

# The Safety Net

Eastern Virginia Medical School's Environmental Health and Safety Newsletter  
[https://myportal.evms.edu/research/safety/environmental\\_health\\_and\\_safety](https://myportal.evms.edu/research/safety/environmental_health_and_safety)

Winter 2023  
Volume 127



## Special Interest Articles:

- EH&S Service Fees
- Personal Protective Equipment
- Reporting Incidents, Injuries and Near Misses

## Individual Highlights:

Cold Stress	1
Fit Test Fees	2
Irradiation Fees	3
PPE	3
Dosimeters	4
Injury Reporting	4
S.O.B.	5
Notes	5
Poster	6

## Cold Stress

Cold stress occurs when the body struggles to maintain normal body temp under abnormally cold temperatures. Predisposed individuals with health conditions such as hypertension, hypothyroidism, and diabetes are more at risk to suffer from cold stress. The consequences of cold stress can be as subtle as exhaustion and the lowering of normal immune function, to dangerous tissue damage such as Hypothermia and Frostbite, and to the more extreme possibilities of Hypothermia and death.

Frostbite is an injury caused by the freezing of the skin and underlying tissues. It occurs quickly in cold environments when the body tries to conserve heat by shifting blood flow from the extremities and skin to the core to maintain homeostatic temperature for the vital organs.

Symptoms of Frostbite are:

- Hard, reddened, numb skin and/or tissue
- Patches of gray or white on the skin
- Possible blistering of the affected area

Hypothermia occurs when the core body temperature goes below 95°F. In very cold temperatures body heat is lost faster than it is replaced.

Symptoms of Mild Hypothermia are:

- Extreme shivering
- The person is conscious and alert

Symptoms of Severe Hypothermia are additionally:

- As the body temperature falls shivering stops
- Dilated pupils, slow pulse and breathing
- Loss of coordination, hand fumbling
- Confusion, disorientation
- Inability to walk or stand

To treat both Frostbite and Hypothermia:

- Immediately move them into a warm dry area
- Remove wet clothing and replace with dry clothing
- Cover the body in layers of blankets, do not cover the face
- Place warm bottles or hot packs in armpits, sides of chest, and groin to increase body temperature
- Do not rub skin, apply warm water, or break blisters because these actions can cause more damage but only loosely cover and protect the area from contact
- Call 911 immediately in case of an emergency.



(cont...)

Mindful preparation can prevent Cold Stress on the job. Employees should be fully trained to prevent and recognize cold stress. Workers must be competent to use PPE properly and follow implemented work practices to reduce their risk. Dressing properly is extremely important to preventing Cold Stress. The pieces worn, types of fabrics, and layering should be specific to the job and temperatures that will have to be tolerated. They should also be taught first aid techniques to deal with the illnesses and injuries that can result.

Employers should use engineering controls if possible. For example: radiant heaters, wind and cold shields, etc. Employers should also use safe work practices, such as: providing warm sweetened liquids to prevent dehydration, scheduling heavy work during the warmer hours of the day, making sure employees use the buddy system to monitor each other for signs of cold stress, frequent break times in warm areas, acclimating new workers until a cold tolerance is achieved, and making sure employees are dressed properly for the weather they will be working in.

Sources:

Center for Disease Control and Prevention: [Outdoor Safety During a Winter Storm](#)

Occupational Safety and Health Administration: [Cold Stress Guide](#)



## Fit Test Fee Schedule

Beginning **July 1, 2023**, the respirator fit test cost will be raised to **\$8.75** per person, per appointment. This reflects the rising costs of materials, supplies and equipment maintenance that are used for this service.

EH&S will charge departments the full \$8.75 cost for “no show” appointments and “turn away” tests. OSHA requires men to be **clean-shaven** in order to wear a respirator and all to be medically cleared before being fit tested. Therefore, everyone must submit their [Medical Questionnaire](#), be approved by Occupational Health, and complete the [Respiratory Protection training course](#) (in BioRAFT). *You will be turned away for not having those prerequisites completed before arriving*

If you have any questions about the EVMS Respiratory Protection Program, please don't hesitate to contact [Kristi Olivar](#).

## Irradiation Service Fees

EVMS Environmental Health & Safety offers the capabilities and services of an orthovoltage x-ray beam for scientific research that requires irradiation. The radiation source consists of a 3,000-watt metal ceramic x-ray tube driven by a high frequency power supply and operated by a contemporary computer-based control. Dosimetry services can be provided to ensure accurate exposures. Calibration is directly traceable to NIST.

### *Dosimetry Services*

- Electrometer (Fluke Biomedical F35040)
- Diagnostic X-Ray chamber (PTW Farmer tube #N30013, with optional build-up cap)

### *Fee Schedule*

- Beam use is charged per exposure, per Gray, rounded up to the nearest whole Gray
- For single exposures lasting 45 minutes or longer, the per-hour rate will apply in 15-minute increments
- Calibration is charged per exposure event and does not include specialized phantom preparation

User Category	Per Gray	Per Hour	Calibration
EVMS Faculty	\$0.65	\$40.00	\$20.00
External Academic	\$0.95	\$80.00	\$40.00
External Non-Academic	\$1.25	\$120.00	\$60.00

## Personal Protective Equipment

Personal protective equipment, commonly referred to as “PPE”, is equipment worn to minimize exposure to hazards that cause serious workplace injuries and illnesses. These injuries and illnesses may result from contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards. Personal protective equipment may include items such as gloves, safety glasses and shoes, earplugs or muffs, hard hats, respirators, or coveralls, vests and full body suits. All personal protective equipment should be safely designed and constructed and should be maintained in a clean and reliable fashion. It should fit comfortably, encouraging worker use. If the personal protective equipment does not fit properly, it can make the difference between being safely covered or dangerously exposed. When engineering, work practice, and administrative controls are not feasible or do not provide sufficient protection, employers must provide personal protective equipment to their workers and ensure its proper use. Employers are also required to train each worker required to use personal protective equipment to know:

- When it is necessary
- What kind is necessary
- How to properly put it on, adjust, wear and take it off
- The limitations of the equipment
- Proper care, maintenance, useful life, and disposal of the equipment)

Also, you should refrain from some bad habits regarding PPE. Some of these include wearing gloves and labcoats outside of the lab and into public areas, taking labcoats home to launder, and improper storage of PPE (usually respirators).

Source: [Occupational Safety and Health Administration: Personal Protective Equipment](#)

## Dosimeters: Late and Lost Charges



EH&S continues to use Landauer's Optically Stimulated Luminescence (OSL) technology for accurate and dependable dosimetry services. When dosimeters are returned late or lost we incur late and lost dosimeter charges. *This has and could significantly impact our limited operating budget.*

The EVMS Radiation Safety Committee approved the following schedule for the recovery of late/lost fees:

- Up to 30 days late: \$10
- 30 – 60 days late: \$20
- 60 – 90 days late/lost: \$30

EH&S will continue to provide and manage radiation dosimetry for free and not increase the recovery charges.

*Please be mindful of dosimeter change-out dates and return your dosimetry in a timely manner to avoid late fees. Also consider creating an area where the dosimeters may be stored when not in use. Coordinators may want to discuss adding funds to cover this potential charge with their department's budget manager.*

If you have any questions about radiation dosimetry or this change, please contact EH&S.

## Why Report Incidents, Injuries, and Near Misses?

Prompt medical treatment is the reason you are asked to report incidents, injuries and near misses, NOT to place blame for the incident. In order to keep a minor injury from becoming worse, proper medical care is very important. In addition to medical treatment, incidents need to be investigated and their causes determined in order to prevent the same injuries from happening to someone else. All injuries and incidents are important and need to be reported.

Once the incident is investigated, it may be classified as minor, serious or major, but all were accidents. If the cause is not found and corrected, the underlying conditions responsible for the incident are still there, waiting to wreak havoc and cause another injury, possibly with more severe consequences. Just because the accident was "minor" this time does not mean that the next time the same type of incident occurs the result could be much different resulting in a major injury or even a fatality.

Safety awareness increases when a near miss is reported. When an accident occurs, even if it does not result in an injury, it serves as a warning that uncontrolled hazards are present. These hazards must be identified and removed from the workplace.

The proper procedures for reporting injuries and incidents are:

- If injured, apply first aid.
- Alert your supervisor as soon as possible.
- Contact **PMA Care 24 Nurse Call Service (Injuries/Illnesses) at 1.833.411.0153** for instructions. Service is available 24/7/365.
- Contact the Human Resources so that an internal investigation can be initiated.

It is crucial that all incidents and injuries, including near misses, be reported so that they can be investigated and the causes determined and eliminated. This will help additional injuries from occurring to our most valuable resource - YOU!

## Ask the S.O.B.

**Q:** Dear S.O.B.,

I have a dead freezer. I need the space; can you pick it up tomorrow?

**A:** Dear Dr. Zonehol,

EVMS has specific policies and procedures for the disposal of assets. Refrigerated equipment, such as -80C freezers and refrigerators, contain freon and freon substitutes - which are strictly regulated by the [Clean Air Act](#) and must be recovered by a [certified technician](#) with approved equipment. Consider this approach:



Safety Office Boy to the rescue!

1. Complete and submit both the [Disposition of Property](#) Form and [Moving Notification](#) Form to Materials Management.
2. Contact an HVAC company that performs refrigerant recovery. You'll need to issue a purchase order to cover this cost.
3. Contact an equipment-repair company or metal recycler and arrange for the removal of the asset. Depending on the company, you may have to issue a purchase order to cover this cost.
4. Ensure that both Materials Management forms have been approved before the asset is removed.

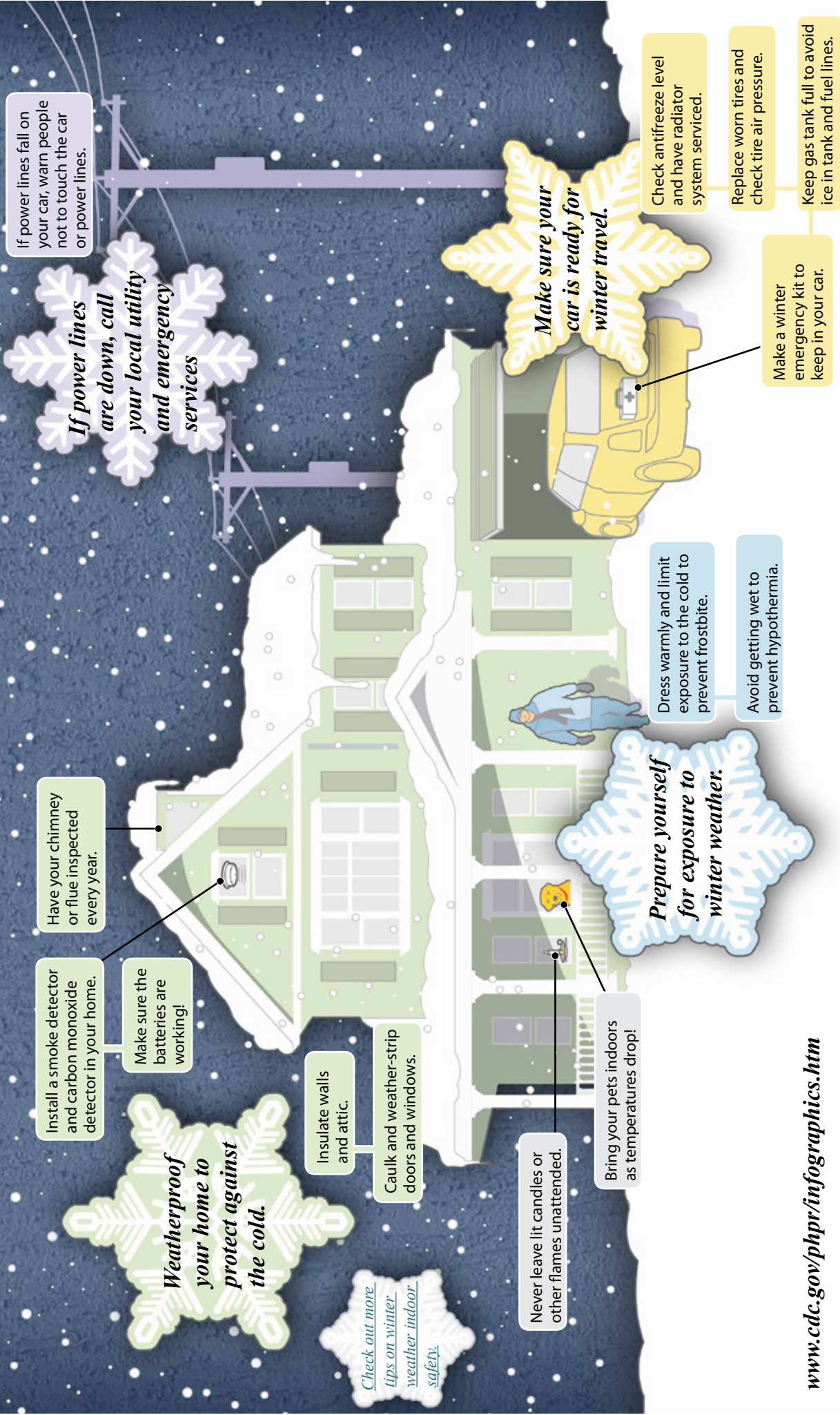
If you have questions or need assistance with the process, please contact EH&S at x5798 or [ehs@evms.edu](mailto:ehs@evms.edu).

## Notes from the Office

### *EH&S Training Courses.*

Course	Date/Time	Location
Chemical Hygiene Plan	January 18, 2023 9:30 AM - 12:30 PM February 16, 2023 9:30 AM - 12:30 PM March 16, 2023 9:30 AM - 12:30 PM	Lewis Hall 2162
Radiation Safety in the Laboratory	Contact EH&S	
Biosafety in the Laboratory Biological Materials Shipping Autoclave Safety Training OHSP Training Respiratory Protection Training	Available on BioRAFT!	<a href="https://evms.bioraft.com/">https://evms.bioraft.com/</a>
HAZCOM Bloodborne Pathogens Biological Materials Shipping	Available on Blackboard!	<a href="https://evms.blackboard.com/">https://evms.blackboard.com/</a>

# Be Ready! Winter Weather



If power lines fall on your car, warn people not to touch the car or power lines.

*If power lines are down, call your local utility and emergency services*

Have your chimney or flue inspected every year.

Install a smoke detector and carbon monoxide detector in your home.

Make sure the batteries are working!

*Weatherproof your home to protect against the cold.*

Insulate walls and attic.

Caulk and weather-strip doors and windows.

*Check out more tips on winter weather indoor safety.*

Never leave lit candles or other flames unattended.

Bring your pets indoors as temperatures drop!

*Prepare yourself for exposure to winter weather.*

Dress warmly and limit exposure to the cold to prevent frostbite.

Avoid getting wet to prevent hypothermia.

*Make sure your car is ready for winter travel.*

Check antifreeze level and have radiator system serviced.

Replace worn tires and check tire air pressure.

Keep gas tank full to avoid ice in tank and fuel lines.

Make a winter emergency kit to keep in your car.