"Safety Comes First"

Case Western Reserve University

Environmental Health and Safety

2220 Circle Drive, Service Building, 1st Floor
Phone: (216) 368-2906/2907
FAX: (216) 368-2236
Website: case.edu/ehs

Dec 2025 – Jan 2026

In this issue:

2026-1

Spread Cheer, Not Germs

Handwashing Awareness Week / December 7-13, 2025

During the winter months, as we congregate indoors and visit loved ones, the chances of getting sick increase. The best way to reduce the risk of illness is to wash your hands. In the first week of December, medical professionals and health officials celebrate Handwashing Awareness Week, reminding everyone how to properly get rid of germs.

According to the Centers for Disease Control and Prevention (CDC), hand-washing education reduces the number of people who get sick with diarrhea by 23% to 40% and reduces respiratory illnesses by 16% to 21%. Washing hands is even more important and effective for schoolchildren, reducing absenteeism due to gastrointestinal illness by up to 57%.

Handwashing Awareness Week is a good time to practice the five-step process for washing away germs:

1. **Wet your hands.** Use clean, running water—warm or cold—and then turn off the tap.
2. **Apply soap and lather.** Make sure you cover fingers, palms, and backs of hands and get under fingernails.**Scrub the soap for at least 20 seconds.** Scrubbing creates friction, which lifts dirt, germs, and microbes from your skin. By washing for 15 to 30 seconds, you can clean your hands more effectively.
3. **Rinse your hands.** Turn on clean, running water, and wash away the soapy lather.
4. **Dry your hands.** Use an air dryer, a paper towel, or a clean hand towel to get the water off your hands. Wet hands transfer germs more easily.

HANDWASHING FACTSHEET

Part I — The First Temple of the Atom: The AEC and the Research Reactor

"...the (nuclear) reactor was an audacious idea when the most basic information about the fission process was a Cold-War secret."

In January 1955, Newsweek reported, "It is the envy of thousands of scientists and hundreds of college presidents. It has made Raleigh, North Carolina's capital, an atomic mecca, attracting such disparate types as President Celal Beyar of Turkey, a band of junketing North Carolina peanut growers, some German school teachers, as well as a procession of industrialists from all over the world."

Proposed by NC State in 1950, the reactor was an audacious idea when the most basic information about the fission process was a Cold-War secret. Industry and universities were unwilling to pursue civilian applications of nuclear energy that required expensive security clearances.

Where others saw obstacles, Clifford Beck spied an opportunity. A physicist at NC State, Beck proposed to the Atomic Energy Commission the nation's first nuclear engineering program built around a declassified reactor.

His timing was perfect. The announcement in September 1949 that the Soviet Union had exploded an atomic bomb tipped the debate within the AEC toward those who favored declassifying atomic secrets. Former AEC Chairman David Lilienthal called on the AEC to "free the atom" for U.S. industrial use.

AEC officials were elated with Beck's proposal since it provided them with a concrete reason to declassify reactor information. They assured him they were "practically unanimous" that it would be approved. In late 1950, the AEC made public for the first time information on fission research and small research reactors, including the NC State reactor.

Taking advantage of its status as the world's only public reactor, NC State included a viewing auditorium with thick water-shielded windows so the public could see nuclear energy was, as Beck claimed, "just another type of tool, not something mysterious and super-secret." In the first year of operation, the reactor had more than 6,000 visitors who came to see a reactor that was "guarded by nothing more than a physics student with a guest book." One intrigued journalist dubbed it "The First Temple of the Atom."

Ending secrecy cleared only the first hurdle for NC State. The AEC had to confront difficult safety and security questions.

In 1950, the 1946 Atomic Energy Act strictly limited uses of fissionable material. How could the agency provide bomb-grade fuel to a civilian reactor? How could it prevent sabotage of an unguarded reactor? How could the AEC ensure safe operation on a densely populated college campus? And who in the AEC should approve the reactor? In answering these questions, the agency foreshadowed many of the later practices it followed in licensing nuclear power reactors. See Part II for the rest of the story in the next issue.

By Thomas Wellock, NRC

Deck the Halls with Properly Placed Holly

Holiday safety tips

Mistletoe, garland, candles, ornaments—the special decorations we use each December brighten our homes and our spirits. However, there are certain risks that come with holiday tinsel and trimmings. According to the CPSC, almost 15,000 people visited the emergency room in 2023 because of a decorating-related injury.

As you carry out bins from the basement or attic, follow some simple tips to ensure decking the halls is jolly and safe for all.

Plants and trees: When enjoying a live tree, you should cut two inches from the trunk and check its water level daily. Place your tree away from space heaters and fireplaces. All artificial trees should be labeled fire-resistant. Remember to keep all potentially poisonous plants away from small children and pets. For example, American holly, mistletoe, and poinsettias are toxic to both dogs and cats and can cause health issues in humans.

Lights and candles: Use outdoor lights outdoors and indoor lights inside. Don't use any light strands that have frayed wires or broken bulbs. Never nail or tack the wiring when hanging lights. Avoid overloading electrical outlets or stringing together three or more sets of lights. Turn off all lights and blow out candles whenever you leave the house or go to sleep. Keep candles away from children and pets so they don't get knocked over. Use LED candles instead of live flames.

Ornaments and other decor: Avoid placing breakable ornaments on low-hanging branches when children or pets are present. Instead, hang ornaments made of natural fiber or other soft, non-toxic materials. Don't use decorations that have detachable parts or small batteries.

Decorating safely will make all your holidays merry and bright!

"Use outdoor lights outdoors and indoor lights inside.."

Safety in a Winter Wonderland

"The symptoms of hypothermia include confusion, shivering, and sleepiness."

Seeing white snow on evergreen trees marks the beautiful beginning of winter in many regions—and the potential storms that come with the season. Most of the United States won't experience a blizzard, which the National Weather Service (NWS) defines as a storm with sustained winds of 35 miles per hour (mph) and snow that reduces visibility to less than a quarter mile. However, even a relatively mild winter storm can wreak havoc on homes and vehicles and put both humans and animals at risk. As you look ahead to winter, consider how you can protect yourself, your loved ones, and your property from snow and other cold weather hazards.

1. Know how to dress for the cold. To avoid hypothermia and other cold-related health issues, make sure to dress appropriately for the temperatures in your community. As the temperature drops, add a layer to your body, as well as your extremities. Extreme cold requires a face covering, waterproof boots, and other weather-specific clothing.

2. Know how to recognize and treat symptoms. The symptoms of hypothermia include confusion, shivering, and sleepiness. If you suspect someone has hypothermia or frostbite, which can be recognized by pain, then numbness, plus a change in skin color, move the person to a warm area immediately. Remove wet clothing, and wrap the person in dry layers of clothes and blankets to warm up. Place affected skin in warm, not hot, water. Don't use fireplaces for warming or rub an area with frostbite.

3. Know the difference in winter weather conditions. When your local NWS office issues a winter weather statement, it's important to understand the difference between an advisory, a watch, and a warning. Each of these conditions also varies according to geographic location. If you hear an advisory has been issued, be aware and pay attention to weather conditions, especially when driving. If a watch is issued, be prepared for a significant winter

(Continued on page 5)

Safety in a Winter Wonderland, cont.

(Continued from page 4)

storm event with heavy snow and cold temperatures. A warning means you need to immediately take action by delaying travel plans, restocking your emergency kits, and gathering supplies in case of lost power.

4. Know what to include in an emergency kit. When winter weather threatens, be prepared with an emergency kit in your home, your office, and your vehicle. Stock up with a cellphone charger, a first-aid kit, extra winter clothing and blankets, a flashlight and extra batteries, a radio, some water, and nonperishable food. Keep an emergency heat source, as well as prescription medication and extra pet supplies, at home. According to the NWS, more than 5,000 people are killed each year due to weather-related car crashes, so avoid driving if possible. If you must be in your car, carry flares and a tow rope or sand to help stuck vehicles.

5. Know what to do after a winter storm. Even after the skies clear and the snow starts to melt, you need to use caution when leaving your shelter. Melting snow can cause flooding and black ice. Power lines and other debris may be down. Check your home first, then contact neighbors and loved ones.

Winter weather can be fun in many cases, but you should always be prepared for an emergency just in case

Source: Safety BLR

"A (weather) warning means you need to immediately take action..."

Drowsy Driving Prevention Week

"...keep a close eye on any food cooking on the stove or in the oven."

To coincide with the end of daylight saving time (DST), Drowsy Driving Prevention Week (DDPW) is held annually during the first full week of November. This year's events will take place November 2 to 8. Sponsored by the National Sleep Foundation (NSF), DDPW is a time to reflect on how dangerously common—but preventable—drowsy driving is. The National Highway Traffic Safety Administration reports that an estimated 100,000 crashes each year are caused primarily by drowsy driving, resulting in more than 71,000 injuries and, in 2023, 633 deaths. In fact, operating a vehicle after getting 4 hours of sleep or less is like driving drunk. Young drivers—those aged 16 to 25 years—and shift workers are at greatest risk of falling asleep behind the wheel.

Key steps to prevent you from driving while drowsy include:

- Getting the recommended amount of sleep (approximately 7 to 9 hours) the night before your trip. You can achieve better sleep by avoiding heavy meals, alcohol, and electronic devices before bedtime and sleeping in a quiet, cool, and dark environment.

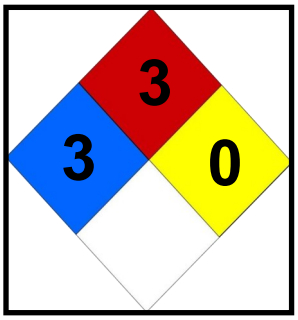
- Checking your prescription and over- the-counter medications to see if drowsiness is a possible side effect.

- Planning long trips with a companion. Having someone to talk to keeps you alert and engaged.

- Scheduling regular stops every 100 miles or 2 hours and avoiding the road between midnight and 6:00 a.m., as well as late afternoon, when sleepiness is at a peak.

Chemical Spotlight: Neohexane

Neohexane (2,2-Dimethylbutane) is a colorless, flammable liquid with a gasoline-like odor. It's used as an additive for fuel and in the manufacture of agricultural chemicals. The liquid is lighter than water and may float, while the vapor is heavier than air and may travel.



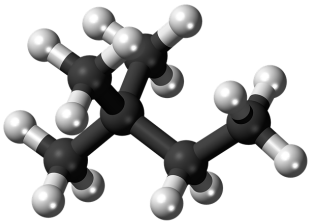
Where possible, enclose operations and use local exhaust ventilation. Store neohexane in tightly closed containers in a cool, well-ventilated area away from all oxidizing agents. Sources of ignition are prohibited where neohexane is used, handled, or stored. Use only non-sparking tools, and make sure all metal containers are grounded and bonded.

If neohexane is spilled or leaked, evacuate everyone from the area, and put on personal protective equipment. Use Nitrile or Viton gloves and a safety equipment manufacturer-recommended material for clothing. Put on indirect-vent, splash-resistant goggles with a face shield. If the potential for exposure over 100 parts per million (ppm) exists, wear a National Institute for Occupational Safety and Health (NIOSH)-approved supplied-air respirator with a full facepiece operated in positive-pressure mode. For increased protection or exposure above 1,100 ppm, use a self-contained breathing apparatus.

Remove all ignition sources. Cover the spill area with vermiculite, dry sand, or earth, and deposit in sealed containers. If neohexane containers are exposed to fire, use dry chemical, carbon dioxide, or alcohol-resistant foam extinguishers to put out the fire. Ventilate and wash the area after cleanup is complete. Keep neohexane out of confined spaces, including sewers, to avoid explosions.

It may be necessary to contain and dispose of neohexane as a hazardous waste. Contact your state or regional environmental protection office for specific recommendations.

"...evacuate persons not wearing protective equipment from the area of the spill or leak."

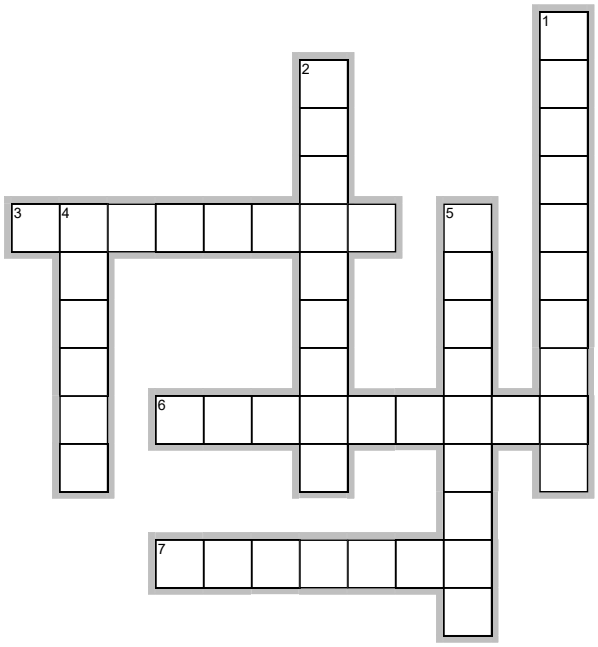


Fun Page

F U N P A G E

Across

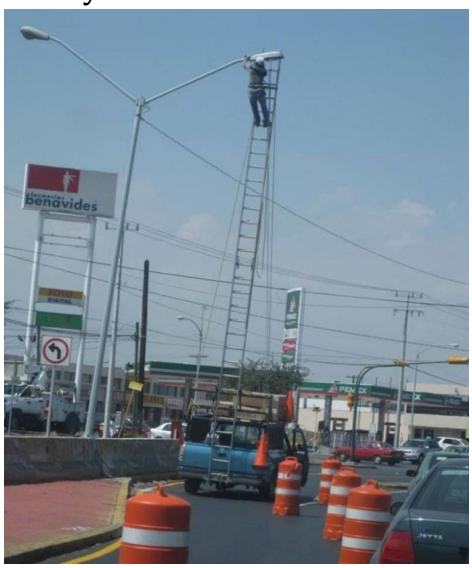
3. It's important to understand the difference between an _____, a watch, and a warning.
6. Hand-washing _____ reduces the number of people who get sick with diarrhea by 23% to 40% .
7. The (nuclear) reactor was an audacious idea when the most basic information about the _____ process was a Cold-War secret.



Down

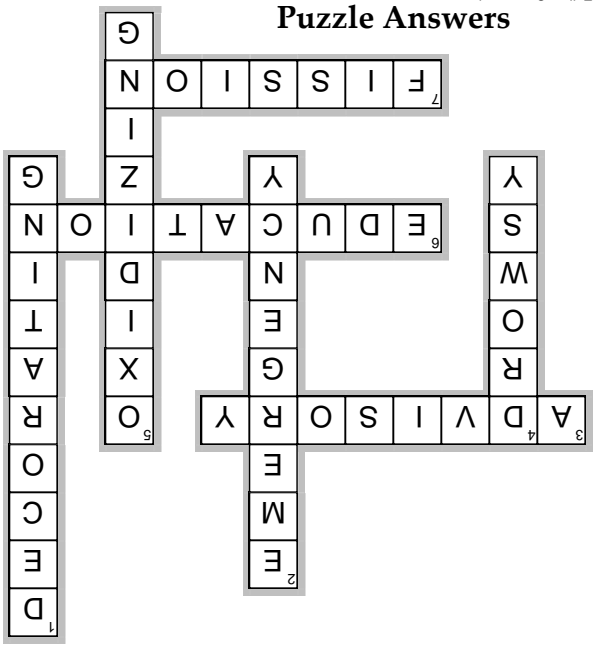
1. Almost 15,000 people visited the emergency room in 2023 because of a _____-related injury.
2. When winter weather threatens, be prepared with an _____ kit.
4. An estimated 100,000 crashes each year are caused primarily by _____ driving
5. Store neohexane in tightly closed containers in a cool, well-ventilated area away from all _____ agents.

Safety Fails



I think they missed the ladder safety class.

Puzzle Answers



Environmental Health and Safety Staff

Naomi BOLES (neb51), Department Assistant II
Brad FYE (jxf308), Asbestos and Lead Specialist I
Brandon KIRK (bxk230), Assistant Director of Campus & Facilities Compliance
Todd KOLVA (txk603), Facilities Safety Specialist II
Kumudu KULASEKERE (kck40), Health Physics Specialist II
Amelia MALAK (apm95), Safety Services Specialist I
Tom L. MERK (tlm8), EHS Assistant Director of Safety Services, CSO
Bhagya NALLAPERUMA (bxn178), Safety Services Specialist I
Jeffrey NEISTADT (jxn393), Health Physics Specialist II
Yelena NEYMAN (yxt13), Health Physics Specialist II
Joe NIKSTENAS (jen), EHS Assistant Director of Radiation Safety, ARSO
Daniel O'CONNELL (dxo128), Fire Safety Specialist I
Marc RUBIN (mdr6), EHS Executive Director
Mary Ellen SCOTT, PhD (mas35), Safety Services Specialist II
Joshua SMITH, (mas35), Construction, Mechanical, & Theater Safety Specialist II
Gayle STARLING-MELVIN (ges83), Clerk III
Felice THORNTON-PORTER (fst2), EHS Associate Director, CWRU RSO
Andrew YOUNG (aby3), CWRU Biosafety Officer

Safety Quotes

Better dead sure than sure dead.

~Author Unknown

All back issues of the EHS Newsletter can be found online at

case.edu/ehs/about/newsletters

Environmental Health and Safety
Case Western Reserve University
(216) 368-2906/2907 _____ FAX: (216) 368-2236
(email) cwruehs@gmail.com
(website) case.edu/ehs