



National Safety  
Management  
Society

**DIGEST**

Updating Members on Safety Management News

**January 2007**

## **Happy New Year and Best Wishes for 2007!**

The National Safety Management Society would like to take this opportunity to wish all of you a safe, healthy, and prosperous New Year. Please accept my sincerest thanks for your readership and membership over the years. We are truly privileged to communicate online with you all of you on a monthly basis and will continue to do our very best throughout 2007 to help keep you informed and develop your skills, knowledge and abilities in the safety management field.

We wish for you to start this New Year with hope and as they say:

*"This is the beginning of a new day. You have been given this day to use as you will. You can waste it or use it for good. What you do today is important because you are exchanging a day of your life for it. When tomorrow comes, this day will be gone forever; in its place is something that you have left behind...let it be something good."*

## **NSMS 2006 Membership Renewal Notices Have Been Mailed To You**

NSMS is grateful for your membership throughout the years and looks forward to continuing our association together. Membership renewal notices, both hardcopy letters and e-mails, had been sent out late November. For the sixth year in a row, we will not be increasing member dues. 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.

## **Election Ballot Forthcoming for NSMS Board of Directors Openings**

Nominations have been received from a handful of members and we appreciate their interest and commitment to help serve on the Board. This leadership role is critical to help chart the strategic direction for our Society and address member needs. Electronic ballots will be distributed to current members shortly.

## **NSMS National Conference Planning is Underway**

A core group of volunteers have stepped up to form the working committee to plan for our **Summer 2007 National Conference**. The team is comprised of:

Dr. Charles McGlothlin of Oakland University in Rochester, Michigan, Chair (Email: mcglothl@oakland.edu)

Mr. Walter Caiazza of Risk Stewardship Group, Inc. in Moreno Valley, California (Email: wcaiazza@adelphia.net)

Mr. Timothy Wells of Risk Management Resources, LLC in Houston, Texas (Email: twells@rmrllc.com)

Members have expressed interest in holding the conference in either Vancouver, Washington or Las Vegas, Nevada. Please contact our working group members if you would like to be part of the planning committee, be a keynote or technical speaker, identify sponsors, or are interested in setting up a vendor exhibit booth. We need the active efforts and support of our members to help make this year's conference a knowledge-packed, networking-strong and entertainingly successful event. Please spread the word and get involved! Thank you.

## **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 to CSHM Exam Preparation 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, developed by NSMS member Steve Geigle, can be found at [www.cshmprep.com](http://www.cshmprep.com).

To receive free access members must (1) be current active members of NSMS and (2) verify they have made application to the Institute for Safety and Health Management (ISHM) [www.ishm.org](http://www.ishm.org) to take the CSHM exam. Email Steve Geigle 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.

## **NIOSH Issues Alert on Mobile Crane Safety**

On Oct. 23, NIOSH announced that it posted online an alert that recommends actions employers, workers and crane rental companies can take to minimize the risk of injury and death to those who work on or near mobile cranes.

The alert, "Preventing Worker Injuries and Deaths from Mobile Crane Tip-Over, Boom Collapse, and Uncontrolled Hoisted Loads," describes six incidents resulting in the deaths of eight workers and injuries to two others that were either working near or operating mobile cranes. NIOSH stated that in each incident, these injuries or deaths could have been prevented by using proper safety procedures such as not exceeding the crane's lift capacity; following proper set-up, maintenance and dismantling procedures; and not working under a suspended load. Along with the case reports, the alert lists current standards under OSHA and the Fair Labor Standards Act, certification and licensure, and the ASME B-30.5 Safety Standard for Mobile and Locomotive Cranes.

"Proper training of crane operators in the mandatory use of load charts is important for safe hoisting operations," NIOSH states. "Crane operators need to know and understand how to use load charts provided by the crane manufacturer."

The alert can be accessed at <http://www.cdc.gov/niosh/docs/2006-142>.

## **NIOSH Publication Offers Recommendations to Prevent Injuries from Installing Drywall**

Workers who handle drywall sheets are at high risk of overexertion and fall injuries. On Oct. 25, NIOSH announced that it posted online a guide on preventing such injuries.

A NIOSH survey of drywall installers and carpenters found that workers believed their biggest risk of physical stress was from lifting, carrying or holding drywall. According to the NIOSH publication, the state of Washington also found that overexertion hazards were a major source of injury to drywall installers. Installing drywall can cause overexertion injuries, usually to the back, because drywall sheets are heavy and bulky. Injuries include strains, sprains or tears, which can range from minor to severe.

Falls are an additional major cause of injury during drywall installation, the NIOSH document states. Fall-related injuries for drywall installers and carpenters can be caused by losing balance as a result of lifting, carrying, or holding heavy and bulky drywall sheets, or by other events, such as falls to a lower level from stairs. Poor lighting and a wet or slippery work floor, along with obstruction of peripheral vision due to handling oversized drywall sheets, also can place drywall installers and carpenters at risk of slip and fall incidents.

The NIOSH document offers three case reports of injuries to workers who were installing drywall at construction sites. Additionally, the publication offers recommendations for pre-job preparation and set-up, as well as steps to take during the job.

The document can be accessed at <http://www.cdc.gov/niosh/docs/wp-solutions/2006-147>.

## **BLS: Nonfatal Workplace Injuries, Illnesses Declined In 2005**

Nonfatal workplace injuries and illnesses occurred at a rate of 4.6 cases per 100 equivalent full-time workers among private industry employers in 2005 -- a decline from the rate of 4.8 cases per 100 equivalent full-time workers reported by the Bureau of Labor Statistics (BLS) for 2004.

According to the Survey of Occupational Injuries and Illnesses, released by the BLS, the rate resulted from a total of 4.2 million nonfatal injuries and illnesses in private industry workplaces during 2005. This total is relatively unchanged compared to 2004, however, BLS noted a 2-percent increase in the total number of hours in 2005.

Incidence rates for injuries and illnesses combined declined significantly in 2005 for most case types, with the exception of cases with days away from work, according to the BLS. Goods-producing industries as a whole had an injury and illness incidence rate of 6.2 cases per 100 equivalent full-time workers, while service-providing industries had a rate of 4.1 cases per 100 equivalent full-time workers. The incidence rate for goods-producing

industries declined by 0.3 cases and the rate for service-providing industries fell by 0.1 case per 100 equivalent full-time workers compared to the rates reported for 2004.

Among goods-producing industry sectors, incidence rates during 2005 ranged from 3.6 cases per 100 full-time workers in mining to 6.3 cases per 100 full-time workers in construction and in manufacturing. While rates among service-providing industry sectors ranged up to 7 cases per 100 full-time workers in transportation and warehousing, finance and insurance had the lowest rate within this domain at 1 case. Despite this low rate, finance and insurance was the only industry sector to experience a statistically significant increase in the overall incidence rate in 2005, rising by 0.1 case per 100 full-time workers.

Small establishments (those employing 1 to 10 workers) reported the lowest rate for injuries and illnesses combined (2 cases per 100 full-time workers), while mid-size establishments (those employing 50 to 249 workers) reported the highest rate (5.8 cases per 100 full-time workers). While incidence rates remained relatively unchanged for establishments employing fewer than 1,000 workers, the rate for large establishments (those employing 1,000 or more workers) declined significantly in 2005 to 5.2 cases per 100 full-time workers, down from 5.4 in 2004.

Fourteen industries, each having at least 100,000 injuries and illnesses combined, accounted for slightly more than 1.9 million cases (46 percent) of the 4.2 million total. These same fourteen industries also reported having at least 100,000 injuries and illnesses in both of the previous two years. Hospitals have topped this group of industries in each of the last three years, followed by nursing and residential care facilities.

This announcement is the second in a series of three releases from the BLS covering occupational safety and health statistics in 2005. The first release, in August, covered work-related fatalities from the 2005 National Census of Fatal Occupational Injuries (see article *BLS: Number Of Workplace Fatalities Declined 1 Percent From 2004* at <http://www.ohsonline.com>). Next month, a third release will provide details from the Survey of Occupational Injuries and Illnesses on the more seriously injured and ill workers and on the circumstances of their injuries and illnesses.

## **Survey: Hearing Loss Impacting Work, Home Life for Baby Boomers**

Hearing loss has become a serious health issue for aging Baby Boomers -- with their work and home lives being impacted -- yet most are not seeking help, according to a survey released on Oct. 26 by The EAR Foundation and Clarity®.

This survey is the second phase of a study conducted in 2004 by The EAR Foundation and Clarity® that indicated nearly half of the 76 million Baby Boomers in the United

States are experiencing some degree of hearing loss -- more widespread than previously estimated.

The new survey not only confirms the prevalence of hearing loss among Baby Boomers, it reveals that hearing loss is significantly impacting their lives at work, home and while traveling and is affecting men much more than women (62 percent to 38 percent), the researchers stated.

The findings include:

- Almost one-fourth (23 percent) of the respondents said their hearing loss is affecting their success in the workplace, while 25 percent said hearing loss is affecting their earning potential. The areas of their work that are most affected are hearing and understanding phone calls and conversations with co-workers.
- Forty percent of the respondents who reported having a hearing loss said that it has affected their home life in many ways, such as having conversations with loved ones. Sixty-five percent said they have trouble hearing the television. Watching TV with others and social gatherings are the areas that Boomers with hearing loss avoid most.
- More than half (57 percent) of those with a hearing loss said they often have difficulty hearing on a cell phone.

"Hearing loss is a silent health issue, often overlooked and left unresolved," said Suzanne Wyatt, executive director of The EAR Foundation, a national nonprofit devoted to hearing loss education and prevention. "This survey illustrates how hearing loss is compromising the quality of life for millions across the country, as well as impacting their performance and productivity on the job. Individuals, businesses and the government must become more attuned to the seriousness of hearing loss in our society and the steps they can take to help improve the situation."

The survey found that most people who are having difficulty hearing are not taking the necessary steps to visit an audiologist, have their hearing tested and/or seek treatment. Only 26 percent of those who said they have difficulty hearing have actually had their hearing loss formally diagnosed by a medical professional. Furthermore, 37 percent of the individuals said they have not even had their hearing tested. Only 42 percent of those who reportedly have a severe hearing loss wear hearing aids.

"Unlike when someone is losing their vision and they realize they can't see as well as before, hearing loss can be blamed on others for not speaking clearly or setting the TV volume too low," said Carsten Trads, president of Clarity. "As a result, people with a hearing loss often avoid getting their hearing tested or exploring solutions, like hearing aids or amplified telephones, for seven to 10 years."

The survey also evaluated why these individuals are not seeking solutions. According to the report, less than one-fourth (23 percent) who have been told by their doctor that they should wear a hearing aid actually wear one. One-third (32 percent) indicate that they do

not wear a hearing aid because of cost and/or the fact that the devices are not covered by Medicare, Medicaid or private insurance carriers.

### **Hearing at Work**

For many individuals with a hearing loss, the workplace is a very difficult environment. The survey reveals that one-fourth of those who have difficulty hearing said it affects their work. Furthermore, one-fourth said their hearing loss has had an impact on their earning potential.

"Hearing loss can have a significant impact on productivity in the workplace," Wyatt said. "From conversations with co-workers to conference calls, it is an obstacle at work for many people. To keep this talent in the workforce -- especially the aging Baby Boomers -- companies should look to help their employees."

Phone calls (64 percent) and conversations with co-workers (61 percent) are the areas most impacted by hearing loss, the survey found. The survey indicates that despite the problems this creates at the workplace, fewer than 5 percent have asked their employer for help regarding their hearing loss.

"Solutions like amplified telephones and other communication devices are available to employers," Trads said. "Employers should realize these solutions can dramatically improve the productivity of their employees. Likewise, employees need to request these solutions from their employers. It is a win-win situation for the entire company."

### **Hearing Outside The Office**

The survey also found that hearing loss is significantly impacting Baby Boomers at home. Two-thirds said they have some trouble hearing the television. Meanwhile, most (75 percent) said they find themselves in situations where people are not speaking loudly enough or clearly enough or where the TV is not loud/clear enough for them.

"People with a hearing loss often isolate themselves," Wyatt said. "Watching TV with others in the room and social gatherings are situations that they avoid, because it can be very exhausting and arduous. Isolating yourself from others is not the answer. We hope the results of this survey will compel more individuals to visit their doctor's office and have their hearing checked."

### **Cell Phones**

For people with a hearing loss, cell phones also are problematic. The survey reports more than one-half (57 percent) of Boomers with cell phones said they have trouble using the phone because of their hearing loss. While many people without a hearing loss have trouble with networks and background noise, the survey reports that 30 percent of those with a hearing loss said the problem is mostly their hearing.

"Cell phone technology has vastly improved in recent years, yet these advancements largely involve added features like cameras or MP3 players," Trads said. "The actual sound quality of a cell phone still lags behind. This creates significant problems for someone with a hearing loss who already has difficulty with telephone conversations and then must deal with poor reception and sound quality on a cell phone."

Forty percent of those who have problems hearing on cell phones said they would probably use their cell phone more often if they could hear conversations more clearly when using it.

### **Seeking Solutions**

The survey indicates that Baby Boomers are aware of solutions that can help improve hearing. Ninety seven percent are aware of hearing aids, while 73 percent are aware of amplified telephones. However, most of these individuals are not acquiring these solutions.

"Technology has dramatically changed the landscape for people with a hearing loss," said Trads. "From hearing aids to cell phone amplifiers to TV listening devices to traditional amplified telephones, the list of solutions goes on. Family members and friends should help their loved ones by having them visit hearing health professionals, such as audiologists, who can then point them in the right direction."

Additional information on the study can be accessed in PDF format at [http://clarityproducts.com/boomer/Clarity\\_Boomer\\_2006.pdf](http://clarityproducts.com/boomer/Clarity_Boomer_2006.pdf).

## **BLS Reports Half of Large Employers Had Workplace Violence Incident Last Year**

Nearly 5 percent of the 7.1 million private industry business establishments in the United States had an incident of workplace violence within the 12 months prior to completing a new survey on workplace violence prevention, the Bureau of Labor Statistics (BLS) reported on Oct. 27.

While 5 percent of all establishments had a violent incident, half of the largest establishments (employing 1,000 or more workers) reported an incident. In these largest establishments in private industry, goods-producing industries reported a higher percentage of co-worker workplace violence than service-providing industries. Service-providing industries reported much higher percentages of criminal, customer and domestic violence than goods-producing industries.

The BLS Survey of Workplace Violence Prevention looks at the prevalence of security features, the risks facing employees, employer policies and training, and related topics associated with maintaining a safe work environment. Data are available for private

industry, state government and local government by industry and size of establishment, that is, the number of workers employed. More than 128 million workers were employed at the 7.4 million establishments represented by the survey.

The survey asked whether an incident of workplace violence had occurred during the past year and, if so, how had the incident affected the staff and had the employer implemented changes to reduce the risk of further incidence.

Although about a third of these establishments reporting a workplace violence incident stated that the incident had a negative impact on their workforce, the great majority of these establishments did not change their workplace violence prevention procedures after the incident, according to the BLS. Almost 9 percent of these establishments had no program or policy addressing workplace violence.

State government reported higher percentages of all types of workplace violence in the past 12 months than did local government or private industry. Thirty-two percent of all state government workplaces reported some form of workplace violence. Local government reported 15 percent of their workplaces experienced some type of workplace violence in the past 12 months while private industry reported fewer than 5 percent.

Of those establishments reporting an incident of workplace violence in the previous 12 months, 21 percent reported that the incident affected the fear level of their employees and 21 percent indicated that the incident affected their employees' morale. In state government workplaces reporting an incident of workplace violence in the previous 12 months, 48 percent reported some type of negative effect due to the incident.

Seventy-two percent of establishments, employing 91 percent of workers, had at least one form of security -- either security staff, physical security (such as locked entries), or electronic security (such as metal detectors). While some form of security was nearly universal in establishments employing 1,000 workers or more, about two-thirds of the smallest establishments (with 1 to 10 workers) had such security.

## **Organization Issues Review On 'Best Practices' For Handling Nanomaterials In The Workplace**

On Oct. 18, the International Council on Nanotechnology (ICON) issued a review of existing efforts to develop "best practices" for handling nanomaterials in the workplace.

The work was performed by researchers at the University of California, Santa Barbara (UCSB) as part of a two-phase project to catalogue how industry is managing the potential occupational safety risks posed by nanomaterials.

ICON, which paid for both phases of the project, is a coalition of academic, industrial, governmental and civil society organizations. ICON is administered by Rice University's Center for Biological and Environmental Nanotechnology (CBEN).

The Phase 1 report, *Current Knowledge and Practices regarding Environmental Health and Safety in the Nanotechnology Workplace*, offers a review and analysis of existing efforts to develop "best practices." This report finds that efforts to catalogue workplace practices have not systematically documented current environment, health and safety practices in a variety of workplace settings and geographies. Moreover, the document finds that some existing documents are not publicly available.

In the second phase of this project, the researchers interviewed a range of U.S. and international firms to produce an international snapshot of workplace practices in nanotechnology industries. ICON plans to issue a report of those findings Nov. 13.

"This first report shows the need for better information about how industries are dealing with the unknowns about nanomaterials," said ICON director Kristen Kulinowski. "The phase-two survey will shed light on existing practices so that a global dialogue can move forward on safe handling practices."

The report can be found at <http://icon.rice.edu>.

Last month, the Nanoscale Science, Engineering, and Technology (NSET) Subcommittee of the National Science and Technology Council's Committee on Technology released a document identifying environmental, health, and safety (EHS) research and information needs related to understanding and management of potential risks of engineered nanoscale materials.

The document will be used by federal agencies participating in the National Nanotechnology Initiative (NNI) to inform and guide research programs. It also communicates to industry, universities and other nongovernmental research entities approaches for obtaining the knowledge and understanding necessary to enable risk assessment and management of nanomaterials. The report is available at <http://www.nano.gov>.

## **Supervisor Response to Injury May Reduce Claims**

Companies that improve the way supervisors respond to employees' work-related health and safety concerns can produce significant and sustainable reductions in future injury claims and disability costs, according to a study from the Liberty Mutual Research Institute for Safety, Hopkinton, MA.

Supervisors trained to properly respond, communicate and problem-solve with employees reduced new disability claims 47 percent and active lost-time claims 18 percent, the study found

Earlier studies from the institute have shown supervisor response to work injuries influences whether injured workers have rapid returns to work or prolonged disabilities.

## **Executive, Companies Receive Jail Time, Fines for Environmental Violations**

A Virginia executive and two companies, ACS Environmental Inc. (ACS) and Air Power Enterprises Inc. (Air Power), were sentenced recently to a substantial jail term and fines for conspiracy to defraud the U.S. Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA) and the Small Business Administration (SBA).

James Schaubach, president of ACS and vice president of Air Power, was sentenced to 21 months in prison, to be followed by three years of supervised release, and fined \$1.5 million. Both Air Power and ACS were sentenced to five years probation and Air Power also was fined \$500,000. Nicanor Lotuaco, president of Air Power, was sentenced on Jan. 26 to five months in jail, followed by five months home detention and three years supervised release, and fined \$1 million.

"By falsely certifying that workers had the appropriate credentials to work on asbestos and lead abatement projects, the defendants endangered the health and safety of their employees and the public," said Sue Ellen Wooldridge, assistant attorney general for the Justice Department's Environment and Natural Resources Division. "Today's sentence sends a strong message that the Department will aggressively prosecute companies that intentionally and persistently violate our environmental laws and workplace standards."

All defendants pleaded guilty on June 28, 2005 to buying false training certificates for their employees working in the asbestos, lead abatement, and hazardous waste industries and fraudulently obtaining 8(a) set-aside contracts for minority-owned companies by submitting false statements to SBA.

ACS, located in Chesapeake, Va., and Air Power, located in Portsmouth, Va., worked in the asbestos and lead abatement and hazardous waste removal industries as abatement and removal contractors. From 1999 through 2004, Air Power received \$37 million in federal contracts, many of which were with the Department of Defense, under SBA's 8(a) program for minority-owned businesses. ACS and Air Power admitted to conspiring to make false statements in connection with the certificates and to submitting false statements to the SBA regarding the ownership of Air Power in order to participate in the agency's 8(a) set-aside program, which enabled them to receive federal contracts as a

minority-owned firm. Schaubach and Lotuaco, the president of Air Power, admitted to making false statements in connection with the false certificates and SBA's 8(a) program.

ACS and Air Power admitted to buying these false certificates from F&M Environmental Technologies Inc. a Virginia company that pleaded guilty in February 2001 to selling hundreds of such false training certificates in Virginia, Maryland, and the District of Columbia.

Schaubach and Lotuaco obtained many of the asbestos, lead, and hazardous waste jobs on which the employees with false certificates worked through SBA's 8(a) program by misleading SBA into believing that Air Power was owned and controlled by a minority, when in fact Schaubach, who is not a minority, controlled the company and directed that environmental contracts be sub-contracted to ACS.

Under federal and state law, individuals who intend to work on asbestos and lead-abatement projects are required to take an extensive training course instructing them on how to properly and safely remove asbestos, lead, and hazardous waste without contaminating either themselves, co-workers, or members of the public. ACS and Air Power falsely certified that the workers had taken the required courses, passed the exams, and were otherwise entitled to work on such projects. In fact, these companies simply paid F&M Environmental Technologies to deliver the certificates for workers supposedly taking the course.

Schaubach and Lotuaco purchased these false certificates for ACS and Air Power employees and then used them to obtain contracts to conduct asbestos, lead, and hazardous waste abatement at schools, hospitals, and other public and governmental facilities. These employees did not have the proper training to conduct the abatement, although the falsified certificates were presented to state and federal agencies as proof of appropriate training.

## **Survey: 66 Percent of Office Workers Cite Job Stress As Cause Of Physical Problems**

If you are always nodding off at your desk, have a bottle of aspirin at your workstation, or have been seeing a masseuse frequently for neck and back pain, you may be suffering from "office-itis," according to a survey. Roughly two-thirds of U.S. office workers (66 percent) say they experience some physical problems as a result of job-related stress or exertion.

Swingline Workplace Tools, a unit of ACCO Brands Corp., sponsored the survey conducted by Harris Interactive(R). The survey examined what U.S. office workers would do in their free time if their job required less effort and what physical problems have occurred due to job-related stress and exertion.

The survey found that:

- Almost three-quarters of U.S. office workers (71 percent) would prefer to spend time with their family if their jobs required less effort, thus giving them more free time and energy outside of work hours.
- Exercise was mentioned by many, with 61 percent of workers wanting to burn off their office frustrations, while 57 percent would travel and 55 percent would choose to read.
- Thirty-six percent would volunteer.
- Thirty-five percent would go to the movies or sleep.
- Thirty-four percent would kick back in front of the television.

Workers were asked which aspects of their job they would choose to alter because they require excessive effort:

- Dealing with office politics was cited the most, according to 43 percent of office workers.
- On a similar note, dealing with problem clients came in second place, with 25 percent, and handling a difficult boss or client was third, with 21 percent of office workers wishing to alter these aspects of their job.

Other common complaints include:

- Fourteen percent think handling work assignments and programs requires too much effort.
- Ten percent would think of new ways to master computer software programs.
- Six percent would alter physical tasks, such as shredding, stapling, filing and binding.

"I've seen a number of patients with various aches and pains due to stress, improper posture and use of tools in the workforce," said Dr. Jeffrey Mendelson, chief of Orthopedics, St. John Macomb Hospital, Warren, Mich. "There are several techniques and products that employees can use to alleviate this tension on the body. In particular, ergonomic tools, which lessen the stress and discomfort on the body, and I recommend frequently getting up from their desk to get the blood flowing."

From fatigue and tension headaches to aches and pains and even vision problems, work-related stress is a serious predator on employees' physical well-being:

- Forty percent of office workers have experienced fatigue as a result of job-related stress or exertion.
- Thirty-five percent have had stress-related headaches.
- Twenty-seven percent have suffered back pain, while 26 percent have felt neck strain.
- Eighteen percent reported repetitive motion injuries (i.e. wrist sprain, hand cramp, etc.) as a result of at-work stress.

- Other listed physical ailments included stomach discomfort (17 percent) and vision problems (15 percent).
- One in three office workers (34 percent) said they had not experienced any physical problems due to job-related stress or exertion.

## **Job Insecurity Takes Toll on Worker Health**

Amid growing news of layoffs, outsourcing, corporate bankruptcies, and downsizing, a University of Michigan (UM) study finds that feeling insecure about your job takes a toll on physical and mental health -- whether you actually lose your job or not.

In fact, the health effects of job insecurity are at least as great as the health effects of a serious or life-threatening illness, according to a study of job insecurity and health in the United States.

The study is based on an analysis of data from a nationally representative, longitudinal survey conducted by the Institute for Social Research (ISR) and includes information on more than 1,000 men and women under the age of 60 who were interviewed twice, about three years apart.

"The strength of this study is that we not only have multiple measures of insecurity, but we also have actual measures of job loss," said Sarah Burgard, a sociologist at ISR and the study's lead author.

Since only those who remained employed at both points in time were included in the analysis, the findings are not attributable to health problems related to actual job loss and extended unemployment.

The research also controlled for major health shocks that occurred during the three-year period, and measured respondents' level of neuroticism, to control for the tendency of highly neurotic people to give low ratings of their mental and physical health and of their job security.

Participants were asked how likely they felt it was that they would involuntarily lose their main job during the next couple of years. Those who said "very likely" or "somewhat likely" were considered insecure, while those who replied "not too likely" or "not at all likely" were considered secure.

About 25 percent of respondents reported feeling insecure about their jobs in at least one of two interviews.

Burgard found that self-rated health was significantly lower for respondents who reported feeling insecure about their jobs. Compared to workers who felt secure at both interviews, those who were chronically insecure were about twice as likely to report

physical health that was less than very good or excellent. She also found that private-sector employees were more vulnerable to the negative health effects of job insecurity than were public-sector employees.

Job insecurity took a particularly high toll on black workers, the researchers found. Blacks who were chronically insecure about their jobs were nearly three times as likely as insecure whites and more than four times as likely as secure whites to report very high depressive symptoms.

Other studies have found that at least some concern about the possibility of losing their jobs has begun to affect a larger and more diverse fraction of the population. As increased flexibility in the labor market leaves increasing numbers of workers at all levels with concerns about the future of their positions, and the potential consequences of job loss continue to be substantial, job insecurity will only grow as a potentially potent risk to population health.

"Policymakers may want to attend to differences in the likely consequences for some groups of workers, including African Americans and those in the private sector," Burgard said.

## **A Continuous Improvement Approach to Managing a Reactive Ergonomics Program**

Most emerging ergonomics programs struggle to just keep up with solving ergonomic issues that have been identified via injuries or complaints. Resolving issues in a reactive manner can give a young program success, but relying on complaints and injuries is not an effective way of sustaining an ergonomics program. Using the quality management tool defined by Edward Deming can be a useful way of implementing and measuring the effectiveness of an ergonomics program. In his work Deming described a continuous feedback loop consisting of four steps: Plan, Do, Check, Act (PDCA).

1. **Plan** - Use Data
  - To select areas in your facility that are in need of ergonomic improvement
  - To set targets for expected results (i.e. 10% reduction)
2. **Do** - Implement change and keep records while you are doing it.
3. **Check** - Monitor the effectiveness of changes.
4. **Act** - With successful implementation make it a standard and bring the solution to other areas. If metrics are not affected in a positive manner, revisit solutions targeting the root cause.

Be sure to collect data that can be affected through ergonomic change but do not limit this to just injury data. Typical data sets can include:

- Cumulative Trauma Disorder (CTD) or Repetitive Stress Injury (RSI) incident rates
- Acute Strain/Sprain incident rates
- Safety Incident Rates
- Quality (PPM)/ First Run Yield
- Efficiency (walking time, process requirements, setup times, etc.)
- Scrap Rates
- Floor Space

Tracking these metrics on a monthly basis can help to identify areas that are in need of ergonomic intervention. Target areas that have data spikes or areas that are not performing on par with their counterparts. Continuing to collect metrics after solution implementation can help to evaluate the effectiveness of change and provide data to estimate cost savings. Adding a quality management tool, like PDCA, to an ergonomic toolbox can be an effective way of managing your reactive ergonomics program, ensuring efforts are focused in the right places and tracking your success in terms that can be communicated to upper management.

Sources:

Walton, Mary. Deming Management Method. New York: Berkley Publishing Group, 1986.

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## **Squinting at Computers May Risk Eye Health**

The more people squint at a computer screen, the less they blink—and the more they report symptoms like eye strain, dryness, irritation and tearing, according to a new study published in *Optometry and Vision Science* (Vol. 82, No. 10) by researchers at The Ohio State University, Columbus. Researchers found squinting at a computer screen cuts in half the number of times a person blinks per minute, which could lead to an irritating but treatable condition called dry eye. Researchers say squinting serves two purposes: It improves eyesight by defining objects that are out of focus and cuts down on brightness from sources of glare. Squinting often occurs as an involuntary response, and researchers said people working at a computer may not even realize they are squinting.

## Take Care of Them Bones!

The skeleton is as full and diverse as life itself. Built with the strength of an oak, it can also bend with a sapling's ease. It shelters the organs, supports the body and, bound by muscle, bestows the grace of movement. A relic that long outlives the flesh it carries, bone nonetheless meets the moment's need. Ever building and breaking down, this dynamic tissue forms in proportion to the task at hand. The bones in a ballerina's feet, a sculptor's hands or a bricklayer's arm gain mass and shape in response to the stresses their varied pursuits impose.

\* Whether the event is a fall from an apple tree at 8 years of age or a tennis tumble at 65 years, most of us will experience skeletal injuries in our lifetime. In fact, every year, about two million Americans suffer fractures and countless others dislocate a joint.

\* Broken bones heal much more quickly in children than in adults. A bone that mends in four to six weeks in a child requires two to five months to heal in an adult. Because bone remodeling and growth are so rapid in children, fractures often repair themselves so flawlessly that X-rays cannot reveal where the bone had been broken.

\* The human body starts off with 350 bones at birth. A number of bones fuse together during growth, however, leaving an adult with only 206. Last to fuse is the collarbone, and this occurs between the ages of 18 and 25.

\* The most important thing you should know about broken bones is that they require immediate medical attention. If you even suspect a fracture, have a doctor check it out. Otherwise, you may further damage the broken bone. There's also risk of infection and delayed healing.

\* Bones are full of blood vessels. Since they are constantly rebuilding they need a rich blood supply. Also, bones are an enormous storehouse of minerals, storing 98 percent of the body's calcium, 40 percent of its sodium, and 30 percent of its potassium.

\* One common and often misdiagnosed dislocation of a bone in the elbow is found in children younger than 5 years. It is often referred to as a "nursemaid's dislocation" and occurs when a child's arm is suddenly pulled or jerked by an adult. The immature elbow cannot withstand this stress and a dislocation occurs. The child typically experiences sharp or aching pain and limited motion in the elbow.

\* Most fractures are caused by direct violence, such as a blow from a heavy object. But there are indirect causes also. For example, falling on the hand may cause a fracture of the collarbone or wrist as well as of the hand; or a sudden violent contraction of muscles may fracture the kneecap. Whenever there is swelling, deformity, shortening of the limb, loss of strength, abnormal movement and/or a grating noise inside a limb get medical attention.

\* The shoulder is the most mobile joint in the body.

\* Keeping walkways clear of debris and holes will reduce the chances of a person suffering a Pott's fracture. This type of dislocation fracture usually results from the foot being caught while the body is moving forward (example: while walking down steps or along grating). Though a Pott's fracture is treated with a cast like most other fractures, if the twisting is severe, it can require bone realignment under anesthesia, screws to hold the bones in place and a three-month cast. Another common fracture caused by falls is a Colles' fracture. This fracture of the wrist is especially common in women over 40 and usually occurs when a person uses his or her outstretched hand to break a fall.

\* Exercise is one of the best ways to ensure you don't fracture a bone. It has been established that bones, even in people over 60, stay stronger longer if the person participates in an exercise program.

## **Safety Training Strategies – "Donut Lifts" Back Safety Training**

Bring in a box of doughnuts for all--letting them know that they would get one at the end of the presentation, but only if . . . At the end of the presentation each participant (one at a time) was allowed to go to the front of the room where the donuts were on a very low table. They had to use correct posture and lifting techniques to retrieve their donut.

The rest of the participants had a job to do as well, they had to watch. If the techniques were not correct it was their responsibility to train the person in the correct techniques. Then they were allowed to retrieve their donut correctly.

Mind you, the group was small--we had 11 employees; the laughter made it fun for everyone, and the camaraderie it created lasted for quite some time. When it came time for back safety training again, guess what everyone would ask for?!

## **Safety Training Strategies – "Sandwich Steps"**

This is an idea that has gotten some very positive feedback and can be used for a number of different reasons and on different audiences. This demonstration helps people understand the importance of not skipping an instructional or process step and assuming everyone understands how to do even a simple task. It also shows why policies and procedures are written out word for word.

Break your audience into sub groups. Tell them they are going to write out the procedures for making a peanut butter and jelly sandwich. What they will have is a new loaf of bread, two knives, a plate, a new jar of peanut butter and jelly.

The catch is not skipping a step. Because after they have written the procedures, you then tell them to pick two people from each group to try and make their sandwich. (One will read the steps and the other one will follow them)

The thing to make sure is they only do what is read to them. If they don't say, "put the jar of peanut butter down," then they have to hold on to it. Other examples: If the procedure doesn't say to undo the twist tie on the loaf of bread, they can not take a piece of bread out. If they don't tell you to screw off the lid, they can't take it off, etc.

It gets to be very funny with some groups, but at the end it is made very clear to why everything needs to be written out word for word and step by step.

### **Safety Tidbits** (from "Safety Stuff" by Richard Hawk Inc.

<http://www.richardhawking.com>)

- The knee is the most easily injured joint of the human body.
- The results of a CNN poll showed the chances to be 1 in 3 that an American gun owner's gun is loaded.
- *Punctate pruritus* is the medical term for an itchy spot.
- Russian cosmonaut Vladimir Komarov was the first person to die in space. He was launched into space on April 23, 1967, for a 25-hour flight. Komarov died on the return voyage when the parachute straps on the capsule broke and the capsule plummeted to earth.
- Casanova was the first well-known man ever to smoke a cigarette.
- Less than 1% of people 1.) Notice a car alarm, and ... 2.) Call the police when they hear a car alarm.
- According to *The Book of Risks* by Larry Laudan, the average American believes the odds of his or her dying in a car accident in a year to be about 1 in 70,000; the real figure is closer to 1 in 7,000.
- Both flies and frogs have been known to catch athlete's foot.
- A large helicopter is 500% more likely to crash (per hour of operation) than a large jet.
- Babies are born without kneecaps. Kneecaps don't appear until the child reaches two to six years of age.
- More ships have been sunk by hurricanes than by warfare.
- More than 25,000 individuals sprain an ankle each day in the United States.
- Arachibutyphobia is the fear of peanut butter sticking to the roof of your mouth.