food.

Manufacturer container labels require specific information such as but not limited to product name, health and physical hazards, and warning statements. Secondary containers for working solutions in laboratories have fewer requirements, typically proper chemical name or properly cross-reference acronym.

Labels on all types of chemical containers must resist smearing and fading. Old labels must be defaced or removed when reusing containers. Further guidance is available in the EHS SOP on chemical labeling.

**Chemical Storage.** Safe chemical storage begins with understanding compatibility, segregation, and proper containment. The EHS SOP on compatible chemical storage categorizes chemicals and provides examples of combinations that should be avoided. However, it is important to note that the general chemical compatibility table, while informative, may not address specific storage needs or cover all potential issues.

## Resources

- **Chemical Container Labeling Safe Operating Procedure (SOP)**  
<https://ehs.unl.edu/sop/s-chemlabelguideline.pdf>

- **Compatible Chemical Storage** SOP [https://ehs.unl.edu/sop/s-compatible\\_chem\\_storage.pdf](https://ehs.unl.edu/sop/s-compatible_chem_storage.pdf)
- Other **Chemical Safety** SOPs <https://ehs.unl.edu/sop/chemical-safety>
- Listserv past issues: <https://ehs.unl.edu/listserv-past-issues>

### 3. Safety Using and Disposing of “Sharps”

A “sharp” is an item that can easily puncture the skin. Sharps are used widely across the university in laboratories, custodial services, dining services and even offices. Examples include needles, razor blades, broken glassware, pipettes, cover slips, and scalpel blades. Knives, scissors, and box cutters are also “sharps”.

A recently reported Near Miss involved a worker leaving a scalpel with blade attached within the scalpel storage bin rather than removing the blade and disposing in the available sharps container as dictated by procedure. Fortunately, this oversight was discovered before anyone reached into the bin to remove a scalpel handle. While this example occurred in a laboratory, this incident may be used to raise awareness of the dangers of using any type of “sharp”. Following are safety guidelines for working with a variety of “sharps”:

- Proper procedures for safe use and disposal should be followed.
- All sharps used during the workday must be accounted for in order that loose sharps do not inadvertently end up in the trash instead of in a rigid plastic container designed to safely hold/dispose of used sharps.
- Sharps should not be set down loose on work surfaces or placed unprotected in drawers where others may inadvertently contact the sharps.
- Routinely inspect glassware and remove from service items that are damaged, cracked, or chipped. Glass should be packaged in a sturdy container that is labeled “Glass” or equivalent wording and securely sealed prior to being transported to a dumpster.
- Do not substitute scissors for another tool such as a box cutter or screwdriver. Use the right tool for the task. When using a box cutter be sure that the blade is moving away from you to avoid injury in the case of a slip during use.
- Keep sharp tools sharp. Remain alert while using any type of sharp and avoid distractions.

- For equipment with blades or other sharp surfaces leave all guards in place. Observe proper lockout/tagout techniques when servicing or performing maintenance.

EHS provides online several safe operating procedures to assist with safety for whatever type of “sharp” you might need to use.

## Resources

- EHS SOPs:
  - **Sharps Use and Handling with Livestock** [https://ehs.unl.edu/sop/s-sharps use %26 handling livestock.pdf](https://ehs.unl.edu/sop/s-sharps%20use%20handling%20livestock.pdf)
  - **Sharps Handling and Disposing** [https://ehs.unl.edu/sop/s-bio-sharps-handling disposing.pdf](https://ehs.unl.edu/sop/s-bio-sharps-handling%20disposing.pdf)
  - **Glass Disposal – Intact or Broken** [https://ehs.unl.edu/sop/s-glass disposal.pdf](https://ehs.unl.edu/sop/s-glass%20disposal.pdf)
  - **General Machine Safety** [https://ehs.unl.edu/sop/s-gen machine safety.pdf](https://ehs.unl.edu/sop/s-gen%20machine%20safety.pdf)
  - **Lockout/Tagout for Machines and Equipment** <https://ehs.unl.edu/sop/lockouttagout-machines-equipment>

## 4. Defensive Driving - Buckle Up

Defensive driving requires being aware and prepared. Using a seat belt is one of the most important aspects of defensive driving. According to the National Highway Traffic Safety Administration (NHTSA), wearing a seat belt reduces the risk of a car occupants’ death in a car crash by up to 50%. Wearing a seat belt prevents death/injury due to being thrown from the vehicle or into the air bag in a crash. Air bags are designed to work with seat belts not on their own. Seat belts also help drivers maintain control of their vehicle. Drivers should ensure all passengers are wearing their seat belts.

Buckle up and make it home!

## Resources

- *Buckle Up: a Guide to Defensive driving.* (n.d.). [https://www.automotivetouchup.com/store/2oz\\_touch-up\\_paints/buckle-up-a-guide-to-defensive-driving](https://www.automotivetouchup.com/store/2oz_touch-up_paints/buckle-up-a-guide-to-defensive-driving)
- *Seat belts.* NHTSA. (n.d.). <https://www.nhtsa.gov/vehicle-safety/seat-belts>
- *Click it or ticket | NHTSA.* (n.d.). NHTSA. (includes a video) <https://www.nhtsa.gov/campaign/click-it-or-ticket>

## 5. Near Miss or Near Hit?

The Chancellor's University Safety Committee (CUSC) is reaffirming their goal to focus more intensely on Near Miss/Close Call reporting and to also encourage reporting of unsafe practices. To support that effort, the EHS "*Near Miss/Close Call Incident Reporting Form*" allows for reporting of unsafe practices. A near miss can also be thought of as a near hit!

By reporting near misses, "close calls," or unsafe practices, 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 not included in informational publications. Participation will benefit the entire campus community. Be assured that there is no risk of repercussions for reporting a situation or hazard.

A "near miss" can also be viewed as a "near hit!" History has shown that most incidents resulting in injury or other loss were preceded by warnings or near miss incidents. Next time you see something and think, "This could have ended up very badly," report that online to help your fellow workers throughout the university stay safe.

### Resources

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

## 6. Revised Safe Operating Procedures (SOPs)

The following SOPs are of general relevance.

- **Automatic External Defibrillators** <https://ehs.unl.edu/sop/s-AED.pdf>  
Updated applicable law.
- **Communication of Work Area Safety** <https://ehs.unl.edu/sop/s-workareasafety.pdf>  
Updated, including a new checklist.
- **Emergency Planning** [https://ehs.unl.edu/sop/s-emergency\\_planning.pdf](https://ehs.unl.edu/sop/s-emergency_planning.pdf)  
Updated references.
- **General Material Handling / Safe Lifting** [https://ehs.unl.edu/sop/s-gen\\_safe\\_lifting.pdf](https://ehs.unl.edu/sop/s-gen_safe_lifting.pdf)  
Updated for improved clarity.

## **Adopt Safety as Your Attitude – DON'T LEARN BY ACCIDENT!**

### **Environmental Health and Safety**

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