OHBA Safety Pages: Working Safely in Cold Weather

Introduction:

Winter has arrived in Oregon with colder temperatures alongside the rain and snow. Anyone working in a cold environment may be at risk of cold stress. Working in cold conditions isn't just uncomfortable, it can be dangerous. Frostbite, numbness, dehydration, and hypothermia are real concerns from chilly outdoor weather. If you're working outdoors this winter, be aware of the dangers and stay safe.

Main Message:

How Cold is Too Cold?

What constitutes extreme cold, and its effects can vary across different areas of the country. In regions that are not used to winter weather, near freezing temperatures are considered "extreme cold." A cold environment forces the body to work harder to maintain its temperature. Whenever temperatures drop below normal and wind speed increases, heat can leave your body more rapidly.

Wind chill is the temperature your body feels when air temperature and wind speed are combined. For example, when the air temperature is 40°F, and the wind speed is 35 mph, the effect on the exposed skin is as if the air temperature was 28°F.

Cold stress occurs by driving down the skin temperature and eventually the internal body temperature (core temperature). This may lead to serious health problems, and may cause tissue damage, and possibly death.

Cold Stress Risk Factors

Some of the risk factors that contribute to cold stress are:

- Wetness/dampness, dressing improperly, and exhaustion
- Predisposing health conditions such as hypertension, hypothyroidism, and diabetes
- Poor physical conditioning

Cold Stress Signs and Symptoms

- Cold stress can be identified in a number of ways, but a few of the most common signs to watch for are dehydration, numbness, shivering, frostbite, and arguably the most dangerous, hypothermia.
- Of course, if there is a noticeable drop in your ability to use your hands and fingers, due to numbness or shivering, cold stress may be occurring.
- Loss of mobility in your hands is a common effect of cold stress and can result in safety hazards to you and your coworkers, especially if you are unable to grip a tool or properly handle the materials you're working with.
- Shivering is another of the body's responses to the cold and a potential indicator of the onset of cold stress. Be on guard if you begin to shiver.
- Shivering is the body's protective mechanism that increases the rate of your body's metabolism. This is a solid sign that hypothermia may be at the beginning stages.

Tips for Working Safely in Colder Weather

1. STAY WELL NOURISHED BY EATING AND DRINKING ENOUGH

Make sure to drink enough fluids, as you dehydrate faster in cold weather conditions. Dehydration causes headaches, dizziness and fatigue, and it's important to stay alert outdoors. Eating enough food during the day, especially fats and carbohydrates, is also important. Your body uses those nutrients as energy to stay warm in cold temperatures.

2. STAY WELL RESTED

Working outdoors can be challenging and increases risks to your safety. Make sure you're getting enough sleep to stay alert on the job when conditions are more dangerous.

3. PLAN BREAKS FROM THE COLD

Just like you need to take breaks from your work throughout the day, your body needs to take breaks from the cold. Plan warm-up times throughout your day to avoid numbness and shivers.

4. STAY DRY

Damp clothing can quickly drop your body temperature. It's more important than ever to stay dry in the cold. Wear a moisture-wicking base layer to draw away sweat as you work. Wear waterproof gear as an outer shell to prevent your under layers from getting wet. Remove any wet clothing immediately.

5. DRESS FOR THE CONDITIONS

Dressing in layers is key, as it not only keeps you warm but allows you to adjust to changing temperatures. Proper gloves, socks and footwear are essential. Choose headwear that keeps your head and ears warm. Your body loses 40% of its heat through the head.

Fast Fact:

What is immersion/trench foot?

- *Trench Foot* or immersion foot is caused by prolonged exposure to wet and cold temperatures. It can occur at temperatures as high as 60°F if the feet are constantly wet. Non-freezing injury occurs because wet feet lose heat 25 times faster than dry feet. To prevent heat loss, the body constricts the blood vessels to shut down circulation in the feet. The skin tissue begins to die because of a lack of oxygen and nutrients and due to the buildup of toxic products.
- Redness of the skin, swelling, numbness, blisters are all symptoms of trench foot.
- The proper medical response for trench foot is to call 911 immediately in an emergency; otherwise seek medical assistance as soon as possible. Remove the shoes, or boots, and wet socks, and then dry and cover the feet.

SAFETY PAGE MEETING GUIDE Topic: Working Safely in Cold Weather

Employer: _____ Project: _____

Date: _____ Time: _____ Shift: _____

Number in crew: _____ Number attending: _____

Safety or Health issues discussed. Include recent accident investigations and hazards involving tools, equipment, the work environment, work practices and any Safety or Health recommendations:

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Follow up on recommendations from last safety meeting:

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Record of those attending:

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Supervisor's remarks: _____

Supervisor: _____ _ _____
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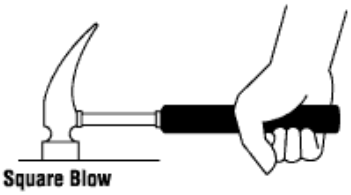
OHBA Safety Pages: Hammer Safety

Introduction: Hammers and other striking tools are widely used and often abused. Hammers are made for specific purposes in various types and sizes, and with striking surfaces of varying hardness. For example, hammers are used for general carpentry, framing, nail pulling, cabinet making, assembling furniture, upholstering, finishing, riveting, bending or shaping metal, striking masonry drill and steel chisels, and so on. Hammers are designed according to the intended purpose.

Main Message:

- Discard any hammer with mushroomed or chipped face or with cracks in the claw or eye sections. Wear safety glasses or goggles, or a face shield (with safety glasses or goggles).
- Make sure to select the proper hammer for the job – one that is too light is just as unsafe and ineffective as one that is too heavy. When driving a nail, hold the hammer close to the end of the handle. Use a light blow first and increase the power of the blows once the nail is set.
- Select a hammer that is comfortable for you and that is the proper size and weight for the job. Misuse can cause the striking face to chip, possibly causing a serious injury.
- Choose a hammer with a striking face diameter approximately 0.5 inches larger than the face of the tool being struck (e.g., chisels, punches, wedges, etc.).
- Choose a hammer with a cushioned handle to protect you from vibration, impact, and squeezing pressure.
- Use hammers with electrically insulated handles for work on or around exposed energized parts.
- Ensure that the head of the hammer is firmly attached to the handle.
- Replace loose, cracked or splintered handles.
- Keep the work area clear of debris.
- Discard any hammer with mushroomed or chipped face or with cracks in the claw or eye sections.
- Wear safety glasses or goggles, or a face shield (with safety glasses or goggles).
- Strike a hammer blow squarely with the striking face parallel to the surface being struck. Always avoid glancing blows and over and under strikes. (Hammers with beveled faces are less likely to chip or spall.)
- Look behind and above you before swinging the hammer. Keep enough clearance from fellow workers.
- Maintain a secure footing and keep good balance while using a hammer.



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OHBA Safety Pages: Lithium-Ion Battery Safety

Introduction: Lithium-ion batteries power many of our handheld tools and devices because they are lightweight, powerful, and rechargeable. However, if they are damaged, overheated, improperly charged, or poorly stored, they can catch fire or explode. Lithium battery fires burn extremely hot and are difficult to extinguish, which can lead to serious injuries, equipment damage, and property loss.

Common Hazards:

1. Overheating and Fire
Lithium-ion batteries can overheat due to overcharging, using the wrong charger, physical damage, or exposure to high temperatures.

2. Physical Damage
Dropping tools, crushing batteries, or puncturing battery packs can cause internal short circuits and lead to thermal runaway (a rapid chain reaction causing fire or explosion).

3. Improper Charging
Using non-approved chargers, charging on flammable surfaces, or charging unattended can increase the risk of fire.

4. Improper Storage and Transport
Storing batteries in hot vehicles, near combustible materials, or loose in toolboxes with metal objects can create fire and shock hazards.

Safe Work Practices:

Use Only Approved Equipment
- Use manufacturer-approved batteries and chargers.

- Do not mix brands or use counterfeit batteries.

Inspect Before Use
- Check batteries for swelling, cracking, leaking, or unusual odors.

- Do not use damaged batteries, remove them from service immediately.

Charge Safely
- Charge batteries on a non-flammable surface away from combustible materials.

- Do not cover chargers or batteries while charging.

- Never charge unattended or overnight unless manufacturer instructions allow it.

Store and Transport Properly
- Store batteries in a cool, dry place away from direct sunlight.

- Keep terminals covered or in original cases to prevent short circuits. - Do not store batteries in vehicles where temperatures can become extreme.

Handle With Care

- Do not drop, crush, puncture, or modify battery packs.

- Keep batteries away from water unless specifically rated for wet conditions.

If a Battery Overheats, Smokes, or Catches Fire

- Move people away from the area immediately.
- Do not touch the battery or device.
- Use a Class ABC fire extinguisher if trained and safe to do so.
- Call emergency services if the fire cannot be controlled.

Employee Responsibilities

- Follow all manufacturer instructions and company safety policies.
- Report damaged or malfunctioning batteries and chargers.
- Do not attempt to repair lithium-ion batteries.
- Participate in safety training and toolbox talks.

Key Takeaways

- Lithium-ion batteries are safe when used correctly, but dangerous when damaged or misused.
- Always use approved chargers and batteries.
- Inspect, charge, store, and transport batteries safely.
- Report and remove damaged batteries immediately.

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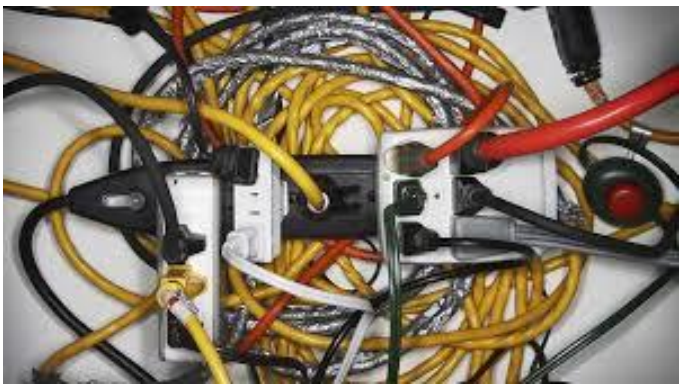
OHBA Safety Pages: Extension Cord Safety

Introduction: On construction sites, flexible extension cords that power tools and equipment are everywhere. These cords are often loose and uncovered. They can cause tripping hazards. They can be damaged easily and create electrical hazards.



Main Message:

- Inspect all extension cords daily for damage and missing grounding prongs. Repair or replace damaged equipment.
- Use a Ground Fault Circuit Interrupter to protect against any electrical fault, especially when working outside or in wet/damp conditions.
- Keep extension cords away from foot traffic to prevent tripping and cord damage. The insulation in cords and electrical tools can become damaged. If a live wire touches exposed metal parts inside a tool, it can become energized.
- DO NOT use extension cords/flexible wiring
  - ~ where frequent inspection would be difficult
  - ~ where damage would be likely
  - ~ disconnect from the power supply by pulling or jerking the cord from the outlet
  - ~ for long-term electrical supply as a substitute for the fixed wiring of a structure
  - ~ rated for light-duty power cords on heavy load applications
  - ~ where vehicles or equipment are allowed to pass over unprotected power cords. Cords should be put into electrical conduits or protected by placing them between two pieces of lumber of suitable strength
- In addition, NEVER USE
  - ~ a metal outlet box, Romex, or nonmetallic cable as an extension cord
  - ~ staples or nails to hold cords in place
  - ~ multiple cords that are connected together (use one long cord instead)
  - ~ multiple cords plugged into one outlet where a circuit overload could occur

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