



NSMS December 2006 DIGEST

Warmest Holiday Greetings!

This holiday season, families all across America will gather with neighbors and friends to rekindle old friendships, revive honored traditions, and renew the hope and love that is part of the season. And as we do, our thoughts and prayers should extend the men and women of our armed forces whose mission it is to defend peace and freedom, those in the southeast who have endured and are rebuilding from natural disasters, and all who are less fortunate or hurting.

On behalf of the National Safety Management Society President Roosevelt Smith, Executive Director Jeffrey Chung and the entire Board of Directors, we want to take this opportunity to wish all our members and affiliates great joy, peace, prosperity, and good health during this holiday season and as we enter into 2007. Thank you for reading the NSMS Digest, visiting our Website and for being part of our Society. We hope to continue to add value to your professional development and work lives. Until next time, Merry Christmas and Happy Holidays!

NSMS 2007 Membership Renewal Notices Have Been Sent

By now you should have received your membership renewal letters in the mail. NSMS is very grateful for your membership throughout the years and looks forward to continuing our association together. There is no dues increase over the 2006 rate. **Please renew by January 15, 2007.** Your dues will support a number of critical initiatives, both new and ongoing. NSMS will strive to further: engage in outreach activities, maintain the website, offer online and live technical and management training workshops (with significant course fee reductions for current members), maintain certification programs for safety technicians and supervisors, prepare for annual conferences, offer CSHM exam preparation workshops, support the establishment of new state chapters and student chapters at higher educational institutions, and any other initiatives based on member needs and recommendations. These are ambitious goals and it will take a group of dedicated members stepping up and volunteering to help NSMS achieve them. Please consider offering your expertise and time to these important initiatives. Thanks you.

Welcoming Our New 2006 NSMS Members

On behalf NSMS President Roosevelt, the NSMS Executive Committee and the NSMS Board of Directors, we like to thank all members who have renewed their 2006 membership to the National Safety Management Society. We would also like to acknowledge and welcome the following new members to our Society:

- MD Idris Salim, Engineer – Johnson Controls (Petaling Jaya, Selangor, Malaysia)
- Alfred W. Williams, Manager CTW Program – Veteran Hospital (Reno, NV)

We appreciate your interest in furthering your skills, knowledge and abilities in the management of safety and risks, as well as your interest to networking and professional development. Welcome again to NSMS!

Call for Nominations – NSMS Board of Directors

The National Safety Management Society (NSMS) is seeking nominations from its current membership to fill three (3) at-large positions on the Board of Directors to replace:

John H. Bridges III, CSHM
Edward G. Ratzenberger, CSP
Dr. Andrew Sorine, EdD CSHM

The newly elected Board members will be serving a two-year term. The NSMS is looking for individuals with the talent and experience to help shape the direction of NSMS's future and we are especially interested in candidates of diverse safety management, strategic planning, organizational development and training backgrounds. All current dues-paying members classified as: "Members," "Retired Members," "Life Members," or "Fellows" (who are classified as "Members," "Retired Members," or "Life Members" are eligible to nominate a fellow member or self-nominate. No slate shall have more than one individual from the same firm, agency, or organization,

Please submit your letter of nomination or self-nomination with, along with the candidate's CV/resume, no later than December 15, 2006 and email it to nsmsinc@yahoo.com or physically mail it to:

National Safety Management Society
c/o NSMS Nominating Committee
P.O. Box 4460
Walnut Creek, CA 93496-0460

An electronic ballot will be mailed out to all current dues-paying members. Please make sure your email address is correct in our database.

Calling All NSMS Members: Volunteers Are Needed for Our National Conference Planning Committee

NSMS is still seeking volunteers to form a working committee for planning our **Summer 2007 National Conference**. We need the efforts and support of all members to keep the information exchange and networking possible. Without a working group, our goal of a conference may not be met this calendar year. If you are interested in participating, please email us at nsmsinc@yahoo.com. Please spread the word and get involved! Thank you.

We are taking a quick poll as to desired conference location for a 2-3 day program. Please email us at nsmsinc@yahoo.com to vote for a preference (if any) to one of these venues:

Cruise ship to Baja California, Mexico

Houston, Texas

Las Vegas, Nevada

San Francisco Bay Area, California

Los Angeles Area, California

Other suggestion: _____

The NSMS “Blog” is Here

Steve Geigle has created and launched the “NSMS Blog” on the NSMS website. It will allow members and others to post comments, remarks and initiate discussions about a variety of safety management topics and issues. You can participate in the Blog by going to the NSMS website (<http://nsms.us>) and look for the link on the home page along the left-hand column of navigation areas.

FREE ACCESS: Online Certified Safety and Health Manager (CSHM) Educational and Exam Preparation Reference Materials

As a benefit for our current and future dues-paying members, NSMS is **permanently** offering free access to the Certified Safety and Health Manager (CSHM) preparation and educational materials. The online resources, created by NSMS member Steve Geigle, can be found at www.cshmprep.com and the only action an NSMS member needs to take is to email Steve

requesting access from that website. You will need to include your current NSMS member number (found on your membership card and certificate). Once the number is verified, you will be granted a username and password to access the online reference materials. This is a great opportunity to brush up on your safety management and technical knowledge and prepare for a successful passing of the CSHM certification examination.

OSHA's New Fact Sheet Focuses On Fall Protection

OSHA recently released a fact sheet for employers and employees involved in working in and around aboveground storage tanks that describes how to recognize fall hazards, develop prevention priorities, and use protective equipment.

Additionally, the fact sheet highlights safe climbing practices, specialized training, and other safety and health tips. The fact sheet is a product of the Safe Tank Alliance (http://www.osha.gov/dcsp/alliances/api_nfpa/api_nfpa.html).

Fall prevention means keeping accidents from happening. Using equipment like guardrails, stair rails, travel restraint systems, safety nets, arrest systems (harnesses), self-retracting lifelines/lanyards and ladder safety devices help keep workers from falling and avoid a hard landing if they do fall.

According to the fact sheet, fall hazards in and around tanks are:

- Holes in walking or working surfaces
- Poorly secured ladders
- Faulty scaffolds
- Untidy or congested work areas
- Obstructed walkways
- Improper use of equipment or procedures
- At ground level around the tank
- On tank stairs, ladders, platforms, rooftops, scaffolds or girders
- Slippery floors and obstacles inside the tank

The fact sheet can be accessed (in PDF format) at http://www.api.org/ehs/health/upload/fall_prevention_factsheet.pdf.

Two Free Online Construction Safety Programs Launched

The educational requirements for OSHA's excavation and lead safety standards can be daunting for contractors. The Construction Safety Council (CSC) is offering two new online programs that offer tools to help contractors fit training into their busy work schedules.

These two programs, Excavation Competent Person Training Program and Lead in Construction Program, are offered free of charge for the next two years. The programs were created with funding from OSHA's Susan Harwood Training Grant Program and authored by the Construction Safety Council.

OSHA's Excavation Safety Standard requires that contractors designate "competent persons" to supervise all trenching and excavation work. The Excavation Competent Person Training Program is an interactive course designed to cover the most important knowledge requirements that must be met by the competent person. The designation of "competent person" can only be made by the employer responsible for performing the excavation work. Participants will go through a sequence of learning modules: Introduction to Competency, Specific Excavation Requirements, Protective Systems and Soil Analysis, Emergency Response, and a Post-Test. Upon successful completion of the program and post-test, the participant will receive a course completion certificate from the Construction Safety Council.

Paul Satti, CSC's director of program development, said, "When a contractor only has one or two people needing competent person level training, CSC's on-line excavation safety course is efficient and cost effective. It also provides supervisory and management personnel with an excellent avenue for professional development."

The Lead in Construction Program is a downloadable program that informs participants about the hazards of lead in the workplace and the measures that can eliminate or reduce exposure. Participants completing the program will learn about the history of lead-related disease and various sources of exposure to lead in construction and demolition work. They also will learn about health effects of lead, exposure monitoring and medical surveillance, engineering work practice controls and the use of appropriate personal protective equipment.

"We're very excited about the Construction Safety Council's ability to offer the new computer-based training developed with funding received from OSHA's Susan Harwood Training Grant Program," said Tom Broderick, executive director and a construction safety professional for more than 25 years.

The online programs can be found at <http://www.buildsafe.org>.

Fire Protection Module Added To OSHA's Shipyard Employment eTool

On Sept. 14, OSHA launched a new Fire Protection Module as part of its interactive Web-based training Shipyard Employment eTool.

The module and eTool are products of alliances between OSHA and the American Shipbuilding Association, National Shipbuilding Research Program and the Shipbuilders Council of America.

"This is a crucial addition to a very important resource that helps educate employers and employees on the steps they can take to ensure their safety in the event of a fire while performing shipyard work," said OSHA Administrator Edwin G. Foulke Jr. "The Fire Protection Module builds upon the viable information in the eTool that helps employees identify job-related hazards and learn about possible solutions."

The module focuses on the importance of protecting shipyard employees from fire hazards while conducting ship repair, shipbuilding, shipbreaking, barge cleaning and other work-related activities through implementing an effective fire protection plan. Many of the basic tasks

involved in shipyard employment, such as welding, grinding and cutting metal with torches, can provide an ignition source for fires. It is important that employees learn to recognize, respond and provide corrective action during a fire crisis, so the module also offers users access to training information on "fire watch" and "fire response" activities.

The eTool features additional modules describing the common hazards and potential solutions to those hazards associated with ship repair, shipbuilding, shipbreaking and barge cleaning.

The Fire Protection Module can be accessed at http://www.osha.gov/dcsp/products/etools/shipyard/fire_protection/index.html.

New Guidance to Help Small Businesses Comply With Hexavalent Chromium Requirements

On Oct. 2, OSHA released a safety and health guidance to help small businesses comply with the agency's new hexavalent chromium (Cr(VI)) requirements for general industry, construction and shipyards.

"This new resource is aimed at helping small businesses comply with the new standards, while helping them reduce the risk to employees potentially exposed to these compounds," said OSHA Administrator Edwin G. Foulke Jr.

The guide describes the steps that employers are required to take to protect employees from hazards associated with exposure to Cr(VI). It is divided into sections that address the major provisions of the standards, and follows the same organization as the corresponding paragraph of the standards. However, the guide provides more detail than the standards to help employers better understand the requirements.

Permissible Exposure Limits (PEL), exposure determination, regulated areas, methods of compliance, respiratory protection, protective work clothing and equipment, hygiene areas and practices, housekeeping, and medical surveillance are the major topics included in the guide.

Hexavalent chromium compounds are widely used in the chemical industry as ingredients and catalysts in pigments, metal plating and chemical synthesis. Cr(VI) also can be produced when welding on stainless steel or Cr(VI)-painted surfaces. The major health effects associated with exposure to Cr(VI) include lung cancer, nasal septum ulcerations and perforations, skin ulcerations, and allergic and irritant contact dermatitis.

The guidance can be accessed in PDF format at http://www.osha.gov/Publications/OSHA_small_entity_comp.pdf.

Also see "Fact Sheet: Health Effects of Hexavalent Chromium" at <http://www.ohsonline.com>

Online Database to Help Companies Switch to Safer Cleaning Alternatives

The Toxics Use Reduction Institute (TURI) at the University of Massachusetts Lowell unveiled last month a new surface cleaning online database called CleanerSolutions. The free, interactive web-based tool helps manufacturers find safer cleaning alternatives that perform as well as hazardous chemicals -- without increasing risks, TURI stated.

The database is filled with more than 10 years of performance testing results combined with health and environment indicators. The system helps companies understand how to choose alternatives so that overall risks to workers and the environment are reduced.

"The reason I developed the database was because I couldn't imagine manufacturers taking the time to weed through mounds of data to find safer cleaning products," said Jason Marshall, TURI manager of laboratory testing. "If companies can view hard data on how safer industrial and janitorial products perform, then they are more likely to pilot test alternatives and replace the toxic chemicals they may be using."

Companies are able to choose the contaminant, solvent to replace, type of equipment and the material that's being cleaned from a drop-down menu. The search results list possible replacement products, performance test results, and safety information based on five environmental and health indicators. The TURI Laboratory conducts a preliminary screening to determine a chemical's potential risk based on global warming potential, ozone depletion potential, volatile organic content, flammability/reactivity and acute toxicity.

William Sweetman, director of Environmental, Health and Safety Affairs at The Top-Flite Golf Co. in Chicopee, Mass., is pilot testing two solutions found through the database. He has worked with laboratory personnel, as well, to identify alternatives to toxic materials used in the company's golf ball manufacturing process.

He also searched and found a new process for cleaning equipment parts. Instead of soaking the parts in solvents for two days and then cleaning them with a wire brush, the company switched to an ultrasonic cleaning process. Sweetman used the database to find solutions that could work best with that technology. Both solutions will protect workers from current exposures while improving product throughput, TURI stated.

"Compared to what I've used in the past, TURI's CleanerSolutions database was one-stop shopping," Sweetman said. "Because of the very specific search criteria and documented testing results, it quickly brought me down the path of finding a safer process and solution for our unique needs."

Since each manufacturer's process and application are unique, TURI recommends pilot testing the potential replacement found in the database for both safety and performance. Visit <http://www.turi.org> to access the free database.

Deciding To Stay Or Go? – Have an Evacuation Plan

Depending on your circumstances and the nature of the disaster, the first important decision after an incident occurs is whether to shelter-in-place or evacuate. Ready.gov advises businesses to understand and plan for both possibilities in advance by developing clear, well thought out plans.

- Have an **Evacuation Plan** and a **Shelter-in-Place Plan**.
- In any emergency, local authorities may or may not immediately be able to provide information on what is happening and what you should do. However, you should monitor TV or radio news reports for information or official instructions as they become available.
- If you are specifically told to evacuate, shelter-in-place or seek medical treatment, do so immediately.
- Use common sense and available information to determine if there is immediate danger. For example, if your building is damaged you will typically want to evacuate.

Evacuation Plan

Some disasters will require employees to leave the workplace quickly. The ability to evacuate workers, customers and visitors effectively can save lives. People who plan and practice how they will get out of the building in an emergency are better prepared than those who do not have an exit strategy.

- If feasible, develop a system for knowing who is in your building, including customers and visitors, in case there is an emergency.
- Decide in advance who has the authority to order an evacuation. Create a chain of command so that others are authorized to act in case your designated person is not available. If local officials tell you to evacuate, do so immediately.
- Identify who will shut down critical operations and lock the doors, if possible, during an evacuation.
 - Choose employees most able to make decisions that emphasize personal safety first.
 - Train others who can serve as a back-up if the designated person is unavailable.
 - Write down, distribute and practice evacuation procedures.
- Locate and make copies of building and site maps with critical utility and emergency routes clearly marked.
 - Identify and clearly mark entry-exit points both on the maps and throughout the building.
 - Post maps for quick reference by employees.
 - Keep copies of building and site maps with your crisis management plan and other important documents in your emergency supply kit and also at an off-site location.
 - Make copies available to first responders or other emergency personnel.
- Plan two ways out of the building from different locations throughout your facility.
- Consider the feasibility of installing emergency lighting or plan to use flashlights in case the power goes out.

- Establish a warning system.
 - Test systems frequently.
 - Plan to communicate with people who are hearing-impaired or have other disabilities and those who do not speak English.
- Designate an assembly site.
 - Pick one location near your facility and another in the general area in case you have to move farther away.
 - Talk to your people in advance about the importance of letting someone know if you cannot get to the assembly site or if you must leave it.
 - Be sure the assembly site is away from traffic lanes and is safe for pedestrians.
- Try to account for all workers, visitors and customers as people arrive at the assembly site.
 - Take a head count.
 - Use a prepared roster or checklist.
 - Ask everyone to let others know if they are leaving the assembly site.
- Determine who is responsible for providing an all-clear or return-to-work notification. Plan to cooperate with local authorities responding in an emergency.
- Conduct employee training, exercises and drills including procedures for evacuating high-rise buildings on a regular basis.
- Plan for people with disabilities who may need help getting out in an emergency.
- If your business operates out of more than one location or has more than one place where people work, establish evacuation procedures for each individual building.
- If your company is in a high-rise building, an industrial park, or even a small strip mall, it is important to coordinate and practice with other tenants or businesses to avoid confusion and potential gridlock.
- If you rent, lease or share space with other businesses make sure the building owner and other companies are committed to coordinating and practicing evacuation procedures together.
- Make a Shelter-In-Place Plan.

Study Finds Learning Gaps in Meeting the Challenge of Changing Workforce as Baby Boomers Retire

While global organizations recognize the looming workforce demographic shift, far too few have taken action to meet the challenges, either by addressing the retirement of baby boomers, or streamlining the learning curve for new employees, according to a study by IBM and the American Society for Training & Development (ASTD).

Learning leaders and their teams are uniquely positioned to lead the way in bridging the gap between awareness and action, yet only 16 percent of organizations have made changing workforce demographic considerations a priority in their learning strategies, the organizations stated.

The study surveyed more than 240 global learning executives on issues including the impact of changing workforce demographics on their organizations, approaches to knowledge transfer, perceptions of learning preferences among workers of different generations and barriers to learning.

Public, private and not-for-profit (including government) organizations across eight industry sectors in North America, South America, Asia-Pacific and EMEA (Europe, the Middle East, and Africa) responded to the study, which was carried out online in June-July 2006. More than 70 percent of respondents were learning executives or professionals, with the balance including HR executives, and senior management outside of the learning function.

"Learning executives identified knowledge transfer, removing barriers to learning for mature workers and meeting the needs of the next generation of employees as their greatest challenges related to changing workforce demographics," said Ray Rivera, director, Workplace Learning and Performance Scorecard, ASTD Research. "Yet, less than half think their organizations are doing enough to tackle these challenges, and only about 40 percent believe their companies are addressing their overall skill and capacity needs over the next three to five years. These findings suggest that many organizations remain unprepared for workforce shifts of potentially 'tectonic' magnitude."

Among the study's specific findings:

- More than 80 percent of learning executives believe that changing workforce demographics will have a notable influence on their organizations, yet only 46 percent of learning executives report their organizations are doing either a "good" or "excellent" job in addressing demographic shifts.
- Learning executives are keenly aware of the need to preserve and transfer critical knowledge before employees retire or leave an organization for other reasons. Yet, while organizations are making strides in areas such as mentoring and knowledge repositories, less than one-third incorporate knowledge transfer into traditional learning programs. Recruiting mature workers to deliver classroom content, fostering communities of practice, and capturing and embedding knowledge into existing learning programs are among the practices organizations are under-utilizing. Only about 2 percent of companies are using multimedia, such as audio/video interviews, to capture knowledge and insights from retiring employees.
- More than one-third of organizations believe that mature workers participate in learning activities less than younger workers, and that older workers encounter more barriers in participating in learning activities.
- Learning leaders are concerned about streamlining the learning curve for new employees, not only as they replace older workers, but in organizations with rapid growth, especially in emerging economies such as China and India. Rapid "on-boarding" is taking on new priority as demographic shifts gather steam.

Based on these findings, IBM and ASTD see five key action steps for learning executives:

- Work with HR and line-of-business leaders to increase awareness and visibility of changing workforce demographic issues.
- Develop a knowledge transfer strategy to address high-value knowledge at risk in the organization.
- Consider learner preferences as an input into a larger training delivery strategy.
- Identify relevant opportunities for mature workers to take part in learning activities, including non-traditional learning experiences.
- Focus on reducing the cycle time and increasing the effectiveness of on-boarding and management development efforts.

More information about the IBM/ASTD Changing Workforce Demographics and the Learning Function study may found at http://www.astd.org/astd/research/research_reports.

NLRB's Expanded Definition of Supervision Affects Millions

The most important National Labor Relations Board decision in many years was released at 1 p.m. Eastern time on Oct. 3, with the board voting 3-2 that permanent charge nurses employed by Oakwood Heritage Hospital, an acute care hospital in Taylor, Mich., exercised supervisory authority in assigning employees within the meaning of Section 2(11) of the National Labor Relations Act. But in two other cases released the same day, *Golden Crest Healthcare Center* and *Croft Metals Inc.*, the board ruled that applying the definitions for "assign" and "responsibly direct" set in the Oakwood case, charge nurses at a Beverly Enterprises nursing home in Minnesota and Croft Metals' lead persons at a McComb, Miss., doors and windows manufacturing plant did not exercise supervisory authority under the act. These three are the so-called "Kentucky River" cases that the AFL-CIO and congressional allies have warned may deny as many as 8 million American workers the right to join a union by broadening the definition of a supervisor.

AFL-CIO President John Sweeney immediately called the decisions "outrageous" and added, "It's the latest example of how the Bush-appointed NLRB is prepared to use legal maneuvering to deny as many workers as possible their basic right to have a voice on the job through their union. The NLRB should protect workers' rights, not eliminate them. ... The board's new definition essentially enables employers to make a supervisor out of any worker who has the authority to assign or direct another and uses independent judgment. Amazingly, the board also ruled that a worker can be classified as a supervisor if he or she spends as little as 10 percent to 15 percent of his or her time overseeing the work of others."

The board found that the Oakwood charge nurses, as a regular part of their duties, assigned nursing personnel to the specific patients for whom they would care during their shifts, and that such assignments meet the statutory definition of "assign" under the act. Chairman Robert J. Battista and members Peter C. Schaumber and Peter N. Kirsanow were the majority, with members Wilma B. Liebman and Dennis P. Walsh dissenting. Pending for three years, these

cases are NLRB's attempt to solve the problem raised in *NLRB v. Kentucky River Community Care*, a 2001 U.S. Supreme Court decision that criticized the board's interpretation of the Section 2(11) term "independent judgment." In the Oakwood decision, the board defined "assign" as the act of "designating an employee to a place (such as a location, department, or wing), appointing an individual to a time (such as a shift or overtime period), or giving significant overall duties, i.e. tasks, to an employee." To "assign" for purposes of the act "refers to the ... designation of significant overall duties to an employee, not to the ... ad hoc instruction that the employee perform a discrete task," it explained. And the board defined "independent judgment" in relation to two concepts: First, to be independent, the judgment exercised must not be effectively controlled by another authority, such as by detailed instructions or regulations. Second, the degree of discretion exercised must rise above the "routine or clerical."

NLRB: <http://www.nlr.gov>

People Drinking Coffee to Get Through a Night Shift or a Night of Studying Will Strongly Hurt Their Recovery Sleep the Next Day

A new study at the Université de Montréal has found negative effects of caffeine are stronger on daytime sleep than on nocturnal sleep. The study published in the current issue of *Neuropsychopharmacology* was conducted by Dr. Julie Carrier from the Department of Psychology at the Université de Montréal. Carrier runs the Chronobiology Laboratory at the Hôpital du Sacré-Coeur de Montréal.

"We already knew that caffeine has important effects on nocturnal sleep. It increases the time taken to fall asleep, it increases the amount of awakenings, and it decreases the amount of deep sleep," Carrier said. "We have shown that these effects of caffeine on sleep are way stronger when taken at night prior to a daytime recovery sleep episode than in the evening before a nocturnal sleep episode.

"Caffeine makes daytime sleep episodes too shallow to override the signal from the biological clock that tells the body it should be awake at this time of day," Carrier said. "We often use coffee and other sources of caffeine during the nighttime to counteract sleepiness generated by sleep deprivation, jet lag, and shift-work. However, this habit may have important effects when you then try to recuperate during daytime."

Thirty-four moderate caffeine consumers participated in both caffeine (200 mg) and placebo (lactose) conditions in a double-blind crossover design. Seventeen subjects followed their habitual sleep -- wake cycle and slept in the laboratory during the night (Night group), while 17 subjects were sleep deprived for one night and recovery sleep started in the morning (DayRec group). All subjects received a capsule of 100 mg of caffeine (or placebo) 3 hours before bedtime, and the remaining dose one hour before bedtime. Compared to placebo, caffeine lengthened sleep latency, increased stage 1, and reduced stage 2 and slow-wave sleep (SWS) in both groups. However, caffeine reduced sleep efficiency more strongly in the DayRec group, and decreased sleep duration and REM sleep only in that group, the researchers said.

Tips: Prepare Your Car for Winter Weather

As winter approaches, CarMax Inc., a retailer of used cars, offers advice on how to make sure your car is ready for cold weather.

"Harsh winter weather can create real challenges for your vehicle," said Todd Gartner, CarMax ASE master technician. "That is why it is so important to take the necessary steps to ready your car for the cold weather season."

CarMax's automotive service technicians offer these ten winterizing tips:

1. Check your anti-freeze. The best ratio of anti-freeze to water is 50/50. The number one cause of engine-related breakdowns is cooling system failure. Prevent this by having your cooling system flushed every two years.
2. Replace your windshield wiper blades twice a year. Fill the windshield washer reservoir with freeze resistant wiper fluid (plain water and standard windshield washer fluid will freeze) and keep an extra gallon in the trunk.
3. Check your battery. If the battery is more than three years old, have a technician test its capacity. Have the alternator tested at the same time. Make sure the battery terminal ends are corrosion-free.
4. Check your tire pressure. Check the pressure when the tires are cold, and set the pressure to the car manufacturer's recommendations for your specific tires. When the weather turns cold, the air inside the tire will contract and the pressure will drop.
5. Look at the tread depth on your tires. Put a penny headfirst between the treads. If you can see the top of Lincoln's hair, it's time to replace the tire.
6. Check your spare tire. Make sure it has the proper air pressure and tread depth and that all the proper tire-changing equipment is in the vehicle.
7. Check that your lights, heater and defrosters are working properly.
8. Check all rubber hoses and belts to ensure they are not damaged. Coolant hoses wear from the inside out. Inspect for heavy cracks or chunking in the belts. Alternatively, have a professional inspect all hoses and belts.
9. Have your car's brake system checked if you haven't had the system inspected in the last six months.
10. Assemble a winter emergency kit for the trunk of your vehicle (*go to <http://www.osha.gov/SLTC/emergencypreparedness/guides/winterstorms.html> for a list of emergency items to carry in a vehicle*).

"In addition, slower is always better when driving in winter weather," Gartner said. "Driving slower gives both you and your car more time to react during inclement weather."

Along with following these tips, it's also important to read your owner's manual and follow the manufacturer's recommended service schedules.

Firefighter Radios May Fail During High-Temp Fires

Firefighters sometimes find themselves fighting blazes in temperatures as high as 500 degrees Fahrenheit (260 degrees Celsius). Firefighter gear and self-contained breathing apparatus can allow firefighters to safely work for a limited time during these conditions. A recently released National Institute of Standards and Technology (NIST) study, however, reveals that first responders can't rely on their unprotected handheld radios even in routine firefighting situations, much less in higher-temperature fires, where good communications are especially crucial.

The NIST fire engineers tested three representative portable radio models from three different manufacturers in a wind tunnel designed to simulate thermal conditions at three different degrees of intensity that firefighters are equipped to withstand -- Thermal Class 1, with a maximum temperature of 212 degrees Fahrenheit (100 degrees Celsius) for 25 minutes; Thermal Class 2, with a maximum temperature of 320 degrees Fahrenheit (160 degrees Celsius) for 15 minutes; and Thermal Class 3, with a maximum temperature of 500 degrees Fahrenheit (260 degrees Celsius) for 5 minutes. Each of the radios tested listed their maximum operating temperatures as only 140 degrees Fahrenheit (60 degrees Celsius).

One radio of the three samples would not transmit or receive after 25 minutes at 212 degrees Fahrenheit though it did begin working after a cooling off period. In another 15-minute experiment at 320 degrees Fahrenheit, one radio went dead within 8.5 minutes. The other two radios suffered significant performance problems from transmission and reception shutdown to signal degradation or fluctuation. None survived the Thermal Class 2 test and cool down period.

Portable radios inside pockets or firefighter turnout gear fared much better. All survived temperature tests at Thermal Class 1 and Thermal Class 2 maximum heats and times. Pocket protected radios also survived Thermal Class 3, but exposed cords, speakers and microphones did not, effectively limiting the radios to Thermal Class 2 electronics. The NIST engineers suggest that small design changes on the speaker/microphones and cords could allow all the protected radios to reach a Thermal Class 3 rating.

NIST conducted the study to evaluate the general performance of portable radios at elevated thermal conditions, to identify shortcomings and to suggest standards for the radios. The results will be used to develop test methods and recommendations that will be submitted to the National Fire Protection Association and other appropriate standards-setting bodies. The NIST study was conducted by the Building and Fire Research Laboratory for the NIST Office of Law Enforcement Standards with funds from the Department of Homeland Security.

Study: NYC Transit System Noise Levels Hard On the Hearing

Researchers at Columbia University's Mailman School of Public Health, who analyzed noise levels of the New York City transit system, found that exposure to noise levels in subways has the potential to exceed recommended guidelines of the World Health Organization (WHO) and EPA.

According to the research, as little as 30 minutes of exposure to decibel levels measured in the New York City transit system per day has the potential to result in hearing loss. The findings were published in the September issue of the *Journal of Urban Health*, a publication of the New York Academy of Medicine.

"Noise exposure and noise-induced hearing loss is a global health problem of significant magnitude, especially in urban settings, yet published data are extremely limited," said Robyn Gershon, DrPH, professor of Sociomedical Sciences at the Mailman School of Public Health and lead author of the study.

Gershon and co-authors report that the findings suggest that, "Daily exposure to noise on subway platforms and subway cars has the potential to cause hearing loss. At the highest level obtained on the platform (106 decibels), the allowable limit under WHO and EPA is only 30 seconds. More than 1 in 10 of the platform measurements exceeded 100 decibels -- which translates into an allowable limit of only 1.5 minutes."

Gershon noted that "maximum levels inside of subway cars were even greater, and could lead to serious exposures, although more research is needed to determine exactly how much exposure that frequent, long distance, long-term riders experience."

This research by safety experts at the Mailman School is the first scientific subway noise assessment in over 30 years, and believed to be one of only two papers published on NYC subway noise; the last one was in the 1930s.

Average and maximum noise measurements were made using a precision sound level meter on subway platforms located in the four New York boroughs with underground subways (Manhattan, Brooklyn, the Bronx and Queens). The average maximum noise level on subway platforms measured was 94 decibels (dBA). The average maximum inside of subway cars was 95 dBA, and at bus stops, the average maximum was 84 dBA. The logarithmic nature of decibels means that every 10 dBA equals a 10 fold increase in intensity. Thus a 90 dBA sound is 10 times as intense as an 80 dBA sound, the researchers said.

"Several factors have the potential to contribute to hearing loss, including years of ridership, frequency of ridership, and length of rides," Gershon said. "If a rider is exposed to other high noise-level activities such as a personal listening device, the potential for hearing loss is even greater."

Gershon further noted that even short exposures to very high noise levels can cause the same amount of damage as much longer exposures at lower levels.

To determine if noise levels varied by location on the subway platforms, measurements were made at three different locations on each platform: the front end, the middle section and the rear section of the platform. For all measurements, other conditions that could affect noise levels, such as passing trains, air brake release, police sirens, subway musicians etc., also were noted.

Earlier research by Columbia University's Mailman School of Public Health offered a comprehensive look at subway-related health and safety hazards that might affect both riders and subway workers. While this assessment found that subways in general, and the New York City subway system in particular, are relatively safe, especially in comparison to automobile use, they may be associated with a wide range of potential health hazards.

The New York City subway system is the largest and the second oldest system in the United States, with more than 450 subway stations, 500 subway trains and more than 2,000 miles of track. Operating 24 hours a day throughout NYC, it has almost 4 million riders per weekday, which is the fifth largest ridership in the world.

Because excessive noise exposure can ultimately result in noise induced hearing loss, Gershon noted that risk reduction is the best strategy. Many steps have been taken and continue to be taken by large transit systems, including the Metropolitan Transit Authority, to help reduce subway noise. Steps that individuals can take include the use of personal hearing protection devices (e.g., earplugs and earmuffs). The use of cotton or fingers only reduces the noise levels slightly. The use of personal listening devices, which many may think is protective, can actually contribute to noise exposure if they are played at high volumes. Public education and awareness on hearing protection in general, is highly recommended.

Researchers Find Burnout Explains Link Between Job Strain, Depression

Workers have speculated on this for years, and now researchers announced they have found that workers with high levels of job strain are at increased risk of burnout, which seems to explain the relationship between job strain and depression.

Using questionnaires, Kirsi Ahola of the Finnish Institute of Occupational Health, Helsinki and colleagues assessed burnout and job strain in a representative sample of 3,270 Finnish workers. Workers with high scores for exhaustion and cynicism and low scores for professional effectiveness were considered to have burnout. High job strain was defined as facing high work demands with little control over one's work. The workers were also assessed for symptoms of depression.

Twenty-eight percent of workers met the study definition of burnout. Burnout was more common in older workers, those who were unmarried, and those with manual occupations. High alcohol use, physical inactivity, being overweight, and having a physical or mental illness also increased the risk of burnout.

High job strain was present in 23 percent of workers, and was the most important risk factor for burnout. After adjustment for other factors, workers with high job strain were seven times more likely to be "burned out" than those with low job strain.

High job strain was also the strongest risk factor for depression. Workers with high job strain were four times more likely to have depressive symptoms and 70 percent more likely to score in the "clinically depressed" range.

The relationship between job strain and burnout was little affected by adjustment for other factors, including indicators of physical and mental health. In contrast, the association between job strain and depression all but disappeared after adjustment for burnout. "This suggests that much of the association between job strain and depression is attributable to burnout," the researchers write.

Burnout and depression also were related to other categories of job strain: "active work," consisting of high job demands and high control; and "passive work," with low demands and low control.

The concept of job burnout -- defined as "a state of exhaustion combined with doubts about the value of one's own work and competence" -- is still debated among occupational health researchers. Previous studies have shown a close relationship between burnout, which is supposedly work-related, and depression, generally regarded as a more pervasive problem. The new study is the first to simultaneously assess all three factors in a large population representing the full range of occupations.

Although the study can't prove any cause-and-effect relationship, the results suggest that burnout is an intermediate step in the relationship between job strain and depression. Their researchers said their findings also suggest that various types of job strain may contribute to burnout. The researchers hope their results will point the way to new opportunities to addressing work load and other aspects of modern working life that contribute to burnout and depression.

The researchers results were reported in the reports a study in the October *Journal of Occupational and Environmental Medicine*, official publication of the American College of Occupational and Environmental Medicine (ACOEM).

Finnish Institute of Occupational Health: <http://www.ttl.fi/internet/english>

Safety Training Strategies – "Injury Chairs"

Try this strategy when you hold a safety meeting with a bunch of data entry personnel who don't think they can "get hurt on the job." To start the meeting, put a type of "injury" on each chair. For example, one could say, "Sat on broken chair, broken leg" another could identify "poor hand position- carpal syndrome" and another could list "back pain", "improper lifting."

Have everyone go around and find one person that had or knew someone that had these injuries so that they could see these were common--not just something the boss said they had to hear about. Then discussed how to prevent these injuries.

Safety Training Strategies – "Real Reasons" Back Safety Training

If you are lying in bed one morning and pondering to yourself about an upcoming presentation on back injury prevention you need to deliver, you'll find most people don't care that the back has a lumbar, thoracic and cervical region. It is important to touch upon trends, the proper way to lift and anatomy again, etc. What will strike a chord is to discuss the real reason to take care of your back: LIFE.

Showed them photos of someone lifting their child over his/her head. Showed them photos of people riding dirt bikes, running, playing beach volleyball and yes, even working. Then go around the room and asked the employees to name one of the things they might not be able to do after a significant back injury that they would rather keep doing. It worked wonders!

They were prepared to sit through another boring, droning talk about stuff they already knew, but in this way, got something completely different instead.

Safety Tidbits (from "Safety Stuff" by Richard Hawk Inc. <http://www.richardhawkinc.com>)

- On the same day that Nero took his own life, lightning struck his 120-foot portrait.
- Studies indicate that about 50 percent of the medicine prescribed by doctors is never taken by the patients.
- The most frequent cause of severed fingers and toes at home is carelessness around chain saws, power saws, and lawn mowers.
- You would need to walk thirty-four miles to melt away one pound of fat.
- The risk that, if robbed or assaulted, you'll be injured: 30%.
- Carnivores will not eat an animal that has been struck by lightning.
- A man is four times more likely to die from cirrhosis of the liver than a woman.
- A single day's trash from New York City would fill the Empire State Building.
- Your risk of being killed in a car accident is about twice as great as your risk of being a homicide victim.