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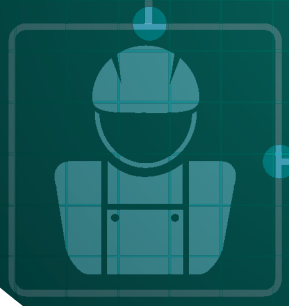
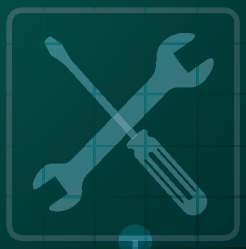
Special Report

50 Tips For More Effective Safety Training

Volume 1





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SPECIAL REPORT

50 Tips For More Effective Safety Training

Volume 1

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Section #1: Specific operations safety training tips

Asbestos awareness

Training covers a broad range of employees

29 CFR 1910.1001(j)(7)

Why it matters …

- Serious diseases related to asbestos exposure include lung cancer, asbestosis, and mesothelioma, a cancer involving the lining of bodily organs.
- Symptoms of asbestos exposure usually do not appear until 20 or 30 years after exposure.
- Buildings constructed before 1980 are generally presumed to contain asbestos or asbestos-containing material (ACM).

Asbestos training should match employees' jobs. For companies in general industry, the Occupational Safety and Health Administration's (OSHA) detailed training requirements related to asbestos exposure were designed primarily for those that use asbestos in the manufacturing process. Regardless of the source of the exposure, all workers who may be exposed to airborne asbestos at or above the permissible exposure limit (PEL) require extensive training in how to protect themselves through engineering controls, respirators and other personal protective equipment (PPE), and medical surveillance. But there is an entirely different category of workers—those in custodial or housekeeping-type jobs—who also must receive "asbestos awareness" training even if there is no immediate threat of asbestos exposure. (This requirement, of course, applies only to workers in buildings where asbestos is believed to be present.) A strong case can be made that any employees who might encounter ACM in the course of their jobs should receive asbestos awareness training.

"Awareness" means understanding the hazards. Perhaps the first point to make about asbestos is that exposure above the PEL can be very dangerous, potentially causing serious diseases, including cancer. The second point, however, is that while there are many items that might contain asbestos—roof shingles, floor tiles, various insulating materials, etc.—these should not automatically be considered hazardous. Emphasize that the main hazard of asbestos comes from inhaling microscopic asbestos fibers, which are likely to be produced only if asbestos or ACM is damaged, disturbed, or otherwise no longer intact. Minimum OSHA requirements for asbestos awareness training include:

- Health effects of asbestos exposure
- Locations of ACM in the building or facility
- How to recognize if ACM is damaged or has deteriorated
- Housekeeping procedures related to asbestos
- Proper response in the event of a release of asbestos fibers

Go beyond the minimum requirements. Some of OSHA's training requirements for workers exposed at or above the PEL can also apply to general awareness training. These include:

- The relationship between smoking and asbestos exposure in causing lung cancer
- Specific work processes and engineering controls intended to control asbestos exposure
- The meaning of warning signs and labels related to asbestos

Finally, remember that OSHA's Asbestos Standard requires that training (including awareness training) must be conducted at least annually and that copies of the standard itself, as well as asbestos safety training materials, must be made available to employees upon request.

Back safety

A million reasons to take back injuries seriously

Why it matters …

- Back pain accounts for about 25 percent of all workers' compensation payments—totaling nearly $10 billion per year.
- In a recent year, there were nearly 300,000 back injuries resulting in lost workdays, of which 89 percent were in material-handling jobs.
- Back injuries are the leading cause of disability for workers younger than 45.

With over 1 million back injuries in the workplace each year, prevention should be a major focus of your safety training—and not just for workers in material-handling jobs. While it's true that a leading cause of back injuries is overexertion—such as improperly lifting a heavy object—it's not the only cause. Other major reasons for disabling back pain are related to *long-term effects* of doing a job, including:

- Heavy physical work of any kind
- Awkward postures required to do a job
- "Whole body vibration"—for example, operating a jackhammer or heavy equipment such as a crane
- "Static posture"—being required to sit in one position for an extended period of time

Clearly, teaching proper lifting techniques is very important—but it's still only part of the answer.

Ask employees for their own solutions. A complete back safety program will also look for ways to reduce long-term effects by educating employees about the possible causes—and asking them to contribute to the solutions. Workplace safety studies find that injuries and accidents are often greatly reduced when employees and management work in partnership. If back injuries are a persistent problem in your workplace, form a task force to take a closer look. Implementing just one good idea can more than pay for itself in terms of reducing lost time injuries and workers' comp costs.

Substitution works. One company used a safety team to reduce employee back injuries by 57 percent and lower related workers' compensation costs by 71 percent. How? The team first identified specific causes of the injuries, then developed ways to avoid them—primarily by substituting mechanical devices for manual lifting. So encourage employees to use mechanical devices—hand trucks, conveyors, pneumatic lifts, etc.—whenever possible, instead of their own arms, legs, and backs to lift and carry heavy objects. And if substitution isn't feasible in a given situation, two or more people should team up for a difficult lift.

Bloodborne pathogens safety

A far-reaching issue

29 CFR 1910.1030

Why it matters …

- OSHA's BBP Standard is often one of the Top 10 most frequently violated standards, with penalties in the hundreds of thousands of dollars.
- An estimated 600,000 to 800,000 needlestick and other sharps injuries are reported each year, but the actual number is probably much higher.
- The risk of contracting hepatitis B from exposure to infected blood may be as high as 30 percent.

Nearly 6 million American workers are at risk for infectious diseases such as hepatitis and human immunodeficiency virus. That's why OSHA takes its Bloodborne Pathogen (BBP) Standard so seriously—and as a safety trainer, so should you. To begin with, all employees whose jobs expose them to infectious diseases must be trained, at no cost to them and during working hours. Training must occur at the time of an employee's initial assignment to a job that may expose him or her to infectious diseases, and at least annually thereafter. Additional training must be given when jobs or procedures are changed or when the nature of the employee's exposure changes. Training material must match employees' education, literacy, and language levels.

Make sure you're not leaving anything out. Review the training provisions of the OSHA standard, which are summarized here:

- A copy of the BBP Standard with an explanation of what it requires
- General explanations of infectious diseases, their symptoms, and how they are transmitted
- An explanation of your company's written Exposure Control Plan
- Description of the hazards of infectious diseases associated with different jobs
- Information on how to reduce the risk of exposure, including engineering controls, work practices, and PPE
- How to select, use, store, removal, handle, decontaminate, and dispose of PPE
- Information on vaccination against hepatitis B
- What to do in an emergency involving blood or other potentially infectious materials
- What to do if exposed, including reporting and medical follow-up
- Signs, labels, and color-coding relevant to infectious materials
- An opportunity for interactive questions and answers with the trainer

Emphasize engineering controls and work practices. While PPE is vitally important, the first line of defense against infection is to use equipment and methods designed to lessen the risk of exposure in the first place. A prominent example is preventing injuries from needlesticks and other sharps—one of the leading causes of exposure. As new devices that reduce the need to handle sharps become available, employees should be immediately trained in how to use them properly. Similarly, they need to know the best work practices for handling, storing, and disposing of sharps properly and safely.

Chemical labels

Are employees reading them?

29 CFR 1910.1200(f)

Why it matters …

- Environmental Protection Agency (EPA) surveys have indicated that a large percentage of workers do not read labels for pesticides and other chemicals.
- There are more OSHA citations for violations of Hazard Communication (HazCom) than any other general industry standard.
- To state the obvious—hazardous chemicals are *hazardous*, causing such tragedies as fires, explosions, and serious illness if not handled properly.

Find out what employees know about the chemicals they use. As a training exercise, choose a substance that employees commonly use, and ask your group to describe the basic information found on its label: common and chemical name, the kind of hazard it represents, and how to handle and use it safely. If they don't know or aren't really sure, it's time to reinforce a fundamental HazCom safety message: *Always*

read the label before using any product that may contain a hazardous substance. (Remember that this rule also applies to such common "household"-type products as cleaners.)

Review the labeling requirements for hazardous substances. Remind your group that all products containing hazardous chemicals are required by law to include specific safety information on the label. Emphasize that this information is there to protect them and that it's part of their responsibilities as employees to read labels and understand what they mean.

In 2012, OSHA revised HazCom to align with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

The GHS is a system for standardizing how chemicals are labeled and classified across the globe. It provides a standardized way to determine how hazardous chemicals can affect health and safety. The GHS is intended to improve understanding of hazards and lead to better handling and use of chemicals in the workplace.

The labels provide workers with immediate visual reminders of hazards. The elements of a GHS-compliant label include:

- **Product Identifiers:** Chemical name, code, quantity, etc.
- **Supplier Information:** Manufacturer's company name and contact information.
- **Pictograms:** Nine different black symbols with a diamond-shaped red border that depict the hazard classification of the given chemical.
- **Hazard Statements:** Various detailed phrases describing the hazards associated with a chemical, e.g., flammable gas, fatal if swallowed, causes eye irritation.
- **Precautionary Statements:** Four types of precautionary statements must be on each label: prevention, response, storage, and disposal.
- **Signal Word:** One of two signal words for alerting the level of hazard on each label:

  —DANGER—more severe hazards possible.

  —WARNING—less serious hazard.
- **Supplemental Information:** Any other instructional information that the chemical manufacturer would like to provide.

Cold weather work

Watch out for winter's chill

Why it matters …

- While there are no specific rules for cold weather work, OSHA does take it seriously and publishes helpful guidelines.
- According to OSHA, more than 700 hypothermia deaths occur each year in the United States.
- In addition to hypothermia, frostbite is also a serious hazard of cold that can cause permanent damage to body tissue.

Cold weather dangers are nothing to sneeze at. Employees need to know that working outside in cold conditions can have serious hazards—principally hypothermia and frostbite. Hypothermia in particular is a significant health issue, for three reasons:

- It's sneaky—It can be difficult to recognize until a case becomes moderate to severe.
- It's deceptive—It can happen even if temperatures are above freezing.
- It can be deadly—Unrecognized and untreated, hypothermia can actually kill.

Often, the real culprit in cases of hypothermia is not cold by itself—it's moisture (that's why it's possible to get hypothermia in relatively mild conditions). So make sure your employees know that it can be far worse to be *cold and wet* than just to be cold.

What is hypothermia, exactly? The human body has its own "thermostat" to regulate its normal temperature of 98.6 degrees Fahrenheit, and it generates heat in response to cold temperatures in order to maintain this level through such mechanisms as perspiring and shivering. Hypothermia means that the body's normal temperature has dropped sufficiently to impair physical and mental functions. And it doesn't take much—body temperature that is only slightly below 98.6 degrees can produce mild hypothermia. Signs of advancing hypothermia include:

- Loss of physical coordination
- Slurred speech
- Uncontrollable shivering
- Dazed consciousness or irrational behavior

Take steps to prevent hypothermia. Employees who work in cold conditions should understand, first, that hypothermia is a real hazard and, second, that there are several commonsense things they can do to protect themselves, including:

- Stay dry—If they get wet, come in and change clothes or dry out.
- Dress in layers—These provide insulation, and outer layers can be removed if the weather gets warmer.
- Wear clothing that resists moisture or "wicks" it away quickly. Synthetic fabrics are best; cotton is not recommended because it retains moisture.

- Work in pairs—If one shows signs of hypothermia, the other can provide assistance.
- Avoid caffeine and alcohol—These actually hurt, rather than help, in resisting the cold.
- If they're uncomfortably cold, come inside and warm up!

Contractors

Are you required to train them?

Why it matters …

- According to the Bureau of Labor Statistics (BLS), contract workers accounted for 16 percent of all work-related fatal injuries in 2012.
- OSHA can cite either a host employer or a contractor, or both, for a violation.
- Ensuring that outside contractors have good safety programs helps protect your own employees from accidents.

You may be responsible for the safety of outside contractors. Generally, when employees of an outside contractor come into your workplace, BOTH your company (what OSHA calls the "host" employer) and their own employer share responsibility for the outside employees' safety. The dividing line between areas of responsibility is not always clear, but you can use this rule of thumb as a starting point: The contractor is responsible for making sure that its employees know how to do their jobs safely, while the host employer is responsible for informing the contractor of any hazardous conditions that are specific to the host's workplace. For example, if your workplace includes hazardous chemicals, the host needs to make sure the outside contractor knows about the hazards.

Know the OSHA standards that refer to outside contractors. The "rule of thumb" mentioned above can apply for any potential hazardous situation involving outside contractors. But be aware, also, that several of OSHA's general industry standards refer specifically to the host employer's responsibilities. These include:

- Process Safety Management (29 CFR 1910.119)
- Hazardous Waste Operations ("HAZWOPER") (29 CFR 1910.120)
- Confined Spaces (29 CFR 1910.146)
- Lockout/Tagout (29 CFR 1910.147)
- Hazard Communication (29 CFR 1910.1200)

Note that this list is not necessarily complete and that there are various construction industry standards (29 CFR 1926) that include rules for outside contractors as well. Note also that different standards impose different requirements on the host employer, so be sure to read them thoroughly.

Communication and coordination are essential. Regardless of specific OSHA requirements for outside contractors (if any), it is essential for safety managers of both the host employer and the contractor to exchange all relevant information regarding potential hazards and safety procedures. This is for your own company's protection as well as the safety of all employees. Here are some tips to keep in mind:

- Require outside contractors to demonstrate an adequate safety program before they come into your workplace.
- Review your own safety program with the contractor; identify any differences between the host's and the contractor's programs, and agree on how to bridge any gaps.
- Arrange for any specific training that the contractor's employees might need, either by requiring the contractor to provide the training or by providing the training directly.

Emergency Action Plan

Are employees prepared for emergencies?

29 CFR 1910, Subpart E

Why it matters …

- OSHA estimates that approximately 200 workplace deaths and 5,000 workplace injuries each year are due to fire, one of the most common types of emergencies.
- In one recent year, OSHA issued more than 300 citations for violations of its rule on Emergency Action Plans (EAPs).
- Safety experts all agree that knowing how to act quickly and properly in an emergency is the key to saving lives and preventing injuries.

Who needs to have an Emergency Action Plan? There are two different, but equally correct, answers to this question. The first answer is that OSHA requires an EAP only for employers that are covered by certain standards, such as "Fixed Extinguishing Systems" and "Process Safety Management of Highly Hazardous Chemicals" (other standards also require EAPs). The second answer is that *every* company really should have an EAP. Not only does OSHA explicitly recommend it, but it simply makes sense to have a plan for a safe, orderly response to emergencies such as fires, weather events, and releases of hazardous substances. And note that even relatively minor incidents, such as small fires or spills, constitute an "emergency" if they trigger an alarm and require employees to stop what they're doing and evacuate their work areas.

What should an EAP contain? OSHA includes helpful guidelines for EAPs as an appendix to its standard on Exit Routes, EAPs, and Fire Prevention Plans (29 CFR 1910, Subpart E). In brief, the EAP should address any emergencies that might reasonably be expected to happen in your workplace and include:

- Procedures for reporting the emergency

- Evacuation procedures—ideally, the EAP should include floor plans showing exit routes and assembly points
- How to account for all employees who have evacuated
- Responsibilities of any employees who are designated to stay behind and ensure safe shutdown of operations
- Responsibilities of any employees who may be designated to perform rescue or medical duties

What should emergency response training include? Every employee needs to know what he or she is expected to do when an emergency alarm sounds—and furthermore, to do it quickly. For most employees, the proper response is simply to evacuate the work area in a rapid but orderly manner, using proper exit routes, and to assemble in a designated "safe area." However, some employees—OSHA calls them "evacuation wardens"—should be given the responsibility for making sure that other employees leave the area properly and safely. OSHA recommends one warden for every 20 employees and suggests that they should receive specialized training in:

- Knowing the complete layout of the building or work area, including the various exit routes
- Giving guidance and instruction to employees during evacuation
- Knowing how to assist employees, such as those with disabilities, who may need assistance
- Checking all rooms and enclosed spaces to make sure that no one is left behind
- Accounting for all employees after evacuation is complete

Emergency preparedness

Disaster training or training disaster?

Why it matters …

- In one recent year, OSHA gave out more than 300 citations for violations of its EAP rules.
- Life-threatening emergencies can happen in any workplace, so it simply makes sense to make sure employees know how to respond properly and safely.
- A comprehensive emergency response program can also help reduce legal, insurance, and recovery costs.

Emergency training is not "one size fits all." The proper emergency response to a fire might be quite different than to a hurricane, a release of toxic chemicals, or a terrorist attack. Not knowing the difference could make a bad situation a lot worse—and you don't want to wait until a disaster happens to find out that your emergency training is … well, a disaster. So the first step in an effective training program is to identify what types of emergencies might actually occur and determine the appropriate

response for each. This may mean that you need to have more than one type of training for different possible emergencies.

OSHA's guidelines are a good start. Although OSHA's standards related to emergency response provide little specific direction on what training must include, other OSHA publications have specific guidelines for emergency response training. These guidelines include the following general training points:

- Recognizing potential hazards and threats that might create an emergency
- Contents of the company's EAP
- Location and use of common emergency response equipment, such as alarms
- Individual roles and responsibilities
- Warning, alarm, and communication procedures and systems
- Evacuation and shelter procedures
- Reporting and accountability procedures (that is, making sure everyone is accounted for in an emergency)
- Equipment shutdown procedures

Because fast response is critical in an emergency, practical exercises and drills should be considered essential to effective emergency training. And remember that employees with specific emergency response duties must receive additional, specialized training.

Don't forget to update emergency training. OSHA also provides guidelines on *when* to provide emergency training. Clearly, it's not enough simply to train once and forget about it. OSHA encourages emergency training:

- Immediately after developing an EAP
- After revisions to the EAP
- For all new employees
- For employees with new responsibilities or assignments
- When new equipment, materials, or processes are introduced
- When exercises and drills show unsatisfactory performance
- In any event, at least annually

Ergonomics

Ergonomics may be more important than ever

Why it matters …

- Estimates of the costs associated with work-related musculoskeletal disorders (MSDs) range from $13 billion to $54 billion per year.
- According to the Bureau of Labor Statistics, about one-third of all occupational injuries and illnesses are due to overexertion or repetitive motion.
- Numerous case studies show that increased ergonomics-oriented awareness, training, and hazard reduction will reduce injuries, lost work time, and associated costs.

When Congress killed OSHA's Ergonomics Standard in 2001, some people thought that interest in preventing work-related MSDs would also start to die. That prediction turned out to be wrong. If anything, the focus on MSDs and ergonomics has intensified on the part of business, labor, and OSHA. Why? Because all three have found that ergonomic measures for preventing MSDs actually pay off in terms of reducing worker injuries, lost work time, and insurance and medical costs. OSHA in particular has announced a four-point program for ergonomics that includes:

- Guidelines for specific industries and tasks
- Enforcement—even without a specific standard, OSHA will inspect for ergonomic hazards and issue citations under the General Duty Clause
- Outreach and assistance, to help businesses address ergonomic issues
- A National Advisory Committee on ergonomics to continue studying ways to apply ergonomics in the workplace

Tailor your training to employee needs and issues. There is no "one size fits all" way to approach ergonomics training, because types of MSDs and their causes vary so widely from industry to industry and even from task to task. Determine the types of training that are needed by reviewing health records and job analyses for evidence of MSD hazards. Then design and conduct training sessions that address these specific hazards—even if you have to hold different ergonomics sessions for employees in different job classifications.

Employee involvement and feedback is key. Employees themselves are the only ones who *really* know the physical requirements of their jobs. Encourage them to talk about the tasks they must perform at their workstations and to do their own analysis of potential MSD hazards and how these might be alleviated. For example:

- Have them discuss, and actually demonstrate, the types of actions they take that involve repetitive motions, impact, or awkward movements or positions,
- If possible, show them different, less physically stressful ways to perform these tasks, *or*
- Ask for their specific suggestions on new or different equipment, tools, furniture, and other engineering controls that might reduce MSD-related problems.

Fall protection

Training helps ensure a soft landing

Why it matters …

- OSHA estimates that there are about 68,000 fall-related injuries in the workplace each year.
- Falls of all types in North America account for an estimated 800,000 injuries per year, including 13,000 deaths.
- Duty to have fall protection is consistently #1 on OSHA's top ten most frequently violated standard.

Falls are a leading cause of work-related deaths—and are almost completely preventable. While most falls occur in the construction industry, the problem is by no means limited to construction work. General industry experiences thousands of serious accidents each year from employees falling from or through roofs, platforms, ladders, scaffolds, and openings in floors or walls. OSHA believes that almost all such accidents could be prevented through the use of basic safeguards such as guardrails, safety harnesses, and other fall arrest equipment.

Develop your own training program for fall protection. OSHA regulations for general industry provide very little guidance for such training. Yet it's clear that in any workplace where falls could occur, employers should address this issue through employee training as well as by providing the physical safeguards that are required in the standards. A basic training outline might include:

- Recognize the hazards—identify the locations, conditions, and situations in your workplace where falls might happen.
- Understand the need for safety equipment—employees probably don't need to know the detailed OSHA specifications for guardrails and other fall protection devices, but they definitely should understand that such equipment is required on or around platforms, catwalks, openings, or wherever there is a fall hazard.
- Know how to use PPE—personal fall arrest equipment, such as safety harnesses, is considered to be a type of PPE that requires thorough training in how to use it properly, in compliance with OSHA regs (29 CFR 1910.132).
- Use common sense—falls often occur when employees are careless or foolish; for example, there have been several instances of deaths from workers standing or leaning on skylights.
- Take action to prevent tragedies—encourage employees to develop a strong "safety sense" about possible fall hazards, to take all possible precautions in potentially hazardous situations, and to report any unsafe conditions (such as missing guardrails or other safety equipment) immediately.

Employees should know when harnesses or other fall arrest equipment is required. It's helpful to have specific rules, or at least clear guidelines, especially if these go beyond OSHA requirements. As an example, several companies have adopted a rule that all work that takes place 6 feet or more off the ground requires employees to wear complete fall protection equipment—a rule that has saved lives more than once.

Forklift safety

Forklift safety training isn't just for operators

29 CFR 1910.178 (l)(1)(i)

Why it matters …

- According to U.S. government statistics, forklift-related accidents account for nearly 20,000 injuries and nearly 100 fatalities per year.
- In one recent year, OSHA cited 2,858 violations of rules related to powered industrial trucks and assessed nearly $1.8 million in penalties.
- Recently, OSHA announced fines of $72,500 for a single company that had been cited for forklift safety rule violations.

While it's true that only employees with specific training can operate a forklift, *any* employees who work around forklifts should know the basics of safe operation and maintenance—and what they must do to avoid getting hurt accidentally. So don't hesitate to hold a "basic forklift safety" session for anyone who might be affected by forklifts. Even experienced, trained operators won't be harmed by some refresher training in basic forklift safety. And remember that OSHA takes forklift safety very seriously and in recent years has beefed up its standard to include very specific and careful operator training requirements.

To begin with, everyone should know about forklift hazards. Forklifts are big, heavy machines that can seriously injure or kill people; they're not like minicars in an amusement park. Remind employees that forklifts can topple over, collide with objects (and people), and drop heavy loads, as well as represent a possible fire and explosion hazard when refueling. Next, review some of the basics of forklift safety: Never exceed the rated load capacity, make sure the load is balanced on the forks, never ride as a passenger on a forklift, never stand under the forks when they're raised, no smoking when refueling, etc. Finally, encourage all employees to be on the lookout for possible forklift safety hazards—including unsafe operation or maintenance problems—and to report any such hazards to a supervisor as soon as possible.

Formal operator training requires more than just the basics. OSHA's standard on powered industrial trucks has very specific requirements for operator training that should include a combination of formal training (classroom, videos, etc.) with practical instruction, as well as an evaluation and certification process. The standard specifies that only those who are already competent operators can provide this training and also specifies a long list of topic areas that training must cover. Once trained, operators must receive refresher training and evaluation at least every 3 years—more often for operators who have a record of accidents or near misses. (Note that a near miss involving a forklift should be taken very seriously and used as an occasion for formal or informal safety training.) Trainers should definitely refer to the "training" section of the OSHA standard to make sure that all the required subject matter is covered.

Hand safety

Keeping hands out of trouble

29 CFR 1910.138

Why it matters …

- There are about 250,000 serious hand, finger, and wrist injuries in private industry per year, according to Bureau of Labor Statistics data.
- In a recent year, about 8,000 of these injuries were amputations.
- In one recent year, OSHA issued more than 1,000 citations for violations of the "General Requirements" section of its PPE standard (29 CFR 1910.132).

Ignorance isn't bliss. When OSHA revised its PPE standard in 1994, it included a new rule on hand safety. There were two main reasons for revising the overall PPE rule:

Too many employees were not wearing PPE, and too many employees who did wear PPE were either using the wrong PPE or using it incorrectly. Regarding hand injuries specifically, one study showed that 70 percent of injured workers did not wear gloves, and the remaining 30 percent wore gloves that were inadequate, damaged, or wrong for the type of hazard being protected against. OSHA therefore concluded that it wan't enough simply for employers to require employees to wear PPE—the employer needed to select PPE based on the specific conditions and potential hazards of the task to be performed.

Have employees conduct their own hazard assessment for hand safety. OSHA requires employers to determine the types of PPE to be required by assessing the workplace for hazards. Involving employees in this hazard assessment can be an effective training technique. On the topic of hand safety, ask them to list all the ways their hands might be injured on the job. Depending on the jobs done in your workplace, the list might include:

- Cuts, lacerations, punctures, and even amputations
- Abrasions from rough surfaces
- Broken fingers or other bones of the hand
- Chemical burns
- Severe skin irritation (dermatitis) from contact with certain chemicals
- Thermal burns from touching very hot objects
- Absorption of hazardous substances through unprotected skin

Choose the right gloves for the job. Of course, wearing gloves will help protect against many of the hazards listed above. But not just any kind of glove will do. As another training exercise, have employees match the hazards they've identified with the right kind of glove, and ask them to explain why certain types of gloves are or are not appropriate for certain hazards. (For example, use rubber rather than cotton gloves for handling hazardous liquids because rubber repels liquids, while cotton absorbs them.) And for hand injuries that generally are not prevented by gloves (lacerations, broken bones, amputations), remember to include training on safe ways to use hand tools, power tools, machinery, and other typical causes of serious hand injuries.

Hazardous waste operations

HAZWOPER training isn't for amateurs

29 CFR 1910.120

Why it matters …

- By definition, sites covered by OSHA's Hazardous Waste Operations and Emergency Response (HAZWOPER) standard contain substances that could endanger the health of employees and potentially the general public.
- OSHA cares a lot about HAZWOPER training—its standard extensively covers training requirements, with an appendix on training guidelines.
- In one recent year, there were more than 200 OSHA citations for violations of the HAZWOPER standard.

OSHA's HAZWOPER standard puts a lot of emphasis on training, for both employees and trainers. And not just anyone can be a trainer. The standard specifies that HAZWOPER trainers themselves need to be trained or have equivalent academic credentials and instructional experience. This means, for example, that supervisors and managers can't provide training unless they have already been trained to do so. In fact, supervisors and managers on hazardous waste sites must receive the same kind of training as other employees, plus an additional 8 hours of specialized training in subjects that will allow them to supervise others.

HAZWOPER training is highly job-specific. The OSHA standard requires that employees may not participate in field activities "until they have been trained to a level required by their job function and responsibility." The number of hours of required training varies according to the type of worker:

- Regular site workers who may be exposed to hazardous substances need at least 40 hours of off-site training, plus at least 3 days of supervised field experience.
- Regular site workers (or workers who occasionally come to the site for specific limited tasks) whose duties have a very low risk of exposure need at least 24 hours of off-site training plus 1 day of supervised field experience.
- Limited-duty or occasional site workers whose job duties change such that they are regularly exposed to hazardous substances must receive the additional 16 hours of off-site training and 2 days of supervised field experience.
- Employees who can demonstrate that they already have equivalent training and experience need not undergo initial training (of course, it is the employer's responsibility to make sure that the "equivalent" training is adequate).
- All employees (including supervisors) must receive at least 8 hours of refresher training at least annually.

HAZWOPER training should include plenty of "hands-on." Of course, adequate training is about more than just counting hours. That's why, for example, computer-based training (CBT) for HAZWOPER isn't enough all by itself. According to OSHA,

CBT training should be accompanied by opportunities for Q&A, discussions of actual incidents and situations, and hands-on assessments of employees' knowledge. Depending on their specific job duties, types of hands-on training might include:

- Putting on and removing protective clothing
- Putting on and removing a respirator
- Cleaning and inspecting a respirator
- Conducting sampling of potentially contaminated air, soil, or water
- Demonstrating safe and proper ways to handle containers of hazardous materials

Head protection

Which employees need to wear hard hats?

29 CFR 1910.135

Why it matters …

- Head injuries are no joke—they often can be disabling and even fatal.
- There are many instances each year of a worker's life being saved by wearing a hard hat.
- Violations of OSHA's PPE standard were cited 1,800 times in general industry in one recent year, with penalties totaling over $1 million.

OSHA's "head protection" regulation doesn't tell the whole story. The OSHA rule for head protection in general industry specifies two types of employees who are required to wear head protection:

- Those who work in areas where there is a potential for head injury from falling objects, *and*
- Those who are working near exposed electrical conductors that could contact the head.

But those two specific examples just begin to cover the range of situations in which employees should be required to wear a hard hat. The head protection rule is only a part of a much broader PPE standard (29 CFR 1910, Subpart I) that starts with a more detailed description of employees who are affected.

"Physical contact" hazards trigger hard hat requirement. OSHA's general requirement for PPE states that protective equipment shall be used "wherever it is necessary by reason of hazards of processes or environment" that could cause injury through (among other things) physical contact. More simply put, whenever there is a reasonable chance that someone could suffer a head injury, head protection should be required. Causes of head injuries might include:

- Falling objects—including both small objects such as tools, and large objects such as loads falling from a raised forklift
- Flying objects—including objects being swung from a crane or similar device
- Bumping the head on overhead objects, such as piping
- Contact with electrical hazards, such as power lines or wires

Hazard assessment is the key. Another important part of OSHA's PPE standard is the requirement to perform a hazard assessment of the workplace to determine what kinds of PPE employees must wear. (Note that you must have a written certification that the hazard assessment has been performed.) A hazard assessment can be an ideal training exercise for employees: Have them inspect their own work areas for conditions that might cause head injuries, then report back a list of their findings. It should help make them more aware of hazards and how to protect themselves—and perhaps even encourage them to wear hard hats whether or not they are specifically required to do so.

Home safety

Safety at home means safety at work

Why it matters …

- Accidents in the home cause approximately 20,000 deaths per year and 13 million injuries per year in the United States.
- Medical and other costs of home accidents total in the billions of dollars annually.
- Employees with a "round the clock" safety consciousness are less likely to be injured than those who view safety only as a job requirement.

Safety shouldn't stop at quitting time. There are at least three good, practical reasons why your company should encourage employees to practice safety at home as well as at work:

- Paying attention to safety at all times makes safety a habit and builds a good "safety attitude."
- Preventing accidents at home means fewer lost workdays and fewer employees who can't do their work properly because of off-the-job injuries.
- An off-the-job death or serious injury to an employee or family member is a real tragedy that will affect coworkers and your company as a whole.

What are the top five causes of fatal accidents at home? This is a question you can ask employees to lead off a training session. According to the Home Safety Council, the answer, in order of frequency, is:

1. Falls
2. Poisoning (ingesting or inhaling toxic substances)
3. Fires

4. Suffocation (often involving choking on food)
5. Drowning

Interestingly, the five leading causes of *nonfatal* injuries are not the same. Falls still leads the list, and poisoning is Number 5. In between are Striking or being struck by an object (Number 2); Cuts (Number 3); and Overexertion, such as back injuries and muscle pulls (Number 4).

Make the connection between home safety and work safety. The list of parallels between home hazards and workplace hazards is almost endless: tripping and falling, hazardous substances, electric shock, fire, power tools, falling and flying objects, eye injuries, back injuries, etc., etc. Remind employees that they should take the same precautions against these hazards at home as they do at work, including reading labels, wearing PPE, and removing tripping hazards. Make it a standard part of your safety presentations to discuss how safety training at work should be practiced at home as well.

Housekeeping

It's a safety issue

29 CFR 1910.22(a)

Why it matters …

- In one recent year, OSHA issued more than 1,100 citations for violations of Subpart D ("Walking and Working Surfaces"), which includes the housekeeping rules.
- Penalties for these violations totaled more than $550,000.
- Enforcing good housekeeping practices helps encourage employees to maintain an alertness to hazards and a good "safety attitude."

"Your mother doesn't work here, so please clean up after yourself." Signs with these or similar words are frequently seen in employee lunchrooms and work areas, as a way (not always successful) to remind employees not to leave a mess for others to deal with. Encouraging employees to follow good housekeeping practices isn't only about being neat, clean, and considerate of others—it's also a serious safety issue. If there were any question about that, one need only read OSHA's rule on "housekeeping," which starts out with the blunt statement, "All places of employment, passageways, storerooms, and service rooms shall be kept clean and orderly and in a sanitary condition." There is no room for exceptions in a rule like that.

Hazards of poor housekeeping—how many can you name? As an exercise in a general training session on housekeeping, try asking the group to name all the possible safety hazards that might be associated with poor housekeeping in general. Some general hazard categories are below, but encourage your group to be as specific as possible.

- Fire—from ignition of paper scraps, wood shavings, dust, or puddles of flammable liquid
- Slipping and falling—on wet floors
- Tripping and falling—from objects left on the floor
- Cuts and puncture wounds—from sharp objects left exposed on floors or other surfaces
- Injuries from tools or other objects falling from work surfaces

Some jobs have specific housekeeping requirements. Beyond discussing general good housekeeping practices to prevent accidents, remind employees that certain types of jobs require them to follow specific housekeeping practices. Depending on your workplace, these jobs might include:

- Cleanup and removal of hazardous dust, such as lead or asbestos,
- Containment and cleanup of small spills or leaks of hazardous liquids (a major release of hazardous chemicals, of course, requires specialized personnel, equipment, and procedures),
- Proper storage or disposal of empty or partially used containers of hazardous substances or of tools used for applying these substances (such as brushes or cleaning equipment), *and*
- Cleanup and other housekeeping practices for hazardous substances may require separate training sessions with more detailed descriptions of proper procedures.

Lockout/tagout

Training must be effective and complete

29 CFR 1910.147

Why it matters …

- OSHA's lockout/tagout standard was the fourth most frequently violated standard in one recent year.
- There were nearly 4,000 OSHA citations for lockout/tagout violations in that year.
- Penalties assessed totaled nearly $3 million.

Lockout/tagout training can save lives. Stories about employees crushed to death when heavy machinery starts up without warning are all too common. So it's essential for your training in the isolation and control of hazardous energy (aka "lockout/tagout") to be effective. To begin with, remember OSHA's rules about the three categories of employees who must be trained:

1. "Authorized" employees, who lock or tag out machinery in order to perform service or maintenance
2. "Affected" employees, who use or operate machinery that is locked or tagged out and who are present when maintenance or service is being performed

3. "Other" employees, whose jobs may require them to be in work areas where lockout/tagout procedures are used

Note that "affected" employees are usually considered to be "authorized" if they actually perform service or maintenance work.

OSHA requires different levels of training for different employees. The most basic form of lockout/tagout training is for "other" employees, who need to be informed about the procedures and to understand that any attempt to restart machinery that is locked or tagged out is strictly prohibited. "Affected" employees need to also know the purpose and use of the procedures. "Authorized" employees need to know how to recognize hazardous energy, where it might be found in the workplace, how to isolate or control it, and how to make sure control procedures work. Finally, *all* employees need to know the difference between "lockout" and "tagout"—in particular, that tags are not the same as physical controls, and they should never be ignored, bypassed, or removed.

More training is usually better. Recognize that OSHA's training categories represent the *minimum* training requirements for each type of employee. It may well be appropriate to give all employees more information, rather than less, about the purposes and procedures of your lockout/tagout program. And don't forget that OSHA requires retraining for all employees whenever:

- There is a new energy hazard,
- There are new energy control procedures,
- Employees are given new job assignments, *or*
- An employer has reason to believe that employees do not know about or understand lockout/tagout.

Machine guards

Guarding against machine accidents

29 CFR 1910, Subpart O (Machinery and Machine Guarding)

Why it matters …

- OSHA's general requirements for machines and machine guarding was the sixth most cited rule violation in one recent year, with more than 3,000 citations issued.
- Penalties for these violations of machine and machine guarding rules totaled more than $7.5 million!
- More than 5,000 amputations occur each year in manufacturing industries.

Machine rule violations are high on OSHA's hit parade. Violations of 29 CFR 1910, Subpart O (Machinery and Machine Guarding) of OSHA's regulations are among the most frequently cited every year, and penalties can run into the tens of thousands of dollars for each violation. Providing guards for machines is not optional: OSHA states unequivocally that "machine guarding shall be provided"

against such hazards as "those created by the point of operation, ingoing nip points, rotating parts, flying chips and sparks," and they must protect both machine operators and everyone else in the area. With this in mind, the two fundamental rules of machine safety should be:

- Never, ever remove, disable, or try to circumvent a machine guard, *and*
- Never, ever use a machine with a guard that is missing, disabled, or not working properly.

One size doesn't fit all. These basic safety rules are essential, but they are not enough for complete training in machine safety. Subpart O covers an extremely wide range of industrial machines, including:

- Woodworking machines of all kinds (1910.213)
- Abrasive wheels (1910.215)
- Mills and calendars in rubber and plastics industries (1910.216)
- Mechanical power presses (1910.217)
- Forging machines (1910.217)
- Mechanical power transmission apparatus (1910.218), applicable to many of the above kinds of machines

These rules are essentially performance-oriented equipment specifications, and they're not exactly light bedside reading. Even so, trainers need to be thoroughly familiar with those that apply to the machines in their workplace and be able to demonstrate and explain different pieces of equipment to their employees—ideally, right on the shop floor.

How often should you conduct machine safety training? The OSHA rules are not very specific on the type and frequency of training for machine operation. Yet, the consequences of machine accidents are severe enough that training should clearly be a top priority. At a minimum, training should take place:

- For new operators of existing machines,
- For new types of machines introduced into the workplace,
- Whenever there is evidence that an operator needs training, *and*
- At least annually, on a "refresher" basis.

Note: Don't forget to document your training with employee names, dates, and type of training.

Safety data sheets

Review them often

29 CFR 1910.1200(g)

Why it matters …

- There were more than 7,000 OSHA citations for HazCom violations in one recent year, with total penalties assessed of approximately $2 million.
- This number of citations made HazCom the second most frequently cited of all the OSHA standards and the most-frequently cited general industry standard.
- Frequent training reviews of important safety tools such as safety data sheets (SDSs) show employees that the topic really matters and should be taken seriously.

SDSs are the "backbone" of HazCom. Do employees refer to the SDSs in your workplace regularly and often? Or do your SDSs just collect dust on a rack or shelf someplace? If the latter is true, it probably isn't because employees already know all they need to know about working with hazardous chemicals. Instead, they probably don't understand the importance of the SDS as a safety tool and that they need to make it a habit to refer to SDSs regularly and often. Not only do SDSs convey essential safety information, but OSHA insists on their availability and use in the workplace as part of the HazCom standard.

It's not hard to find reasons to review SDSs. One way to help instill the habit of actively using SDSs is to hold refresher training on the different hazardous chemicals employees work with—and to make the SDS for each chemical the centerpiece of the training session. There are plenty of reasons to justify such a session:

- A new chemical is introduced into the workplace (or a familiar chemical from a different manufacturer).
- A new use or work process for a familiar chemical is introduced into the workplace, requiring new ways to work with it safely.
- A new SDS form with revised information comes into the workplace.
- You hire new employees who may not be familiar with a chemical or with your company's safety rules for using it.
- There is evidence that employees are not using a chemical safely, such as reports of lost time due to accidents or illnesses associated with a chemical.

Note: Do your own review of the SDSs your company uses. If they seem to be outdated or are third-generation copies that are distorted, faded, or otherwise unreadable, it may be time for a general SDS makeover.

Occupational Safety and Health Administration

Talking to employees about OSHA

Why it matters …

- OSHA is increasingly emphasizing "compliance assistance" and other forms of partnership with employers, rather than simply enforcing standards by looking for violations.
- Workers are more likely to comply with safety rules if they understand the "big picture" of workplace safety and health.
- Though it's relatively uncommon, OSHA does cite and penalize employers that do not inform employees of their rights under the Occupational Safety and Health Act (OSH Act).

OSHA is not an adversary. One of the ultimate goals of safety training is to build and sustain a "safety culture" throughout your organization. It's hard to do this if you project an "Us versus Them" attitude toward OSHA, and even harder if you convey the feeling that the main reason for promoting health and safety in the workplace is to avoid an OSHA citation. Instead, focus on the concept of "partnership" among the employer, employees, and OSHA—that each has certain roles and responsibilities in ensuring a safe and healthful workplace, and that it is in everyone's best interests to work together for safety.

What should employees be told about OSHA? Generally, the answer is, "Anything they want to know." Under the OSH Act, employers have an affirmative obligation to inform employees both about the law and about their rights under the law. These informational requirements include:

- Posting the OSHA poster prominently
- Making a copy of the OSH Act and OSHA regulations and standards available to any employee who requests them
- Informing employees of their right to be present during an OSHA inspection
- Informing them of their right to lodge a complaint with OSHA without fear of retribution
- Posting any OSHA citations received by an employer

There is no disadvantage to being as open as possible about OSHA and your company's relationship with it, because it reinforces the sense of "partnership" you're trying to encourage.

Employees have legal responsibilities, too. Compliance with safety regulations is more than just having the government and company managers tell employees what to do. The OSH Act specifically requires that employees comply with OSHA standards and regulations that apply to them. Point this out when you talk about the importance of following safety rules, as a reminder that "we're all in this together."

Note: Twenty-four states, plus Puerto Rico and the U.S. Virgin Islands, have their own occupational safety and health agencies, with rules that generally follow federal OSHA standards (or in some cases are stricter). Adapt your discussion of OSHA to the conditions in your own state.

Power tools

Make sure workers are safe

Why it matters …

- In one recent year, there were more than 800 OSHA citations for violations of power tools standards (both general industry and construction), with penalties totaling well over half a million dollars.
- There are more than 100,000 hospital emergency room visits each year in the United States due to power tools accidents.
- In California alone, power tool injuries cause more than 1,500 injuries each year that result in lost workdays.

There's a lot at stake with power tool safety. If you've ever actually witnessed a power tool injury, you don't forget it. Knowing how to work safely with power tools—saws, drills, sanders, grinders, etc.—is an extremely serious topic, because injuries from power tool accidents can be severe and permanent. According to the Power Tool Institute, a trade group, there are three main reasons most such injuries happen:

- **Loss of concentration**—operators can stop paying attention to their work if they repeat the same actions with a power tool over and over again.
- **Unexpected events**—a kickback or other sudden problem with a fast-moving power tool can be very dangerous, especially if the operator does not have the experience to expect the unexpected.
- **Inexperience and overconfidence**—it's a hazardous combination if the operator doesn't know the importance of being careful at all times when using a power tool.

Hand injuries are not the only problem. Cuts, abrasions, puncture wounds, and amputations are bad enough, but there are plenty of other ways that power tools can be harmful. Ask your training group to compile a list of possible hazards; in addition to the above, it should also include eye injuries (from flying particles), hearing damage (from excessive noise), inhaling hazardous dust, foot injuries (from dropping a heavy tool), musculoskeletal disorders (from vibration over extended periods), and electric shock.

Compile a power tool safety checklist. As a group exercise, construct a comprehensive checklist of safety rules for power tools. The list should include:

- Don't use any tool that appears to be damaged or unsafe.
- Make sure all blades, nip points, and moving parts are properly guarded.
- Electrically powered tools should be used only with power cords in good condition and properly grounded.
- Always wear appropriate PPE for the tool—eye and face protection, hearing protection, safety shoes, etc.
- If you're not sure how to use a power tool properly, don't guess—read the instructions or ask a supervisor.
- Never lift or carry an electric power tool by the cord.

As a final safety point, remember that OSHA requires employers to make sure that power tools brought from home meet the same safety requirements as those supplied at work.

Respirators

Breathe easier knowing respirator training rules

29 CFR 1910.134

Why it matters …

- The Respiratory Protection Standard is in the top five most frequently cited OSHA violations.
- There were more than 4,000 violations of the Standard in one recent year.
- More than $1.2 million in penalties were assessed for Respiratory Protection Standard violations in one recent year.

Here's why OSHA takes respirator training seriously. In 1998, OSHA issued a new, tougher version of its Respiratory Protection Standard with greater emphasis on proper training. In OSHA's opinion, better training was acutely needed because nearly half of the workers who wore respirators were using them improperly. In many cases, OSHA said, improper use of respirators actually magnified the hazards that respirators were supposed to guard against. Examples include:

- Improper fit, which can trap hazardous dust, fumes, etc., inside the respirator
- Poor cleaning and maintenance, which fails to remove hazardous materials
- Carelessness, such as when a worker removes a respirator, places it on a contaminated surface, and then puts it back on again

OSHA's 9-point training for its own employees: OSHA's guidelines for its own employees elaborate on the training requirements that appear in the actual Standard. The main topics to cover are:

1. The general requirements of the Standard
2. Why respirators are necessary, including hazards, potential exposure, and health effects
3. How respirators are selected
4. Procedures for inspecting the respirator, donning and removing it, checking fit and seal, and actually wearing it
5. The consequences of improper fit, usage, or maintenance
6. Limitations and capabilities of respirator, including knowing when it reaches the end of its service life and needs to be changed
7. Using respirators in emergencies, including malfunctions
8. Proper procedures for maintenance and storage
9. How to recognize medical signs and symptoms (such as shortness of breath or dizziness) that may prevent the effective use of a respirator

Remember that the Standard doesn't just require training … it requires "effective" training. In other words, it's not enough to provide information; the employer must demonstrate that employees actually know how to use respirators correctly. Furthermore, everyone must be trained at least annually—meaning on or before the anniversary date of the first training. Finally, retraining is required whenever:

- A new type of respirator is introduced.
- An employee is not using a respirator properly.
- Retraining appears necessary to ensure safe respirator use.

Sexual harassment and safety

Civil Rights Act of 1964

Why it matters …

- Sexual harassment is subject to civil penalties under the federal Civil Rights Act of 1964.
- OSHA acknowledges that sexual harassment can be a form of workplace violence—an area in which the agency has shown increasing interest.
- Stress caused by sexual harassment may be linked to health problems ranging from headaches and stomach pains to increased risk of heart attack and stroke.

Safety, health, and harassment—is there a connection? In recent years there has been an increasing focus on the relationship between sexual harassment in the workplace and protecting the health and safety of sexual harassment victims. According to those who have studied these issues, connections include:

- Increased stress for victims, which can lead to a variety of physical ailments
- Inability of victims to focus on doing a job correctly and safely
- Inadequate training (experienced by victims as part of an overall pattern of being demeaned or insulted on account of gender)
- Intimidation that causes victims to be reluctant to raise legitimate safety issues for fear of being ridiculed
- Workplace violence, if harassment takes the form of actual or threatened physical contact

What constitutes sexual harassment? It's often thought of in terms of men demanding sexual favors from women (often in return for promotions or other advancement) or men subjecting women to ridicule or abuse of a sexual nature. While both of these examples are accurate, the definition of sexual harassment is actually much broader, including *any* form of sexually oriented conduct that interferes with work performance or creates an intimidating, hostile, or offensive work environment. Potential harassment situations may involve:

- Women harassed by men, or men harassed by women, or both harasser and victim may be of the same sex
- Harassment by superiors, coworkers, or even others not employed by the same company
- Physical or verbal abuse, or even silent harassment (such as posting offensive pictures)

Note also that one need not be a direct victim in order to lodge a complaint of sexual harassment as long as there appears to be a pattern of sexually oriented behavior that creates a negative work environment.

Safety specialists should be sensitive to sexual harassment. Remember that high levels of stress are not compatible with safety, since employees who are upset and distracted are going to be more susceptible to mistakes that lead to accidents. If you sense a high stress level among employees, be alert for signs of what may be causing it—including sexual harassment. Remember, too, that seemingly innocent remarks, banter, or pranks with a sexual overtone can cause a problem if even one employee takes offense at them. Finally, make sure that you, yourself, are not guilty of intentionally or unintentionally acting in a way that could be perceived as demeaning, insulting, or offensive.

Stress

Tips to chill out

Why it matters …

- Surveys show that 25 percent to 40 percent of workers say they face very high levels of stress at their jobs.
- Stress reportedly costs American companies more than $300 billion per year in terms of poor performance, absenteeism, and healthcare costs.
- Workers who must take time off for stress-related problems average 20 days of lost time.

Workplace stress is a real problem. At one time or another, nearly everyone complains about being "stressed out," so it may be hard to accept that stress can be a real workplace issue with serious consequences for employees' health and safety. The effects of workplace stress, and how to deal with it, have increasingly become the subject of studies by the National Institute of Occupational Safety and Health (NIOSH) and other organizations. The experts agree that stress can bring on such health problems as:

- Headaches
- Stomach ailments
- Sleep disorders and resulting fatigue
- Inability to concentrate and focus
- Raised blood pressure that may lead to cardiovascular problems
- Mental health problems

Stress-related health problems can directly impact workplace safety. It stands to reason that employees who are tired, sick, or distracted because of stress are not going to be as attentive to safety as they should be. This leads to more mistakes, more accidents, and more injuries. But the reverse can also be true: Reducing stress in the workplace can also reduce mistakes and accidents. In fact, one study showed that by instituting a stress-reduction program, a company in the medical industry was able to cut its rate of documented errors by more than half.

Stressed out? Talk about it. Many factors, both inside and outside the workplace, can contribute to stress. Work-related factors can include long hours, concern about job security, jobs that are boring or otherwise unfulfilling, and lack of opportunity to interact with others on a meaningful basis. While you may not be able to change conditions that produce stress, perhaps one thing you *can* do is provide opportunities for employees to talk about the stress they feel, the reasons for it, and how it can affect their overall health and safety. Constructively communicating about stress (not just complaining) appears to be an effective way for employees to "blow off steam" appropriately and exchange ideas about how to cope with it. Other helpful stress-reducers are:

- Taking a few moments to relax, even if you don't think you have the time
- Being better organized—starting each day with a written list of goals and priorities
- Finding reasons to laugh (laughter really seems to help)

Violence in the workplace

Don't wait to train on workplace violence

Why it matters …

- According to studies, as many as 1 million Americans each year are the victims of nonfatal work-related assaults.
- Homicide is the third-leading cause of work-related death.
- While the highest percentage of workplace assaults are in the service, healthcare, and retail industries, incidents of violence occur in all industries regardless of race, age, or gender.

Violent behavior can erupt anywhere. Violence in the workplace is a serious problem, and it covers a broad range of situations, including:

- Robberies of service employees such as sales clerks and taxi drivers
- Assaults on police officers, prison guards, and other public safety personnel
- Attacks on healthcare workers by patients
- Fights between coworkers or "revenge attacks" by former or current employees
- Assaults by strangers that are not related to any particular type of work

As a trainer, your job is to tailor your safety tips to the types of violence your employees might actually face. Workers in an office or manufacturing plant need much different information about protecting themselves than do healthcare workers or sales clerks.

Keep your advice practical. Emphasize the need to use common sense:

- Don't leave handbags or other valuables open or unguarded.
- Don't go alone into dark or isolated areas.
- Be alert for unfamiliar persons in areas where they don't belong.

Employees should know what resources are available to protect against crime and how to use them. For example, if security personnel are available to accompany or monitor employees in a potentially unsafe situation, make sure that information is well posted. Above all, make sure employees know how to summon help in an emergency.

Take suspicious or threatening behavior seriously. Train employees to be alert to such warning signs as significant changes in mood or demeanor, extremely angry reactions to minor problems, and verbal abuse or threats. This can be a tricky area: While you don't want to encourage involvement in others' personal problems, you do want to make sure that signs of potential violence are not ignored until it's too late. Urge employees with serious, well-founded concerns about the behavior of a coworker to have a confidential discussion with a supervisor.

Section #2: Train the trainer tips

Blended learning

Using it in your safety training

Why it matters …

- A University of Tennessee study showed that a blended learning program reduced both the time and the cost of training by more than 50%.
- The same study showed a 10% better result in learning outcomes compared with traditional training.
- Learning experts believe that a main advantage of blended learning is that it more closely replicates how people actually learn on the job, through experience and interaction with coworkers.

"Blended learning" doesn't just mean Internet instruction. At its core, blended learning simply means combining two or more forms of delivering information—for example, a combination of classroom instruction and an independent, self-paced online course. The purposes and objectives of blended learning include:

- More effective training by using different delivery media to accommodate different learning styles
- Continuous training, rather than being confined to a particular time and place
- Speeding up the training process by moving through the material more quickly
- Simultaneous training of employees in different locations

Analyze your training needs and objectives before designing a blended learning program. Factor in the nature of the material to be covered, employees' learning styles and attitudes, and even the physical capabilities or limitations of your training facilities (including your computer-based infrastructure). For example, a traditional classroom setting may be best for presenting simple, concrete information, for structured Q&A, or if it is unlikely that employees will complete independent study assignments on their own. On the other hand, if the required learning is ongoing and evolves continuously from actual job experience, self-paced study assignments combined with opportunities for interactive discussion can be highly effective.

Web-based training is a good place to start when adding new dimensions to your safety training program. That's because of the Internet's potential to deliver a wide range of information in many different ways. Explore such possibilities as:

- Training modules that can be downloaded or studied directly online at the learner's own pace
- Interactive training, with online quizzes to measure comprehension
- If your company has intranet capability, virtual classrooms or internal Web-based discussion forums

Don't forget, though, that your overall focus is the learning outcome, not the method of delivery. Your goal is to provide the information employees need to protect their health and prevent accidents and injuries. Using blended learning concepts can be an effective tool for achieving this goal.

Case studies

How effective are they?

Why it matters …

- Case studies give people a way to relate your safety message to their own experiences.
- Using "live" examples helps make your message real and concrete, rather than theoretical and abstract.
- Interactive discussion and participation keeps your audience engaged and attentive.

A case study should be more than just a story. Illustrating your safety message with a real-life example is generally a good way to make a point. But a true "case study" should go beyond giving an example—it should provide opportunities for trainees to test and apply their knowledge of the subject. The audience should participate directly by answering questions and discussing possible alternatives while you encourage them to reach the right conclusions on their own, with you as their guide.

Be creative in turning examples into case studies. If you're trying to make a point about the importance of wearing protective eyewear, for example, you could simply tell a story about an employee who was injured because he didn't wear the proper eye protection. But for a case study of the same situation, you can use your imagination to set up the circumstances behind the event. You can then go much deeper in exploring what actually happened, including such questions as:

- What type of protective eyewear should have been used? (Glasses, goggles, or face shield?)
- Why might the employee have failed to wear protective eyewear? (Perhaps it was lost, or damaged, or he wasn't sure that he needed it.)
- What might the employee have done differently? (He could have asked for a replacement or asked a supervisor if he needed to wear it.)

Don't dwell only on the negative. Case studies can demonstrate positive outcomes as well as accidents and injuries. The example above, about protective eyewear, could be flipped around to describe an employee who avoided a serious

injury by making the right choices and showing good safety awareness; you could then ask your audience to discuss what went right instead of wrong. Some other tips for effective case studies:

- Don't make them too complicated—limit the number of characters and keep the circumstances of the case simple and easy to follow.
- Coach, don't lecture—encourage discussion by asking questions, but let the participants find the answers themselves.
- Summarize the main lessons of the case study at the end of the session.

Computer-based training

Is computer-based training (CBT) right for new hires?

Why it matters …

- A Hudson Institute study showed that "multimedia" CBT that combines text, graphics, sound, and video/animation improves retention by 40 percent.
- The same study showed that CBT also can save as much as 30 percent of training time.
- Good CBT programs can help you meet OSHA training requirements for both new and experienced employees more efficiently.

CBT is like any other tool. It's great when used correctly but not if it's used ineffectively or doesn't help meet your objectives. This is especially true for training newly hired employees—CBT can be very helpful but only when you can leverage its strengths and avoid its weaknesses. The major strength of CBT is that it's self-paced; learners can move quickly through material they already know but can also go back over information that is unfamiliar or difficult without affecting the pace of an entire group. This attribute of CBT is particularly useful for integrating a new hire into a group of more experienced employees because it can provide a foundation of basic knowledge to build on later through more advanced training and actual experience.

Recognize CBT's limitations and plan accordingly. CBT can't offer face-to-face interaction, hands-on demonstrations, answers for questions outside its program, or insights into a company's unique "safety culture." For this reason, you wouldn't want to tell new hires to review a computerized training program and think that you've provided all the training they need. You also shouldn't assume they will understand and be able to use the information—you need a way to measure their comprehension. Look for CBT programs that have built-in quizzes, or follow up with separate quizzes related to the material that has been covered.

Make the most of what CBT offers for new hires. Some guidelines and suggestions to keep in mind include:

- Review CBT programs before assigning them, decide if some of the information they contain is incomplete or unclear, and provide supplemental information and training as necessary.
- Make CBT a starting point for training but not necessarily the end point. Follow up a CBT course with some form of "live" training, such as Q&A or demonstrations.
- If possible, have new hires and more experienced employees review CBT material together. For example, some CBT programs may be suitable both for beginner training and for refresher training, allowing newcomers and veterans to interact while all get the training they need.
- Measure, verify, confirm. Using quizzes or other means, do whatever it takes to make sure new hires actually understand the information you provide.
- Don't forget to keep complete records of CBT training for each employee.

Fresh approaches

Freshening stale topics and materials

Why it matters …

- Periodically reviewing your training materials helps make sure the information stays timely and accurate.
- Approaching a familiar topic in a different way can reveal important safety points that may have been overlooked in the past.
- Trainers must be engaged with their topics before they can expect their audiences to pay close attention or retain key information.

If your training materials put YOU to sleep, think how your audience feels. Let's face it—there are probably one or more safety talks you've given so many times that you dream about them at night. So for the sake of both your audience and your own sanity, maybe it's time to give a makeover to these topics and their associated materials. It can be done without a major investment of either time or money.

Begin with an objective "audit" of your materials. Try to view them as though you have never seen them before, or ask a colleague for a brutally honest assessment. Two main areas to look at are:

- Content and relevance: Does the content of your handouts and other training materials, including visual aids, match your oral presentation? Is the information accurate and up to date? Or perhaps the information is technically correct but really doesn't address the actual safety issues in your own workplace. Revise or replace anything that misses the mark.
- Overall appearance: Visual appeal can do a lot. Your handouts, for example—do they look like copies of copies of copies, with washed-out, distorted print? Maybe it's time to redo them to make them more readable. While you're at it,

maybe you can add a little color or graphics to your handouts, as well as your overhead slides, to make them more eye-catching and heighten interest.

Change for the sake of change can be a good thing. Try experimenting, and even having a little fun, with presentations that have gone stale, so long as you don't leave out important information. Some possible ideas for shaking off the cobwebs:

- Rearrange the outline of your presentation so that the main points are made in a different order than the one you typically use.
- Give a brief quiz at the BEGINNING of the session—this helps reveal what the audience already knows and doesn't know about the topic, so you can tailor your presentation accordingly.
- Similarly, ask for questions from the audience BEFORE the session starts; for example, ask them to tell you the three things they really want to know about the topic, and use this information as the main focus of the presentation.

Games

Are training games a good idea?

Why it matters …

- Used appropriately, training games support your main message and help keep your audience engaged and attentive.
- If not used appropriately, games distract from your message and can undermine efforts to take important safety topics seriously.
- Generally, games and other devices to encourage group participation are a good way to help employees understand and retain key information.

Know the types of games that might be useful. There is a broad spectrum of activities that fall into the category of "training games." Perhaps the most common are quiz show–type games, set up along the lines of *Jeopardy!* or *Who Wants to Be a Millionaire?*, that are designed to test knowledge of particular topic areas. Another type are "icebreakers," structured exercises often used primarily for team-building that may have little or no direct relationship to the training topic. And "scenario"-type games give participants a set of circumstances or conditions, and ask them to interact creatively to solve a problem or achieve a particular result.

Understand the real purpose of training games. Studies show that training games by themselves do NOT provide comprehensive training and should not be used as substitutes for more formal instruction. (That suggests that you shouldn't devote an entire session to a training game, unless you're holding multiple sessions on the same topic.) But games CAN be a useful supplement to formal training by:

- Helping trainers maintain participants' interest and involvement
- Reinforcing key concepts

- Supporting different learning styles
- Providing immediate feedback to both participants and trainers
- Making training more enjoyable and, yes, fun

Tips for using training games effectively. If you're thinking of incorporating training games into your sessions, keep in mind some tips to make sure they accomplish your objectives:

- Games should reinforce the main ideas of your training, rather than wasting time on trivial points that are not essential.
- Games should provide opportunities for everyone in your session to participate, rather than involving only a handful of people while the rest of your trainees simply sit and watch.
- If the games are prepackaged or accessible online, screen them first to make sure they are relevant to your workplace and compatible with your main message.
- Schedule games strategically to help reenergize and reengage the group; for example, right after lunch or other long break.

Handouts

Make them worth keeping

Why it matters …

- Up to 90 percent of spoken information is forgotten within 24 hours, so written handouts are an important way to keep key information available to your audience.
- Handouts help an audience understand the message more quickly, since people process written information two to three times faster than spoken information.
- The quality of your handouts sends a message to your audience about your credibility and professionalism.

If your handouts are "throwaways," you're doing something wrong. Presentation Expert Marie Wallace says, "Too many presenters treat handouts like an afterthought, justifying their action with 'They will just get trashed anyway.' That kind of thinking becomes a self-fulfilling prophecy. When handouts are not designed well, they *do* get trashed." But when done correctly, handouts can serve a number of useful purposes. They:

- Support and reinforce your basic message.
- Provide supplemental information not included in your verbal presentation.
- Keep your audience's attention on the subject matter.
- Create an overall positive impression of you and your mastery of the topic.

Choose the type of handout that fits your goals. Plan your handouts just as you would plan your presentation, and determine what you want them to achieve. For instance, if you want to reinforce your main presentation points, the handout should

include a simple, bold summary of your message. On the other hand, you may want to convey additional detailed information about the topic that can't be given in your verbal presentation; in that case, the handout might be a reprint of an article on the subject or a listing and short description of resources the audience can explore for further information. As a third example, you may want to provide handouts that illustrate your message, such as a copy of an actual SDS if you are covering SDSs in general or a hazardous chemical in particular. The point is to make sure that your handouts complement and supplement your presentation so that your audience comes away with a better, clearer understanding of your points.

Make handouts easy on your audience. Handouts need to be well designed if you want them to be kept, read, and used—they should make it easy for the reader to comprehend the information. Design tips from presentation experts include:

- Use plenty of white space so that the message appears clearly—don't clutter up a handout with a wall of fine print.
- Use a large, bold typeface that is easy to read.
- Bullets are preferable to long narrative sentences.
- Use illustrations, photos, graphs, and charts whenever they support your message.
- Use color—it increases the willingness to read—but don't go overboard with too many colors or elaborate graphics, as these can be distracting.
- Don't use photocopies that are faded, smudged, or distorted—people don't want to make the effort to read them.

Humor

Using 'ho ho' to fight 'ho hum'

Why it matters …

- Studies show that laughter reduces stress and can actually improve physical and mental well-being.
- Public speakers know that a well-placed joke or humorous graphic can wake up a tired, bored, or inattentive audience.
- There are no OSHA regulations that prohibit smiling or laughter.

Humor can actually help make serious points about safety. Training experts agree that using humor in a presentation can make an audience more relaxed, attentive, open to new ideas, and willing to participate. If this is how you want your audience to be, don't be afraid to use appropriate jokes, cartoons, or ad-libs as part of your presentation. The key word here is "appropriate." If you run across a funny idea, saying, or picture that makes you smile and think, "That would be good to use in a safety talk," chances are you're right. So go for it!

Humor can be planned—but it can't be forced. Humor has to be natural, or as one training expert puts it, "Don't try to be funny—try to have fun." Keep in mind some important things to avoid if you plan to add humor to your presentation:

- Don't feel obligated to start the session with a joke. Lots of speakers do it, but few do it well. It can make your audience immediately roll their eyes and tune you out.
- Don't use humor that you yourself don't think is especially funny.
- Don't use humor for its own sake—use it to grab attention or emphasize your points.
- Never use humor that could be interpreted as ridiculing specific persons or groups of people.

Look for opportunities to inject humor into your talks. In addition to using humorous stories, thoughts, and graphics, here are some other ways to employ humor:

- Self-deprecating humor—If you're illustrating a safety point with a story about a hypothetical employee who is acting carelessly, give the employee your own name. Or if you make a mistake during your presentation, acknowledge it with a joke. Making fun of yourself "humanizes" you and helps build trust.
- Exaggeration and zaniness—Ask your audience to answer a multiple-choice question, with one of the choices being obviously silly or bizarre.
- Gimmicks—Give cheap prizes (such as lollipops) or made-up "awards" to people who participate actively in your training sessions. Examples might include the "Best Question Award," or a prize for "giving the best answer that isn't actually correct."

Note: If you haven't been using humor in your presentations and now decide to do so, your audience may not react the way you want them to the first time you use it. They may not have seen your "lighter side" before, so give them some time to adjust to it.

Icebreakers

Hot tips for breaking the ice

Why it matters …

- Icebreakers set the tone for the main part of the session.
- Training experts agree that icebreakers are a good way to stimulate creative thinking and build group energy.
- An engaged, energized audience is more likely to pay attention and contribute useful ideas.

Icebreakers—who needs them? "Icebreakers" are devices used to build feelings of trust and teamwork within a group and encourage participation and interaction. They can range from simple self-introductions by each group member to much more elaborate and structured games and even physical exercises. Icebreakers are a good idea for safety training sessions if:

- Members of the group don't know one another very well.
- The session will be lengthy or will be held in multiple segments over 2 or more days (you can use more than one icebreaker, or use one in the middle of a long session to reenergize the group).
- Your main objectives include teambuilding or solving specific problems.
- You want to encourage the group to interact freely with you and one another.

Icebreakers should help you achieve your main goals. Don't have an icebreaker for its own sake—instead, decide what you want the icebreaker to accomplish and design it accordingly. For example, if you're assembling a safety team to identify hazards and reduce accidents, the icebreaker should be designed to encourage working together and bringing different perspectives to issues. Ideally, you should be able to refer to the lessons, insights, or key information gained during the icebreaker to reinforce the points that are made later in the session.

Effective icebreakers help focus the session and encourage participation. Specific ideas include:

- Have participants introduce themselves and describe something they already know about the topic; post the answers on a flip chart.
- Divide the group into teams, with each team identifying the challenges in the topic and what they hope to get out of the session; again, post the results and refer to them at the end.
- Use an open-ended quiz at the beginning of the session (for example, name the hazards of a particular job, or name reasons to wear a respirator), then repeat the quiz at the end of the session to see if the answers are different.

Note: How long should an icebreaker take? One training expert says that it should be about $^{1}/_{16th}$ of the total length of the training session.

Interactive training

How to keep sessions interactive

Why it matters …

- Interactive sessions keep audience members more attentive and focused on the topic you are presenting.
- Proving that it's "safe" for the audience to participate helps build their trust in you and your knowledge of the topic.
- Trainees who are given responsibility for their own learning are likely to take the subject matter more seriously and put into practice what they learn.

Your sessions should be as safe as your workplace. Everyone agrees that training sessions are better when the audience participates actively, but it's often difficult to "break the ice" and get people to speak up. That's usually because trainees aren't sure that it's "safe" to do so. They may be afraid that asking questions or voicing opinions will make them look ignorant, or they may believe that you won't really welcome their

participation if it disrupts the flow of your presentation. From their point of view, it's much safer to stay silent and avoid the possibility of displeasure or embarrassment. So part of your job as a trainer is to demonstrate that it's just as safe to participate—and a lot more enjoyable and worthwhile.

Don't just say it—show it. According to Training Consultant Robert Menard, speakers may not realize that the audience itself can be a source of energy. "If recognized and directed within the first 10 minutes, this energy can propel a presentation to success," Menard says. It isn't enough just to tell the group to ask questions and get involved—that won't make them believe that it's really OK. Instead, show them that you mean it by getting them involved from the very beginning. Some basic introductory icebreakers include:

- Ask group members to introduce themselves—or as a twist, have them introduce another group member.
- Have each person state the most important thing he or she wants to learn from the session.
- Ask some basic questions about the topic you're presenting—and insist on getting answers from the audience before continuing, rather than answering the questions yourself.

Keep up the momentum. Once you've proved that you're serious about getting people to participate, find ways to keep the session interactive all the way through to the end. Or as Menard says, "Keep the activity level high and put the responsibility of learning in the hands of the audience." As you plan your presentation, look for opportunities to keep the audience engaged and involved, using such techniques as:

- Asking questions of the group throughout the session, not just at the beginning
- Having audience members perform demonstrations, rather than doing the demonstrations yourself
- For longer sessions, breaking into smaller groups to accomplish an objective or solve a problem, then having the small groups report their ideas to the main group as a whole

Lectures

How to avoid 'death by lecture'

Why it matters …

- Audiences who become bored and inattentive do not absorb the important safety messages being presented.
- Keeping your audience guessing "What is he or she going to do next?" is an effective way to hold their attention.
- Training effectively the first time means less time spent in retraining and going over information that has already been presented.

Try the "7-minute solution." Has this ever happened to you? You're totally prepared … you know the material cold … your delivery is flawless … your slides are brilliant … and yet you come to the end of your training session wondering if anyone actually heard anything you said. If you suspect that you may have lectured them to death, you probably didn't realize that most adults can sit and listen to someone else talk for only about 7 minutes before their minds begin to drift off. The solution? Preprogram your presentation with ways to surprise your listeners into engaging their minds every 5 to 7 minutes or so.

Plan to be unpredictable. According to Sharon Bowman, a corporate trainer and author of *Preventing Death by Lecture,* trainers should be willing to do whatever it takes to keep their listeners on their mental toes. Bowman and other training experts say there are many devices you can use, such as:

- Moving around the room, instead of staying rooted to one spot
- Asking questions of audience members
- Writing key messages on a blackboard or flip chart
- Varying your tone of voice from loud to soft or vice versa
- Telling a story, joke, or riddle

Whatever device you use, try to have fun and inject some humor. Find the types of "attention getters" that work best for you and build them into your script (yes—sometimes being spontaneous takes planning). Eventually, you'll probably find it easier to be unpredictable, and you'll develop a keener sense of when your audience is starting to zone out and what you can do to prevent it.

Slides can be fatal, too. It's tempting to think that using PowerPoint® or overhead slides can overcome the narcotic effect of a standard lecture—but that's often not the case. Use slides by all means, but remember that the 7-minute rule still applies. There's no reason you can't turn the projector off at an appropriate stopping point, turn up the lights, do something different to reclaim your audience's attention, and then go back to the next part of your slides.

Multilingual training

Habla safety? Training a multilingual audience

Why it matters …

- The number of foreign-born people in the United States has jumped more than 50 percent since 1990—from 20 million to more than 30 million.
- The percentage of immigrants in the workforce is estimated at 14 percent—that's 1 in 7—and higher in some regions of the United States, such as the West and Southwest.
- Nearly half of immigrants in the United States are considered to have limited proficiency in English.

Trainers need to find ways to hurdle language barriers. While English is a second language for an increasing percentage of the workforce, companies are still obligated to make sure employees understand safety training. It's not enough to make a presentation if you know that members of your audience may not be able to understand or use the information effectively. OSHA is keenly aware of this, noting, for example, that workplace fatalities among Hispanics in the construction industry have increased at the same time that the total number of fatalities has declined.

Look for resources that might be available to help. With the growing awareness of the need for multilingual communication and training, there are more and more programs and other resources that address this issue.

- Check with OSHA—There may be OSHA-funded programs or other forms of assistance in your area that focused on English as a second language (ESL). Search the OSHA website for "bilingual training," or call your regional OSHA office.
- Identify ESL programs in your local area—These are commonly available through community colleges and adult education programs. Then find ways to encourage ESL employees to take the courses they need to improve their English.
- Find bilingual coworkers who can help make sure your safety is message is getting through—and let you know if it's not.

Tips for better communication with multilingual audiences:

- Acknowledge that the language barrier exists. Many people who are not fluent in English are reluctant to admit it, leading them to pretend they understand what you say. Let them know that your goal is to teach safety, not English, and that it's OK for them to keep asking questions until they really understand your message.
- Speak slowly and clearly—this makes it much easier for people who know basic English but are not truly fluent. Try to avoid using jargon or jokes, which can be incomprehensible or confusing.
- Learn some key words and phrases in other languages. You don't have to become bilingual yourself, but you can help break down barriers by showing your own willingness to make an effort to improve communications.

Online training

Make the most of Web-based training (WBT)

Why it matters …

- OSHA encourages using WBT as part of an effective safety training program.
- Since different people have different learning styles, using a blended learning approach helps make sure your message gets through.
- Studies show that the use of an effective training program can increase an organization's overall revenues and profitability.

Understand what online training is … and isn't. Online training—also called WBT—provides information via the Internet in the form of written materials, slide presentations, or videos. It may or may not be interactive. Its advantages include:

- Flexibility—trainees can study the materials at times that are most convenient for them.
- Self-pacing—trainees can go back and review the material as often as need to in order to understand it.
- Standardization—all employees view the same materials each time.

But WBT also has disadvantages, such as:

- It's impersonal—even an interactive program can't compare to a free-ranging discussion of important safety points with a "live" trainer and coworkers.
- It offers limited opportunities for actual "hands on" demonstrations.
- The trainee's actual comprehension of the material can be difficult to measure.

By itself, this WBT probably isn't enough. It can be a highly effective part of a "blended" safety training program that might also include in-person presentations, demonstrations, and training videos.

Five tips for making the most of the WBT:

- Review online programs in advance, determine their strengths and weaknesses, and make sure they complement, rather than conflict with, the rest of your program.
- Don't assume everyone is comfortable with computers and the Internet. Hold an orientation before starting an online training session to make sure everyone understands what to do and what is expected.
- Find ways to test for comprehension. Viewing material online does not guarantee understanding. Use short quizzes to make sure the message has gotten through.
- After employees have finished their WBT session, review the same material during an in-person session.
- Don't forget to document online training; have employees sign a statement to the effect that they have viewed the assigned online material, or use an effective electronic training tracker.

PowerPoint training

How to effectively make your (power) points

Why it matters …

- It takes about 40 hours of work to prepare a 1-hour presentation from start to finish—consider purchasing a prewritten PowerPoint presentation and customizing it to your company's needs to save time.
- According to adult learning experts, people absorb information in different ways—some through seeing it, some through hearing it. So a combination of visual information and your verbal presentation is an ideal way to reach learners.
- Keeping copies of your PowerPoint safety presentations is an ideal way to document your safety training program, in case OSHA ever asks to see it.

It's *your* presentation—don't let the slides take over. PowerPoint is here to stay—by allowing users to create and present their own slide presentations, it's become a powerful tool in the safety training arena.

It's important to remember that PowerPoint slides should *enhance* your overall presentation, but they shouldn't *be* the presentation. Presentation experts agree that one of the worst things you can do is to present a long series of slides and read from them word for word. On the other hand, using slides to emphasize and reinforce your main points will keep your audience engaged and attentive.

Are you using "prepackaged" slides or creating your own? Either way, the same basic rules for effective presentations apply:

- Don't just read from the slides—elaborate in your verbal presentation.
- Give your employees time to absorb each slide. A good rule of thumb is at least 30 seconds per slide—more if you need to explain the points more thoroughly.
- Rehearse the presentation before you give it—don't let yourself be "surprised" by a slide that you yourself don't really understand.
- Make sure the hardware works—fumbling around with the computer or the projector before you can actually begin the presentation is a sure way to undermine your effectiveness and authority.

If you're creating your own slides …

- Keep the message on each slide simple and clear. Slides that are crammed with text are difficult to read and understand. Six short bullets per slide should be the maximum.
- Don't get "graphics-happy"—graphics, colors, and animation are OK in moderation, but too many can be a distraction.

Finally, it's a good idea to reproduce the slides as handouts, especially in a format that allows the listener to take notes alongside each slide (use the "Handouts" format inside the "Print" menu to do this). Encourage your audience to keep the handouts for future reference and follow-up.

Preparation

The power of training preparation

Why it matters …

- As one expert puts it, "Without preparation, a presentation is likely to be unfocused, boring, and uninformative."
- Information in a well-planned and focused presentation is more likely to be remembered and used.
- Since the ultimate purpose of safety training is to protect the health and well-being of employees, each presentation deserves your best effort.

Even experienced presenters need to prepare carefully. If you've been making training presentations for a while, you may think you can "do it in my sleep" and don't need to prepare very much, if at all. But even if that were true, would you really be satisfied giving second-rate presentations—particularly on such critical topics as health and safety? Presentation experts all agree: The difference between a first-rate, effective presentation and a second-rate, "ho hum" presentation is in the *preparation*. The good news is that preparation doesn't have to take hours and hours of your time. But it does mean, at a minimum, going through a mental checklist of bases that need to be covered.

Focus on your goals. The first section of your mental checklist is to decide the main purposes and objectives of the presentation:

- Who is your audience? Are they new employees, experienced veterans, or a mixed group? Knowing your audience helps determine the approach you take, the type of presentation to make, and the points to emphasize.
- What is the main goal? Is your presentation a general introduction to be followed by more specific training later, or are you giving more in-depth training about a particular work practice or item of equipment? Don't stop at generalities if your real goal is to achieve in-depth understanding of the topic.
- What's the "takeaway"? What is one thing you want your audience to remember from the presentation, even if they were to forget everything else? Decide on a succinct message or "punch line," and make sure you include it in your presentation more than once.

Put yourself in the audience's place. Your audience expects you to be knowledgeable and authoritative, while also being easy to listen to and understand. So continue your mental checklist with these points:

- Do I understand the material myself? You can't expect to achieve your goals if you're not sure what you're talking about. Are there points you need to refresh

yourself on? Is there new information about the topic that you need to research and incorporate into the material?

- What questions am I likely to get? Anticipate the areas that your audience may find unclear or difficult to grasp, and know how to handle their questions.
- Am I physically prepared? Do you plan to use audiovisual (AV) equipment or physical props? How do you want the room or training area to be set up? Make sure everything is set up and works correctly and that you know how to use key equipment. Fumbling around with equipment is the surest way to undermine a presentation from the start.

Presentation jitters

How to handle them

Why it matters …

- Communication isn't just words—your message is also expressed in body language and the energy you project.
- If you have confidence in yourself and your material, your audience is more likely to have confidence in you as a knowledgeable expert.
- Safety talks shouldn't be dull and mechanical—channel nervous energy into ways that grab and hold attention.

Having the "jitters" isn't necessarily a bad thing. According to *The Total Communicator*, an online publication of the Executive Communications Group, "the pre-presentation jitters remain the number one challenge listed by most presenters." But it goes on to say, "If you don't get a little nervous before giving a speech or presentation, you should really be worried." That's because the right amount of stress and extra adrenaline is actually beneficial to making a good presentation. It makes you a little sharper and gives you more energy that can flow out toward your audience. So if you're a veteran presenter who still gets nervous before a presentation, remember that (1) you're not alone, and (2) you're probably a better presenter because of it.

Don't forget "the power of preparation." One key to keeping the presentation jitters under control is to master the material you're going to present. Being prepared gives you confidence that you'll be able to handle anything that comes your way. If possible, rehearse the presentation ahead of time; if that's not possible, at least review the material several times in advance. Think about, and write down, the answers to questions that might come up. And don't neglect the physical part of good preparation: Make sure the room is arranged the way you want it, know how to use the AV equipment, and account for other essential items (projection screen, extension cord, etc.).

Psyche yourself out of the jitters. Dianna Booher, a communication trainer and author, offers several useful tips for overcoming excessive nervousness and anxiety before and during your presentation. They include:

- **"What's the worst?"**—remind yourself that the worst thing that could happen during your presentation probably isn't all that bad, and be prepared to deal with it if it does.
- **Focus on the "friendlies"**—some audience members will be supportive and responsive, while others may seem inattentive or even hostile. Try to build on the positive energy from the former group, and ignore the latter group.
- **Stay in motion**—a good way to work off nervous energy is to move around during your presentation; this also helps keep your audience engaged and attentive.
- **Take some risks**—if you don't want to be an average, boring presenter, don't be one. Find ways to inject passion, humor, and audience participation into your session. Keep trying to innovate, and you'll eventually hit your stride.

Toolbox talks

How to do them effectively

Why it matters …

- The "toolbox talk" format helps to quickly focus the attention of your listeners and keep their attention.
- Toolbox talks are a good way to cover "micro" topics, such as how to do a specialized job or use a particular tool safely.
- Giving instruction "up close" and in small groups is one of the most effective training techniques.

There's a world of difference between a "toolbox talk" and a formal training session. A toolbox talk (sometimes known as a "tailgate talk") is a no-frills way to get your safety message down to the bare essentials—no notes, no slides, just getting your points across as directly and effectively as possible to a small group of employees. Done correctly, a toolbox talk quickly grabs the listeners' attention, keeps it with a handful of clear points, and concludes with a summary message that they will remember.

Being informal and spontaneous takes preparation. Don't launch into a toolbox talk without a clear idea of the points you want to make and what you want the listeners to remember. Preparing for your toolbox talks might include:

- Observing and making notes of conditions in the workplace that could be a safety issue: a potential hazard, a careless or unsafe act, or simply an opportunity to make a point about safety
- Jotting down an outline of three to five main points you want to get across
- Coming up with a "punch line"—a short sentence or phrase that sums up your talk and is easy to remember

Effective toolbox talks are practical and "hands-on." Here are some tips to help make them memorable:

- Keep them short—the whole session should be no more than 10–15 minutes, including time for Q&A.
- Make them a habit—they don't have to be strictly scheduled, but do them frequently and regularly enough that employees come to expect them.
- Demonstrate your points—toolbox talks should be held as close to the actual work as possible, so you (or members of the group) can actually demonstrate the correct and safe way to do things.
- Encourage participation—toolbox talks are an opportunity to look employees in the eye and maximize interaction.
- Don't focus only on the negative—potential hazards and unsafe acts are good excuses for toolbox talks, but so are times when work is being done safely and correctly.

Finally, remember that toolbox talks qualify as safety training every bit as much as more formal training sessions. Keep a record of your talks, including date, time, place, subject, and employees in attendance.

Section #3: Special event and awareness training tips

February—Workplace Eye Safety Month

How to prevent eye injuries

29 CFR 1910.133

Why it matters …

- An estimated 2,000 eye injuries occur in the workplace every day.
- 10 percent to 20 percent of eye injuries are disabling.
- In one recent year, OSHA gave out nearly 600 citations for violations of its eye and face protection standard.

February is Workplace Eye Safety Month, so it's a good time for a refresher course on eye injuries, hazards, and protective measures.

Most eye injuries should never happen. According to the American Academy of Ophthalmology, workplace eye injuries are a leading cause of eye trauma, vision loss, and blindness. The Academy also estimates that 90 percent of all eye injuries could have been prevented by using the right kind of protective eyewear. So it's

critically important that employees take eye safety seriously by understanding the potential causes of eye injuries and how to protect themselves.

A hazard assessment is a good place to start. For all kinds of PPE, OSHA recommends conducting detailed hazard assessments of the workplace to determine the types of PPE employees should be required to use. Apply this approach to your eye safety training sessions by asking the group to name all the eye hazards in the workplace. They may realize that some eye hazards are obvious, while others are not. The list includes:

- Impact—from flying chips, particles, sand, dirt, etc.
- Burns—from sparks, molten metal, or chemical splashes
- Heat—extremely high temperature can cause eye damage
- Irritation—from chemical vapors or dust
- Light radiation—from welding and similar operations
- Glare—may not cause eye injury but affects ability to see well and work safely

Make sure employees use the right protection. There should be no uncertainty about the kind of eyewear to use to protect against impact and splashes: It must conform to American National Standards Institute (ANSI) Z87.1. Train employees to make sure this designation is marked on the lens or frame. Beyond that, make sure they understand other key "eye safety basics":

- Protective eyewear should include side protection unless there is no possible risk of injury from side impact, splashes, or sparks.
- Always put on protective eyewear *before* entering an area where hazards might be present.
- Eye protection must fit properly and comfortably, including when worn over prescription glasses.
- Eyewear should always be checked for damage and replaced if there is any defect.
- If there is any doubt whether eye hazards are present, assume that they are.

May—National Electrical Safety Month

Training saves lives

29 CFR 1910, Subpart S

Why it matters …

- There were more than 6,000 citations for violating various parts of OSHA's electrical safety standard in 1 recent year.
- Penalties for these violations amounted to approximately $3 million.
- A NIOSH study showed electrocution to be the Number 5 cause of workplace death, with more than 400 such deaths each year.

Since May is National Electrical Safety Month, it may be time to provide some basic training that benefits all employees—and protects them from tragedies.

You would be shocked at how careless people are with electricity. Historically, electrocution has been a leading cause of death in the workplace. While the number of fatalities has decreased over the past several years—coinciding with OSHA's increased focus on electrical safety—there are plenty of ways that the average employee can be killed or seriously injured by electricity, through carelessness or lack of knowledge. In addition to death by electrocution, serious injuries can be the result of:

- Electric shock—nonfatal incidents that still can be painful and often cause injuries that require a recovery period;
- Burns, which sometimes can be quite painful and serious;
- Falls—even a mild shock can knock people down or cause them to fall from stepstools or ladders.

Leave electrical work to the experts. According to OSHA's Electrical Safety Standard, only "qualified persons" are permitted to work with or near exposed and energized electrical equipment. These are persons who are familiar with how the equipment works, its hazards, and how to use it safely. By contrast, "unqualified" persons are those who may be exposed to electrical hazards but don't have the required expertise to work with electrical equipment—and they must, at a minimum, be trained in work practices needed to avoid hazards. Although the standard does not say it in so many words, it's reasonable to assume that the Number One safety rule for unqualified persons is to stay as far away from exposed electrical equipment as possible. Employees who are not specifically trained in electrical work should never attempt to repair or otherwise work on electrical equipment, even if a task seems too simple to bother calling an expert.

Every employee should know basic electrical safety practices. Even in a setting that does not have any obvious electrical hazards, it's well worth it to review with employees some basic, commonsense rules for avoiding electrical accidents and injuries. These rules include:

- Don't overload circuits, such as by running multiple appliances from a single outlet.
- Never plug in an appliance with a damaged electrical cord or use an extension cord that has damaged insulation.
- Electrical equipment, including cords, should never be touched or handled in wet conditions.
- Never use a power tool, an appliance, or other item of electrical equipment if it is sparking, smoking, or otherwise seems to be malfunctioning.
- Keep metal objects, large and small, away from electrical equipment.

June—National Safety Month

Make sure employees know safety basics

Why it matters …

- There are more than 100,000 accidental deaths per year in the United States, including close to 5,000 in the workplace.
- More than 3 million Americans suffer disabling injuries each year on the job.
- Work injuries cost Americans more than $150 billion per year, or more than $1,000 per worker.

According to the National Safety Council, June is National Safety Month.

Take time to remind employees about safety basics. If most of your safety training sessions focus on the details of specific hazards and work practices, you can easily forget to step back and remind employees about the "big picture." Fundamentally, that means developing an all-around "safety attitude"—keeping safety in mind at all times and in all situations—not just at work, but also at home and on vacation. In fact, practicing safety at work is only part of the picture: Nearly 90 percent of fatal injuries and two-thirds of nonfatal but disabling injuries to American workers occur *away from the job*.

Be alert to the most hazardous situations. Part of safety basics is knowing the most common causes of death and serious injury so that you can stay particularly alert to these possible hazards. As a training exercise, ask your employees to name what they think are the five leading causes of accidental death, then compare their list with these statistics for one recent year:

- Motor vehicles—which accounted for more than 40% of fatal accidents both overall and in the workplace
- Falls (16%); falls were also the leading cause of serious nonfatal injuries
- Poisoning (13%)
- Choking (4%)
- Drowning and fires (tied at about 3% each)

Emphasize the "secret weapon" against accidents. Actually, the secret weapon isn't really all that secret … it's common sense! Remind employees that most accidents can be prevented simply by paying attention to hazards and engaging their brains before they act in a potentially unsafe manner. Ask your groups to name examples of using common sense to enhance safety; these might include:

- Reading the label on a chemical container before using it
- Wearing all required PPE whenever known hazards are present
- Removing or avoiding any possible slipping, tripping, and falling hazards
- Making sure flammable and combustible materials are kept away from sources of ignition
- Never disabling or circumventing safety devices, such as machine guards

- Staying away from power lines or any type of energized electrical equipment
- Asking a supervisor for help and guidance if they are not sure how to do a job safely

July—Ultraviolet (UV) Safety Month

Skin and eye protection

Why it matters …

- More than 50,000 people in the United States are diagnosed each year with malignant melanoma, the most serious form of skin cancer.
- More than 1 million people in the United States are diagnosed each year with less serious forms of skin cancer.
- According to OSHA, the General Duty Clause of the OSH Act has been used to cite employers that expose employees to excessively hot work conditions.

July is "Ultraviolet (UV) Safety Month," and its hot and sunny weather should be a good reason to remind employees about the possible hazards of working outdoors.

Ultraviolet rays can permanently harm both skin and eyes. There's nothing wrong with enjoying a warm, sunny day, but employees should know that whether they're working or playing, too much exposure to sunlight can have serious health effects. Many employees probably know that too much sun can cause skin cancer and premature aging of the skin. But they may not realize that sunlight also can cause eye damage; it has been linked to cataracts and other eye ailments. It's also possible for eyes to become "sunburned"—not necessarily a serious condition in itself, but one that could contribute to eye problems later on in life.

Remind employees to take proper precautions. Virtually all sources of information about skin and eye health agree on basic precautions that everyone should take when he or she is out in the sun:

- Wear a brimmed hat and sunglasses that filter out UV rays.
- Apply sunscreen rated 15 sun protection factor (SPF) or higher.
- Try to avoid sun exposure between 10 a.m. and 2 p.m., when UV rays are strongest.
- Recognize that even on a cloudy day, UV rays still get through and pose skin and eye hazards.
- Protect against glare from sunlight reflecting off water—"wraparound"-type sunglasses provide the best protection.

Don't forget other risks of outdoor exposure. Strenuous physical activity on a hot, sunny day creates other hazards besides sun exposure. Most of these fall into the category of "heat stress" and include dehydration, fainting, nausea, and (in

extreme cases) heatstroke, which can be fatal. Commonsense tips for avoiding heat stress include:

- Wear light-colored clothing—light colors reflect heat away, while dark colors absorb the heat.
- Stay hydrated by drinking plenty of fluids—water is best, juice and soda are OK, but avoid caffeine and alcohol.
- If you feel too hot and start to get woozy, don't try to "tough it out"—get into the shade or go indoors.

August—National Hearing Aid Awareness Month

Noise protection

29 CFR 1910.095

Why it matters …

- Noise-induced hearing loss is the most common occupational illness.
- In one recent year, OSHA gave out 848 citations for violations of its Noise Standard in manufacturing industries, with penalties totaling more than $700,000.
- Violation of the Noise Standard was one of the top 20 most frequently cited violations in the manufacturing sector.

August is National Hearing Aid Awareness Month—a good time to discuss effective ways to train employees on proper hearing protection on the job.

Find ways to make your employees take hearing loss seriously. Many employees exposed to loud noise don't really believe the issue applies to them. That's because hearing loss due to noise is a problem that can start early in life, worsen gradually, and become noticeable only later, when it's too late. Try these statistics to get their attention:

- Noise exposure accounts for 20 percent of all hearing loss.
- One out of three persons exposed to loud noise will develop hearing loss.
- Most workers who are exposed to noise and don't use hearing protection will develop **tinnitus**, a persistent ringing in the ears—how would you like to live your life with *that*?

The top four reasons employees *don't* wear ear protection. The first is *cost*—hopefully, that's not an issue if your company provides ear protection. Second is *comfort*—admittedly a problem, but one that can be addressed by, for example, substituting custom-molded earplugs for the standard foam version. The third is *convenience*—employees simply don't make wearing earplugs a routine habit, like wearing shoes. The fourth, perhaps surprising, is *safety*—employees are concerned that they might not hear warnings and alarms if their ears are covered or plugged. If this last point concerns your employees, make sure you address it in your training. Point out that ear protection doesn't eliminate sounds, it merely reduces them

to a safe level. If appropriate, review hand signals that should be used when noise levels are high, and remind employees to use both their eyes and their ears to stay alert for danger.

How much is too much (and what's a decibel, anyway)? OSHA's noise standard (29 CFR 1910.095) requires hearing protection when employees are exposed to 85 decibels (dB) or higher averaged over 8 hours. A "decibel" is simply a unit of sound measurement, like an inch or an ounce, and 85 of them are roughly equal to running a lawn mower or hair dryer. Ask your employees to imagine standing next to a running lawn mower or hair dryer all day, and they'll probably agree that protecting their ears against that kind of noise is a good thing. By reviewing the types of work and areas of the workplace that generate this noise level or greater, employees should understand that getting into the habit of wearing ear protection is a lot more important than they thought.

September—National Alcohol and Drug Addiction Recovery Month

Drug-Free Workplace Act

Why it matters …

- In a recent federal study, 1 in 14 workers admitted to illegal drug use (suggesting that the percentage may in fact be higher).
- NIOSH reports that drug- and alcohol-related workplace fatalities occur regularly in the United States.
- Companies covered by the Drug-Free Workplace Act can lose their federal contracts for noncompliance—and must wait 5 years to regain eligibility for new contracts.

To acknowledge National Alcohol and Drug Addiction Recovery Month, brush up your approach to keeping drugs and alcohol out of the workplace.

How compelling is your antidrug message? Your presentation doesn't have to sound like a high school "drug education" class. Instead, keep the focus on *safety*: the fact that people under the influence of drugs or alcohol are likely to have impaired judgment, which endangers themselves and their coworkers. Avoid a debate—or worse, having the audience tune you out—by emphasizing what *everyone* can agree on: Drugs and alcohol in the workplace lead to accidents and injuries.

Policies and consequences should be crystal clear. It's impossible to be too clear about your company's drug and alcohol policy—and what can happen to anyone who violates it. If a violation occurs, the offender should not be able to claim that he or she was not adequately informed. Don't generalize about consequences:

- Too general: "Violation of our drug policy is subject to disciplinary action."
- Better: "Being under the influence of drugs or alcohol on the job is grounds for termination."

The Drug-Free Workplace Act is a helpful model. Most companies that receive federal contracts or grants are covered by this federal law (some states have similar laws for companies receiving state funds). Under the law, employers must notify employees in writing that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the workplace. The company must also establish a "drug-free awareness program" that informs employees about:

- The dangers of drug abuse in the workplace
- The company's drug-free workplace policy
- Any available antidrug counseling or assistance programs
- Penalties on employees for drug abuse violations

Even if your company is not covered by federal or state "drug-free workplace" laws, their requirements are a good outline for developing antidrug policies and training programs.

October—National Fire Prevention Week

Make fire prevention a hot issue

29 CFR 1910.39

Why it matters …

- Fire departments responded to 1.6 million fires in one recent year, which caused nearly 4,000 civilian deaths.
- These fires caused more than $12 billion in property damage, more than three times the amount of damage caused by hurricanes and tornadoes combined.
- In the same year, OSHA cited more than 250 violations of rules related to fire prevention and emergencies, with penalties totaling nearly $100,000.

In honor of National Fire Prevention Week, here are some ideas for effective training in preventing fires in your workplace.

Follow the plan. OSHA regulations require many companies to have written Fire Prevention Plans. The basic requirements for such plans are clearly spelled out in the rules (29 CFR 1910.39) and can be used as a fire prevention training session outline:

- A list of all major fire hazards
- Proper handling and storage procedures for hazardous materials
- Potential sources of ignition and how to control them
- Controlling accumulations of flammable and combustible materials, such as oily rags, piles of waste paper and cardboard
- Proper maintenance of safety devices on heat-producing equipment designed to prevent fires

- Identification of the people responsible for maintenance of fire-prevention equipment and control of flammable fuel sources

Hazard information is key. OSHA also requires employers to inform employees about potential fire hazards of their jobs at the time they are assigned to these jobs and to review aspects of the Fire Prevention Plan that apply to them. In other words, it may not be enough to simply review all the possible fire hazards in the workplace and how to avoid them; the training should be specific to each job area. Examples might include:

- Reviewing the hazards of flammable chemicals and training employees to read the SDSs and labels for these chemicals
- Knowing how to safely handle and store flammable substances such as chemical compounds and flammable gases
- Identifying specific sources of heat or ignition in the work area and how to control them
- Housekeeping measures needed to reduce hazards

Consider a "Fire Risk Assessment." Training sessions are usually most effective when the audience is directly involved and participating. Conduct an exercise in which the group names all the possible fire hazards in their work areas and ranks each hazard as Low, Medium, or High Risk. This will help employees understand the most critical fire hazards and what they need to do to prevent a disaster.

November—Lung Cancer Awareness Month

Lung safety

Why it matters …

- Lung disease is the number one work-related illness in the United States in terms of severity, frequency, and preventability.
- Occupational lung cancer is estimated to kill between 15,000 and 20,000 people each year.
- Lung cancer is the leading cause of cancer death for both men and women in the United States.

November is Lung Cancer Awareness Month—an appropriate setting for reminding employees about protecting their lungs both on and off the job.

Occupational lung disease can be a killer. Many serious—even fatal—lung diseases can be traced to workplace hazards, including:

- Lung cancer, from inhaling carcinogenic chemicals, asbestos, and certain types of carbons
- Asbestosis, a progressive lung disease that results from inhaling asbestos fibers
- Silicosis, from inhaling silica dust found in stone, clay, and glass manufacturing, as well as blasting operations

- Occupational asthma, from exposure to any number of vapors, gases, fumes, or dusts that can trigger an asthma attack
- Certain industry-specific diseases such as black lung (coal) and brown lung (textiles)

In addition, studies clearly show that smokers are more susceptible than nonsmokers to developing occupational lung diseases.

Employees should recognize the key risk factors. Hot, closed-in work areas and poor ventilation magnify the potential for developing lung problems if disease-causing substances are present. Remind employees that they should know both the hazards of the substances they work with AND the conditions that might increase the risk. They should make it a habit to always:

- Read the labels and SDSs of hazardous substances to understand the dangers of inhaling the substance—and do it BEFORE using the substance.
- Avoid or minimize breathing in any sort of dust, vapors, fumes, or gases.
- Make sure that engineering controls, such as ventilation and exhaust systems, are in place and functioning properly.

Of course, anyone who works in an area with high levels of hazardous substances in the air must wear an appropriate respirator and know how to use it properly.

Early detection is key to treating lung diseases. The success of medical treatment for lung diseases usually depends on how early the disease is detected. (Even lung cancer can be treated successfully if found at an early stage.) Encourage employees to get a medical examination if they develop symptoms, such as a persistent cough, and they have reason to believe the problem may be work-related. But most important, emphasize that occupational lung diseases can be prevented in the first place with the right combination of hazard awareness, engineering controls, PPE, and common sense.

December—Drunk and Drugged Driving Prevention Month

Remind employees that safe driving is no accident

Why it matters …

- More than 13,000 people died in work-related roadway accidents in the United States between 1992 and 2001.
- In 2002 alone, more than 17,000 people in the United States died in alcohol-related roadway accidents.
- Accidents involving drugs and alcohol will affect one in three Americans during their lifetime.

December is Drunk and Drugged Driving Prevention Month, and with the onset of the holidays and winter weather, it's a good opportunity to remind employees about driving safely both on and off the job.

Motor vehicle accidents are the leading cause of work-related deaths. Roadway accidents not only kill employees such as truck drivers, who spend all of their time on the road, but also employees who simply are using their own or a company vehicle for job-related purposes.

A NIOSH study of 3,000 work-related driving fatalities showed that a highway tragedy can happen to any employee under any circumstances. The study found:

- Nearly half of all accidents involve something other than another motor vehicle—in fact, 14 percent of the workers killed were pedestrians.
- More than two-thirds of accidents occur among workers aged 25 to 54.
- 85 percent of accidents occur during normal weather conditions.

Drinking, drugs, and driving are a fatal combination. More than 40 percent of all traffic-related deaths in the United States involve alcohol, and drugs such as cocaine and marijuana are involved in approximately 20 percent of fatalities. Most tragic of all, these accidents often involve children under the legal driving age who are passengers riding with drivers under the influence. Only 20 percent of the children killed in alcohol-related accidents were wearing proper safety restraints (seat belts or car seats).

Remind employees to take safe driving seriously. Use facts and figures, such as those presented here, to reinforce the message that fatal highway accidents can have a tragic impact on their own and their families' lives. Other points to emphasize include:

- Your company's policies on being under the influence of drugs or alcohol on the job.
- Mandatory seat belt use for job-related driving—note that 62 percent of the victims in the NIOSH study were NOT wearing any sort of restraints.
- The importance of proper vehicle maintenance—employees should always, at a minimum, check such basic items as tires, front and rear lights, wipers, and washer fluid before starting out.
- Take it easy in bad weather such as snow and ice—it's better to arrive late than not at all.