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"Safety Comes First" Case Western Reserve University Environmental Health and Safety

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Basic Disaster Supply Kit	1	Basic Disaster Supply Kit	
		Tornado season is here. If bad weather strikes your workplace or home, do	
Cleaning With Chemi- cals At Work	2	you have a basic disaster supply kit ready? Ask your supervisor if there is a disaster supply kit and where it is located. It may be located in a shelter location at your workplace. Whether at work	
How To Use A PFAS Correctly	3	 Water—one gallon of water per person per day for at least three days, for drinking and sanitation Food—at least a three-day supply of non-perishable food Battery-powered or hand crank radio and a NOAA Weather Radio with tone alert Flashlight First aid kit Extra batteries Whistle to signal for help Dust mask to help filter contaminated air and plastic sheeting and duct tape to shelter-in-place Moist towelettes, garbage bags and plastic ties for personal sanitation Wrench or pliers to turn off utilities Manual can opener for food 	
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2018-3		Source: Safety.BLR	

Cleaning With Chemicals At Work



Cleaners, sanitizers and disinfectants serve different purposes. Cleaners remove dirt, sanitizers contain chemicals that reduce, but don't necessarily remove microorganisms, and disinfectants contain chemicals that destroy or inactivate microorganisms.

You should always choose the least hazardous chemical to complete the cleaning task at hand. The EPA updates its registered disinfectant lists periodically to reflect label changes, cancellations and transfers of product registrations. Check out the <u>EPA-registered Disinfectants</u> webpage for specific cleaning chemical information.

"Placing the word 'green' on the bottle does not always ensure that the chemical is safe. "

The following are safe work practices for using cleaning chemicals:

- Ensure that all containers are properly labeled.
- Read the chemical hazards and identify the contents of the chemical.
- Do not mix cleaning products that contain bleach and ammonia with any other cleaning agents.
- Know which cleaning chemicals must be diluted and how to correctly dilute the cleaners.
- Know the use, storage and emergency spill procedures for cleaning chemicals.
- Wear the proper protective equipment necessary when using the cleaning product.
 - Use the chemical in a well-ventilated area.

Wash up after you use the cleaning chemicals, especially before eating, drinking or smoking.

Be wary of the "green" product label. Placing the word "green" on the bottle does not always ensure that the chemical is safe. Check with the EPA to see if the product has been certified green.

How to use a PFAS correctly

How to use a PFAS correctly

Personal fall arrest systems (PFASs) provide protection from falling or safely arrests a fall if one occurs. Falls from heights and on the same level are among the leading causes of serious work-related injuries and deaths. The entire PFAS must be capable of withstanding the tremendous impact forces involved in a fall. A person without pro-tection will free-fall 4 feet (ft.) in half a second and 16 ft. in 1 second! A PFAS includes a full-body harness, a shock-absorbing lanyard or rope grab, a vertical lift line, and an anchorage able to support a load of up to 5,000 pounds. The PFAS must be rigged so that you cannot free-fall more than 4 ft. or hit a lower level. Do not use body belts as part of your PFAS. Body belts have proven to cause even more hazards. For example, you could suffer internal injuries or even death from pressure on the internal organs while suspended, or you could suffocate by a belt that shifted upward from the waist to the armpits.

Don't:

- Don't tie a knot in the lanyard. This will reduce its strength.
- Don't use water pipes, electrical conduits, light fixtures, or guardrails as anchor points.
- Don't use any lanyards without self-locking snap hooks.
- Don't join multiple lanyards together to reach an anchorage.
- Don't tie off to the same anchorage as another worker unless it is designed and approved by an engineer.
- Don't unhook from your fall protection while exposed to a fall of 4 ft. or more.
- Don't allow someone else to rig your equipment unless you verify that it has been done correctly.

Don't use an anchorage that is not independent of any anchorage used to support or suspend platforms.

Do:

- Pick an anchorage point that will support 5,000 pounds.
- Rig the fall arrest systems so you can't free-fall more than 4 ft. (or contact any lower level).
- Tie off above your head. A 6-ft person who ties off at the feet could free-fall as much as 12 ft.
- Place your anchorage directly above/behind your work area to avoid potential swing fall hazards.
- Use the shortest lanyard possible. The shorter the tie-off, the shorter the fall.
- Inspect your equipment daily before each use for wear damage, deterioration, fraying ropes, cracks, or other defects in the hardware.
- Tag and remove any defective equipment from service.
- Make sure you are attached to a sound anchorage.



Learn. Comply. Succeed.

"Do not use body belts as part of your PFAS."

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Improving Restaurant Food Safety One Study at a Time



"...focus (is) on foods associated with foodborne illness outbreaks, such as eggs, ground beef, chicken, tomatoes, and leafy greens..."

Did you know that half of all foodborne illness outbreaks in the United States are associated with restaurants? The Centers for Disease Control and Prevention's (CDC's) Environmental Health Specialists Network (EHS-Net) knew so since 2002. EHS-Net has conducted 15 studies investigating food preparation practices and other factors that could contribute to restaurant-related foodborne illness outbreaks. These studies have yielded a wealth of information about restaurant food preparation practices—information that can be used to reduce the number of foodborne illness outbreaks.

EHS-Net studies primarily focus on foods associated with foodborne illness outbreaks, such as eggs, ground beef, chicken, tomatoes, and leafy greens. They also focus on specific food safety practices, such as proper hand hygiene, and food cooling practices, and ill workers not working with food. The lack of these practices has been associated with outbreaks.

EHS-Net Staff Interview and Observe Restaurant Workers

EHS-Net studies usually involve interviews with kitchen managers and/or workers about restaurant characteristics and food preparation policies and practices. For example, for our study on ill food workers—a common cause of foodborne illness outbreaks—data collectors interviewed more than 400 restaurant kitchen managers and food workers about working while ill. Twenty percent of food workers said they had worked at least one shift in the past year while experiencing vomiting or diarrhea, symptoms of contagious foodborne illness. We also found that food workers were less likely to say they had worked when they were ill if they worked in a restaurant that:

was less busy.

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- had a policy for workers to tell their manager when they were sick.
- had workers who could come to work to fill in (on-call workers).
- had a more experienced manager.

Based on the data from this study, EHS-Net recommended that future efforts to prevent food workers working while ill should focus on encouraging workers to tell managers when they are ill and on addressing restaurant staffing issues.

EHS-Net studies also often involve observations of food preparation. In the Tomato Preparation Practices Study, data collectors interviewed a manager, observed food workers working with tomatoes, and took temperatures of tomatoes in more than 400 restaurants. Analysis of the data from this study revealed that preparing tomatoes safely posed a challenge for many restaurants. For example, we found that about 20 percent of the time, tomatoes were washed in a way that could lead to contamination by pathogens. FDA recommends 41 degrees as the maximum cold holding temperature to reduce the spread of pathogens. We found that about half of all batches of cut tomatoes in holding areas were above 41 degrees. Additionally, many tomato batches had been above this temperature in previous preparation stages, such as storage and cutting.

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Improving Restaurant Food Safety...., cont

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One recommendation to come out of this study is that restaurant management and food safety programs focus on temperature control of tomatoes at every stage of preparation, not only in the stage for which temperature control is required. This holistic approach should make it easier to maintain temperature control during holding.

Collaboration and Experience

EHS-Net is a collaborative agreement among CDC, US Food and Drug Administration (FDA), US Department of Agriculture, and state and local health departments. EHS-Net data collectors are environmental public health and food safety professionals in state and local environmental health agencies funded by the EHS-Net cooperative agreement. These data collectors are experienced in restaurant food safety. Several of them have been with EHS-Net since its inception in 2000.

One of those is Danny Ripley from the Nashville Public Health Department in Tennessee. When asked how EHS-Net's studies influence practices in his agency, he said: "Data from our studies influence the training we provide to restaurant staff, and they influence our inspection process. For example, our cooling study highlighted specific weaknesses with restaurants' cooling policies. So now, our food safety training addresses those weaknesses, and we look for these weaknesses during our inspections."

EHS-Net Future

EHS-Net is currently collecting data on deli meat preparation practices in retail delis. These data will inform efforts to reduce infections of listeriosis, a deadly foodborne illness infection often associated with deli meat.

EHS-Net is also working on:

- A study to learn more about restaurant knowledge, attitudes, and practices concerning food allergens.
- An intervention study designed to increase safe food preparation in restaurants.

EHS-Net staff believes that the findings from these studies will be welcomed by the restaurant industry and food safety programs alike.

Carol Selman, the EHS-Net team lead, had this to say about EHS-Net's restaurant food safety work: "The EHS-Net program has done amazing work over the past 12 years. Effective collaboration between CDC and local and state health departments has allowed us to conduct innovative, high-quality restaurant food safety research that can contribute to a reduction in foodborne illness outbreaks. We are especially excited that food safety (https://www.cdc.gov/winnablebattles/) has been identified as one of CDC's winnable battles—we believe that EHS-Net's work can make significant contributions to this battle."

For more information on EHS-Net's food safety work, visit http://www.cdc.gov/nceh/ ehs/EHSNet/foodsafety.htm. This Inside Storyby Laura Brown and Pam Wigington. "EHS-Net is currently collecting data on deli meat preparation practices in retail delis. ."



Source: CDC

Radiation Risks Associated with Medical Events



The term "medical event" may sound alarming when used in nuclear medicine and radiation therapy. But it may not mean a patient has been harmed. It means there may have been a problem in a medical facility's use of radioactive materials.

These materials can help to diagnose and treat illnesses or be used in medical research. Small amounts can allow doctors to see certain organs. Images created using radioactive materials can help to find, identify and measure tumors, or view problems in an organ's structure or function. Radioactive materials can also kill cancerous tissue, shrink a tumor or reduce pain.

NRC regulations aim to assure radioactive materials are used properly. This is also true when they are used in medical diagnosis, treatment or research. The rules protect the safety of patients, medical workers, the public and the environment. They define "medical event" in very specific terms.

A "medical event" involving radioactive materials occurs if BOTH: (1) The dose given is not what was prescribed, and the difference meets the NRC's reporting equirements, AND (2) One or more of the following incidents occur:

- The dose given is off by at least 20 percent from the prescribed dose, either too high or too low,
- The wrong drug is used,
- The drug is given by the wrong route,
- The wrong individual receives the dose,
- A dose is administered to the wrong part of the body and exceeds by 50 percent or more the dose that area should have received, or
- A sealed source used in the treatment leaks.

The NRC requires reporting because a medical event shows the licensee had a problem in administering the doctor's prescription. The problem may have been technical, or may be a quality assurance issue. Dose errors may be a sign of problems in the medical facility's operations. But there is no scientific basis to conclude that such an error results in harm to a patient.

To know if a patient has been harmed, the doctor must do more analysis. Harm may come from too high a dose. But it could also result from inadequate treatment when a dose is too low.

The NRC also analyzes each event to see if further action is needed. If there is a violation of the regulations, the NRC might take enforcement action.

The agency will also look for trends to see if something in NRC regulations or guidance may need to be clarified.

Severe events are rare. An example would be a dose error that is well over 20 percent too high or too low. In severe events, an independent medical consultant will assess the patient's risk of harm.

In all cases, a "medical event" indicates potential problems in a facility's use of radioactive materials. It does not necessarily result in harm to a patient. But the NRC's rules are designed so events are reported to the NRC and the public. Even when there is harm to a patient, the NRC protects the public health and safety.

"NRC regulations aim to assure radioactive materials are used properly."

Source: U.S.NRC Backgrounder

Chemical Spotlight: Toluene

Toluene is a clear and colorless liquid with a strong odor and is a good solvent. Toluene is produced during the process of making gasoline and other fuels from crude oil. This chemical is used in making paints, paint thinners, fingernail polish, lacquers, adhesives, and rubber and in some printing and leather tanning processes. You can be exposed to toluene from contaminated workplace air, automobile exhaust, or by using products such as paints, paint thinners, fingernail polish, lacquers, and adhesives. Toluene can enter surface and ground water from spills of solvents and petroleum products as well as from leaking underground storage tanks (USTs). When spilled into surface water or soil, toluene will readily evaporate into the air or be degraded by bacteria.

Toluene is not compatible with oxidizing agents, metal salts, and strong acids. Store toluene in tightly closed containers in cool, well-ventilated areas, away from combustibles. Ground and bond any metal containers involving the transfer of toluene.

If toluene is spilled:

- Evacuate everyone and secure and control the entrance to the area.
- Remove all ignition sources.
- Absorb all liquids in vermiculite , dry sand, earth, or a similar material.
- Deposit materials into sealed containers.
- Because of the possibility of explosion, keep toluene out of confined spaces, such as sewers.

Toluene may need to be contained and disposed of as a hazardous waste. Contact your state environmental department or EPA regional office for questions about proper disposal.



2 0 *"Toluene"* is not compatible with oxidizing agents, metal salts, and strong acids."



Source: Safety.BLR

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 3. A(n) "event" indicates potential problems in a facility's use of radioactive materials. 4. Do not mix cleaning products that contain bleach and with any other cleaning agents 5. Don't use any without self-locking snap hooks. 7. Aday supply of food and water is the minimal amount to have on hand during a disaster. 	
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Funny Corner	Puzzle Answers
The personal fall arrest system worked	EdipaeCrosswort.com
but tragically Steve was directly above the World Piñata Championships.	
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