

## Hazardous Substances

### Sacramento District Scientist Shrinks Time and Space to Detect Dangerous Gas

A U.S. Army Corps of Engineers Sacramento District scientist is playing a leading role in a series of research projects to protect American service members from toxic vapors, make toxic cleanup projects more effective and potentially change how the world monitors airborne chemicals.

The Sacramento District senior toxicologist is a member of a multidisciplinary team that is developing an instrument that could be worn by military fuel handlers to warn them of unsafe exposure to naphthalene – a component of petroleum fuel vapor that may be carcinogenic.

Read more:

[http://www.spk.usace.army.mil/Media/Ne](http://www.spk.usace.army.mil/Media/NewsReleases/tabid/1034/Article/4721/sacramento-district-scientist-shrinks-time-and-space-to-detect-dangerous-gas.aspx)



[wsReleases/tabid/1034/Article/4721/sacramento-district-scientist-shrinks-time-and-space-to-detect-dangerous-gas.aspx](http://www.spk.usace.army.mil/Media/NewsReleases/tabid/1034/Article/4721/sacramento-district-scientist-shrinks-time-and-space-to-detect-dangerous-gas.aspx)

### EPA Probes Health Risks Left By Old Lead Factory Sites



The EPA is re-examining more than 460 former lead factory sites across the USA for health hazards left by toxic fallout onto soil in nearby neighborhoods.

Read more:

[http://www.usatoday.com/story/news/2012/10/13/epa-actions-underway-to-address-lead-smelter-factory-dangers/1625741/.](http://www.usatoday.com/story/news/2012/10/13/epa-actions-underway-to-address-lead-smelter-factory-dangers/1625741/)

#### Special Interest Articles:

- [Asbestos Standard](#)
- [Radiation in Gas Wells](#)
- [Gas Monitoring](#)
- [Least Healthy](#)
- [Safer Nanoparticle](#)

DOEHRS Super Star

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## Common Pesticide Linked to Birth Defect, Study Suggests

A common herbicide called atrazine may be associated with a rare birth defect of the nasal cavity, a new study suggests.

Atrazine -- the most widely used herbicide in the United States, particularly in corn crops -- is believed to be an endocrine disruptor, which means that it may interfere with the hormone system in humans.

The new study looked at the link between atrazine and choanal atresia, a birth defect in which tissue formed during fetal development blocks the back of the nasal passage. The condition affects a baby's ability to

breathe. Surgery is the typical treatment.



Read more:

[http://www.nlm.nih.gov/medlineplus/news/fullstory\\_129748.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_129748.html)

## Elevated Carbon Dioxide May Impair Reasoning



Carbon dioxide has been vilified for decades as a driver of global warming. A new study finds signs that CO<sub>2</sub>, exhaled in every

breath, can exert an equally worrisome threat — impaired cognition — in nearly every energy-efficient classroom, meeting hall or office space. The work assessed decision-making in 22 healthy young adults. Their performance on six of nine tests dropped notably when researchers raised indoor carbon dioxide levels to 1,000



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parts per million from a baseline of 600 ppm. On seven tests, performance fell substantially more when the room's CO<sub>2</sub> was boosted to 2,500 ppm, scientists report in a paper to be published in *Environmental Health Perspectives*.

*Read more:*

[http://www.sciencenews.org/view/generic/id/345791/description/Elevated\\_carbon\\_dioxide\\_may\\_impair\\_reasoning](http://www.sciencenews.org/view/generic/id/345791/description/Elevated_carbon_dioxide_may_impair_reasoning)

### Transferability of Aliphatic Isocyanates from Recently Applied Paints to the Skin of Auto Body Shop Workers



Isocyanates, the essential cross-linking chemicals used to make polyurethane, are potent sensitizers and a common cause of occupational asthma. In addition, isocyanate (NCO) skin contact may contribute to the development of isocyanate asthma. Prior work has shown that unbound NCO can persist on recently spray coated auto body parts after appearing dry. The purpose of this study

was to assess whether isocyanate skin exposure can result from handling such surfaces. Quantitative surface and skin wipe sampling for total NCO was performed on test panels sprayed with aliphatic isocyanate coatings, and on paired skin samples obtained from participants who had rubbed the recently dried surfaces. Surface and skin samples, obtained from 18 workers in five auto body shops, were prepared following NIOSH method 5525 (modified for skin samples), and isocyanate species derived from hexamethylene diisocyanate and isophorone diisocyanate were analyzed using high-performance liquid chromatography with ultraviolet and fluorescence detectors.

*Read more: Journal of Occupational and Environmental Hygiene Volume 9, Issue 12, 2012 (Available with AIHA membership)*

## **Workers Exposed to Metalworking Fluids: Evaluation of Bioaerosol Exposure and Effects on Respiratory and Skin Health**

Certain respiratory problems are observed in machinists working with soluble cutting fluids (MWF). These problems could be related to the aerosols containing microorganisms present in the MWF systems. To better understand the effects of these aerosols on human health, the work environment must be characterized. We investigated the microbial flora of the MWF and the air, the oil mists, the inhalable dusts, and the endotoxins on 44 machining sites in 25 Québec plants.



*Read more:*

<http://www.irsst.qc.ca/media/documents/PubIRSST/R-745.pdf>

## **HSE Researchers Develop Methods for Determination of Isocyanic Acid and Methyl Isocyanate**



isocyanic acid (ICA) and methyl isocyanate (MIC). These species are produced by thermal degradation of isocyanate-derived polyurethanes at high temperatures and may be produced during machining of polyurethane painted parts e.g. in motor vehicle repair (MVR) shops or during flame bonding of polyurethane foams

*Read more:*

<http://www.hse.gov.uk/research/rrpdf/rr943.pdf>

The objective of this study was to develop methods for the determination of the two low molecular weight isocyanates (NCO):

## The Evaporation of Mercury Droplets in Indoor Spaces

Based on experiments conducted by the U.S. Environmental Protection Agency, the evaporation of mercury droplets in air was modeled as an exponential decay, and values for the decay constant,  $k_d$ , were estimated; values for  $k_d^{-1}$  ranged from 0.7 days to 2.2 days over a temperature range of 302 K to 310 K. Although values of  $k_d$  did not appear to vary significantly as a function of temperature, they did exhibit significant variability for the temperature range studied. These insights can be incorporated into stochastic-based uncertainty analyses when modeling various exposure scenarios for mercury spills in indoor spaces



*Read more: Journal of Occupational and Environmental Hygiene Volume 9, Issue 12, 2012 (Available with AIHA membership)*

## Dispersion and Exposure to a Cough-Generated Aerosol in a Simulated Medical Examination Room



Few studies have quantified the dispersion of potentially infectious bioaerosols produced by patients in the health care environment and the exposure of health

care workers to these particles. Controlled studies are needed to assess the spread of bioaerosols and the efficacy of different types of respiratory personal protective equipment (PPE) in preventing airborne disease transmission. An environmental chamber was equipped to simulate a patient coughing aerosol particles into a medical examination room, and a health care worker breathing while exposed to these particles. The system has three main parts: (1) a coughing simulator that expels an aerosol-laden cough through a head

form; (2) a breathing simulator with a second head form that can be fitted with respiratory PPE; and (3) aerosol particle counters to measure concentrations inside and outside the PPE and at locations throughout the room.

*Read more: Journal of Occupational and Environmental Hygiene Volume 9, Issue 12, 2012 (Available with AIHA membership)*

### EPA Pushes Tough Asbestos Standard for Mont. Town

A proposed standard for federal cleanup of asbestos contamination in a Montana town concludes that even a tiny amount of the material can lead to lung problems — a benchmark far more rigorous than any in the past and one that the industry says could force expensive and unnecessary cleanups across the country.

The Environmental Protection Agency's new proposal for the northwest Montana town of Libby, where asbestos dust has killed hundreds of people, would be 5,000 times tougher than the standard used in past cleanups addressing airborne asbestos.

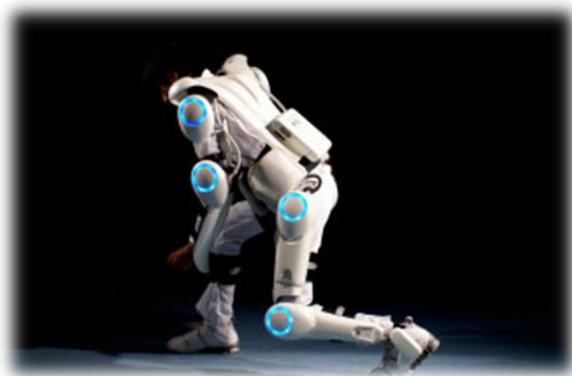


*Read more:*

<http://www.sfgate.com/news/article/EPA-pushes-tough-asbestos-standard-for-Mont-town-3899734.php#ixzz29aj71CTV>

## Radiation

### Japan Robot Suit Offers Hope for Nuclear Work



Researchers showed off the latest incarnation of HAL, the Hybrid Assistive Limb, a full body suit that could eventually be used by workers dismantling the crippled Fukushima nuclear plant. HAL— coincidentally the name of the evil supercomputer in Stanley Kubrick's "2001:

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A Space Odyssey"—has a network of sensors that monitor the electric signals coming from the wearer's brain.

It uses these to activate the robot's limbs in concert with the worker's, taking weight off his or her muscles.

Read more: <http://phys.org/news/2012-10-japan-robot-nuclear.html>

### Radiation Sources in Natural Gas Well Activities

The boom in the natural gas industry across the nation, made possible by recent advances in hydraulic fracturing ("fracking") methodology, has resulted in increased concern for public and environmental safety. This, in turn, has resulted in a series of recommendations for minimizing the risk to the public and the environment (Secretary of Energy, 2011). The natural gas industry has responded to environmental concerns by cleaning and recycling frack water, which can take the form of settling bins, filters, and reverse osmosis devices, among other practices.

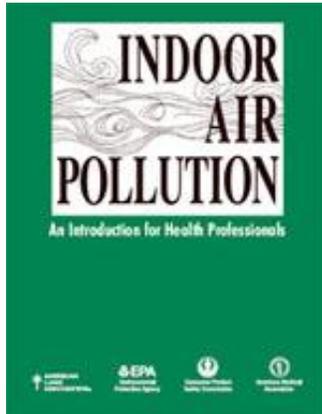
The very practices that are meant to minimize the environmental impact of fracking on the surrounding area may have significant negative impacts on the workers employed at these facilities. The risk is from exposure to increased concentrations of ionizing radiation, which is naturally present in the ground in the forms of radium,



thorium, uranium, lead, and/or radon (Horn, 2009; EPA, 2011).

Read more: <http://ohsonline.com/articles/2012/10/01/radiation-sources-in-natural-gas-well-activities.aspx?admgarea=ht.PPE>

## Ventilation



The CDC has updated its indoor environmental quality page. Building ventilation is one important factor affecting the relationship between

airborne transmission of respiratory infections and the health and productivity of workers.

The HVAC system can have a significant impact on how pollutants are distributed and removed. Maintaining good IEQ requires constant attention to the building's HVAC system, which includes the design, layout and pollutant source management or air filtration. HVAC checklists to assist with maintenance and record keeping from USEPA/NIOSH Building Air Quality: A Guide for Building Owners and Facility Managers:

*Read more:*

<http://www.cdc.gov/niosh/topics/indoorenv/bv/buildingventilation.html>

## IAQ Complaints: Survival Techniques for the Safety Professional

It is the time of year that sparks dread for many safety pros (and the desire to hide) — the changing of the seasons, bringing with it those pesky indoor air quality complaints. The weather is cooling in most parts of the country as winter approaches, and with it often comes a tsunami of new indoor air complaints. Some are real, many frivolous; they range from “bad smells” to serious medical conditions documented by personal physicians and medical test results weakly linked to the work environment.

Whether new construction is involved or a historic building with antique ventilation (windows), chances are you will receive

assorted requests and complaints to deal with professionally and with enthusiasm. For the safety professional, it takes a lot of time, patience, carefully chosen words, and educating the employee workforce to sort out the real issues from the nuisance and "unhappy employee" issues.



Read more:

<http://ohsonline.com/articles/2012/10/01/iag-complaints-survival-techniques-for-the->

[safety-professional.aspx?admgarea=ht.IndustrialHygiene](http://safety-professional.aspx?admgarea=ht.IndustrialHygiene)

## PPE

### New Military Apparel Repels Chemical and Biological Agents

The material will be designed to undergo a rapid transition from a breathable state to a protective state. The highly breathable membranes would have pores made of a few-nanometer-wide vertically aligned carbon nanotubes that are surface modified with a chemical warfare agent-responsive functional layer. Response to the threat would be triggered by direct chemical warfare agent attack to the membrane surface, at which time the fabric would switch to a protective state by closing the CNT pore entrance or by shedding the contaminated surface layer.



Read more: <http://phys.org/news/2012-10-military-apparel-repels-chemical-biological.html>

### Three Things Every IH Should Know about Gas Monitoring



As part of being responsible for controlling the hazards themselves, the IH becomes responsible for managing the programs and tools used to monitor the hazards. When it comes to gas detection, there are three things that all industrial hygienists need to know about their gas detection instruments in order to manage a complete exposure program. They must know that their

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instruments work properly; that they are used properly; and, finally, they must gain clear understanding of the hazards to which their workers are exposed.

*Read more:*

<http://ohsonline.com/articles/2012/10/01/three-things-every-industrial-hygienist-should-know-about-gas-monitoring.aspx?admgarea=ht.IndustrialHygiene>

### Miller Safety Harness Recall

Miller has issued a "safety alert" for their Duraflex harness. Their internal investigation shows that the D-ring has been incorrectly assembled into the harness. This can result in the possibility of the unit functioning improperly in a fall.

*Read more:*

[http://www.gravitec.com/images/pdfs/Miller\\_harness\\_D-ring\\_notice.pdf](http://www.gravitec.com/images/pdfs/Miller_harness_D-ring_notice.pdf)



## Noise

### October Is "Protect Your Hearing" Month



October is "Protect Your Hearing" Month, and NIOSH has published a new Science Blog post on preventing noise-induced hearing loss (NIHL). NIOSH notes that even

young people are at risk for NIHL. The agency uses a training mannequin named "Nick" at conferences and meetings to help teach young people and their families about preventing NIHL. Nick is equipped with a sound level meter wired to a microphone inside a silicon ear that can measure the sound levels of personal music players.

*Read more:*

<http://www.aiha.org/news-pubs/synergist/newswatch/Pages/NIOSHOctoberIsProtectYourHearingMonth.aspx>

## Effect of Chemical Substances on Hearing: Interactions with Noise



While noise is the main cause of occupational deafness, certain chemical substances can produce ototoxic effects that may make the ear more prone to acoustic assault, as opposed to noise alone. They are mainly solvents, asphyxiants, metals and pesticides, widespread in workplaces. In Quebec, over 400,000 workers are exposed to high noise levels, which raises concerns regarding the prevention of hearing impairments. After having evaluated the effects of chemical

substances alone on hearing, this time, researchers will analyze literature data to characterize the interactions between these chemical substances and noise, at exposure levels respecting the current standards of the Regulation respecting occupational health and safety. The results of this study will make it possible to determine the ototoxic agents that are most likely to interact with noise and to propose prevention strategies to stakeholders that take into account the additivity risk of the effects on hearing in situations of simultaneous exposure.

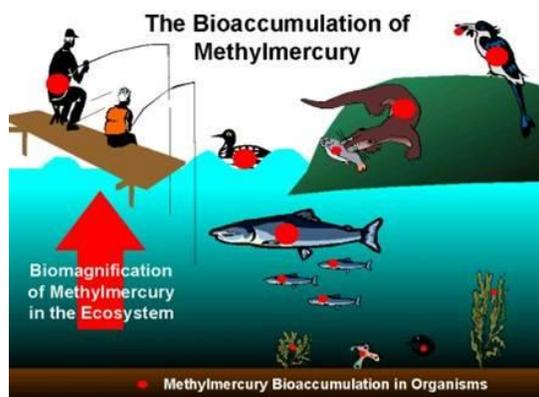
*Read more:*

<http://www.irsst.qc.ca/en/-irsst-publication-effect-of-chemical-substances-on-hearing-interactions-with-noise-r-747.html>

## Preventive Medicine

### Mom's Exposure to Mercury Linked to Kids' ADHD Symptoms

The health risks of mercury exposure are well documented, and the harms for still-developing fetuses are particularly concerning. Now, the latest study finds that kids who were exposed to more mercury in the womb were more likely to show problems with attention and hyperactivity and other symptoms of ADHD at age 8.



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Complicating the matter, however, is that the same study found that children whose mothers ate more fish during pregnancy — fish is known to be a main source of mercury exposure for many people — had a significantly lower risk of ADHD symptoms than kids whose mothers ate less fish. The finding raises the possibility that the health benefits of eating fish, which is rich in the

omega-3 fatty acids that are good for brain development, could outweigh the harms of low-level mercury exposure.

*Read more:*

<http://healthland.time.com/2012/10/09/moms-exposure-to-mercury-linked-to-kids-adhd-symptoms/#ixzz29ZJxAq9i>

### Least Healthy Employees? Hospital Workers



A new study from Truven Health Analytics, formerly the Healthcare business of Thomson Reuters, reports that hospital employees are less healthy than the general workforce and cost more in health care spending.

The study looked at health-risk and health care use among 740,000 hospital workers and their dependents in 2010 and

compared them with 25 million general workforce employees and dependents. They found hospital employees are more likely to be diagnosed with chronic conditions like asthma, obesity and depression, and were 5% more likely hospitalized. These workers spent 9% more in health care costs than the general workforce.

*Read more:*

<http://healthland.time.com/2012/10/16/least-healthy-employees-hospital-workers/#ixzz29ZIHNI4>

### Yosemite Workers Will Be Studied For Disease Clues

Public health officials plan to interview and collect blood samples from up to 2,500 Yosemite National Park workers as they hunt for clues in the biggest outbreak of the deadly Hantavirus in nearly two decades, a state health official said. The voluntary employee screening is the most recent effort to shed light on the rare, mouse-



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borne lung disease, which infected nine park visitors and killed three last summer.

[6/us-usa-hantavirus-yosemite-idUSBRE89F01T20121016](http://www.usda.gov/press/2012/10/16/USDA-12-1016-01)

Read more:

<http://www.reuters.com/article/2012/10/16>

## Fears over Risk of Air Transmission of Superbugs



investigated, experts say. It comes after a Leeds University study has added to a growing body of evidence about the ability of bacteria to float on air currents. Researchers carried out lab tests on a bacteria associated with MRSA and found it could travel up to 3.5m (11ft). And they said the findings could have implications for the design and organization of hospitals.

Read more:

<http://www.bbc.co.uk/news/health-19898735>

The extent to which hospital superbugs are being transmitted via the air needs to be

## EU-OSHA to Address Workplace Stress, Other Psychosocial Risks

Two reports from the European Agency for Safety and Health at Work (EU-OSHA) discuss the management of psychosocial risks at work as well as “drivers and barriers” for psychosocial risk management in the workplace. These reports were released following recent findings of the 2009 European Survey of Enterprises on New and Emerging Risks (ESENER). ESENER found that 3% of businesses address psychosocial risks “in a fully holistic and systematic way,” and 12 % of businesses did not implement any “key measures” for



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managing the risks covered in the survey. According to EU-OSHA's press release, 79 % of managers in the EU are concerned about stress at work, 40 % are concerned about harassment and violence in the workplace, and 74 % of EU businesses do not have procedures in place to deal with stress and other psychosocial risks.

Read more: <http://www.aiha.org/news-pubs/synergist/newswatch/Pages/EU-OSHatoAddressWorkplaceStress,OtherPsychosocialRisks.aspx>

### Environmental Health

#### Changes to LEED Program Upcoming in 2013



The next update to the LEED standard was scheduled to be implemented this November. However, the update has been delayed for a year. Concerns voiced by

the various stakeholders within the U.S. Green Building Council (USGBC) have

pushed the rollout to June 2013, although an earlier implementation may be possible if a consensus can be reached prior to that date.

Read more: <http://www.aiha.org/news-pubs/synergist/Pages/SynergistSolutionsArticles.aspx>

#### October is Army Energy Awareness Month

October is Energy Awareness Month! A joint Army Leadership Message conveys the importance of our collective efforts in the areas of Energy and Water Security. Assuring sufficient, secure Energy and Water in our operational missions and at our installations is becoming a key planning consideration for all Army activities.

Through our comprehensive efforts in the



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areas of Soldier Power, Basing Power, and Vehicle Power, the Army is working to ensure that the Army of the future has assured access to the resources it will need to perform its mission, at a cost it can afford.

*Read more:*

[http://www.army.mil/article/88447/October is Army Energy Awareness Month/](http://www.army.mil/article/88447/October%20is%20Army%20Energy%20Awareness%20Month/)

### Maryland Air National Guard Settles Hazardous Waste Violations at Baltimore Facility



In a consent agreement with the U.S. EPA, the Maryland Air National Guard (MDANG), 175<sup>th</sup> Wing, has agreed to pay a \$75,000 penalty to settle alleged violations of hazardous waste regulations at its facility at 2701 Eastern Blvd., Baltimore, Md.

Resource Conservation and Recovery Act (RCRA), the federal law governing the treatment, storage, and disposal of hazardous waste. RCRA is designed to protect public health and the environment, and avoid costly cleanups, by requiring the safe, environmentally sound storage and disposal of hazardous waste.

*Read more:*

<http://yosemite.epa.gov/opa/advpress.nsf/d0cf6618525a9efb85257359003fb69d/d0e836342e4230a185257a9b005f8445!OpenDocument>

EPA cited MDANG for violating the

### Ten Ways to Save Money, Energy and Protect Your Health This Winter

With winter quickly approaching, the U.S. EPA is highlighting ten tips for Americans to protect their health, save money, and lower energy while enjoying the winter holiday season.

*Read more:*

<http://yosemite.epa.gov/opa/advpress.nsf/d0cf6618525a9efb85257359003fb69d/e48>



[8b5c996fd9ad685257a9b0056ab33!OpenDocument](#)

## Ergonomics

### Chronic Pain Costs U.S. Up to \$635 Billion, Study Shows



Health economists from Johns Hopkins University writing in *The Journal of Pain* reported the annual cost of chronic pain is as high as \$635 billion a year, which is more than the yearly costs for cancer, heart disease and diabetes.

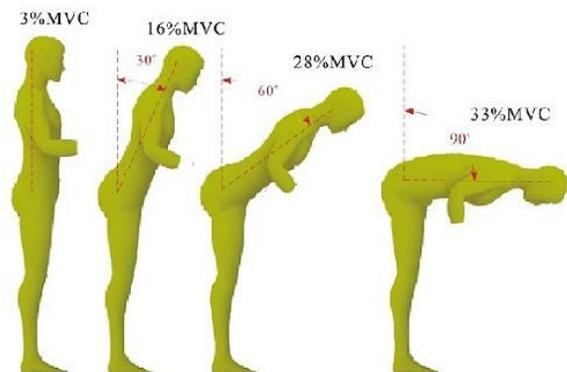
Previous studies have not shown a comprehensive analysis of the impact on health care and labor markets associated with people with chronic pain. The Johns Hopkins researchers estimated the annual economic costs of chronic pain in the U.S. by assessing incremental costs of health care due to pain and the indirect costs of pain from lower productivity. They compared the costs of health care for persons with chronic pain with those who do not report chronic pain

Read more:

<http://www.sciencedaily.com/releases/2012/09/120911091100.htm>

### Developing a Framework for Predicting Upper Extremity Muscle Activities, Postures, Velocities, and Accelerations during Computer Use: The Effect of Keyboard Use, Mouse Use, and Individual Factors on Physical Exposures

Prediction models were developed based on keyboard and mouse use in combination with individual factors that could be used to predict median upper extremity muscle activities, postures, velocities, and accelerations experienced during computer use. In the laboratory, 25 participants performed five simulated computer trials with different amounts of keyboard and



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mouse use ranging from a highly keyboard-intensive trial to a highly mouse-intensive trial. During each trial, muscle activity and postures of the shoulder and wrist and velocities and accelerations of the wrists, along with percentage keyboard and mouse use, were measured. Four individual factors (hand length, shoulder width, age, and

gender) were also measured on the day of data collection

*Read more: Journal of Occupational and Environmental Hygiene Volume 9, Issue 12, 2012 (Available with AIHA membership)*

### New Health Hazard Evaluation Report Now Available: Assessment of Visual and Neurologic Effects among Video Hub Employees



HHE Program investigators evaluated concerns about visual and neurological symptoms among employees who monitored television displays at a video hub office. Most employees reported multiple symptoms while at work, including headaches, eyestrain, and body aches. After measuring the distances from employees to

video displays, investigators determined that looking back and forth between nearby and far objects may cause eyestrain. The video hub office was well maintained and most employees felt that management did an adequate job of letting them know what was being done to address workplace concerns. Investigators recommended that

- Employees are provided adjustable ergonomic chairs.
- Computer monitors have adjustable heights and non-glare screens.
- Management evaluates workshift scheduling.
- Employees wear personal protective equipment such as laser glasses, 3-D glasses, and earmuffs as needed.

*Read more:*

[http://www.cdc.gov/niosh/hhe/whats\\_new.html](http://www.cdc.gov/niosh/hhe/whats_new.html)

*Safety*

### eLCOSH Website Retooled



A popular website for research and resources about construction safety and health, eLCOSH, looks new and improved today. The electronic Library of Construction Occupational Safety and

Health has a more attractive design and better organization.

Visitors can search for more than 2,000 documents, images, videos, photos, and reports according to the hazard (confined spaces to vibration and everything in between), or by trades, by jobsites (heavy and highway, industrial, underground, demolition, etc.), or by type of document (podcasts, recalls, toolbox talks, presentations, etc.).

*Read more:*

<http://ohsonline.com/articles/2012/10/05/elcosh-website-retooled.aspx?admgarea=news>

### Interagency Board Calls for Further Research on Post-fire Environment Hazards

Further research should be conducted to identify and quantify the hazards that emergency responders such as firefighters, law enforcement officers, and emergency medical service workers face in post-fire environments, the InterAgency Board for Equipment Standardization and Interoperability (IAB) recommends in a recent position paper. "When compared to the amount of research on fire and explosive incidents, the hazards of the post-fire environment have received relatively scant attention. This is unfortunate, since in



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general the amount of exposure time in this environment far exceeds the duration of the active incident," IAB says. *Read more:*

*Read more:* <http://www.aiha.org/news-pubs/synergist/newswatch/Pages/InterAgencyBoardCallsforFurtherResearchonPost-fireEnvironmentHazards.aspx>

### Millions of Unexploded Bombs Lie In Waters Off US Coast



Lurking (and leaking) beneath the world's oceans are an estimated 200 million pounds of unexploded and potentially dangerous explosives -- from bombs to missiles to mustard gas.

Texas A&M oceanographers documented two such dumpsites in the Gulf of Mexico

recently. They conservatively guess that at least 31 million pounds of bombs can be found not just in the Gulf, but also off the coasts of at least 16 states, from New Jersey to Hawaii.

Thousands of gallon containers of mustard gas lie strewn off the New Jersey coast, for example. And there are a total of seven dumpsites on the Gulf seafloor, each approximately 81 square miles, one at the mouth of the Mississippi River Delta.

*Read more:* <http://www.foxnews.com/tech/2012/10/08/millions-unexploded-bombs-lie-in-waters-off-us-coasts/>

### OSHA's Warning on Safety Incentive Programs Are Wide of the Mark

Some good-faith efforts by employers to motivate employees to work safely are running afoul of OSHA, which believes that rewards like a pizza party to celebrate a safety milestone actually may provide a disincentive for employees to report injuries. However, in an attempt to clarify its position, OSHA has cast a net that is too wide and only will lead to confusion over



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how a company may use incentives to motivate workers.

I am not in any way suggesting that companies cover up injuries or punish employees who report them. Nor do I believe that safety incentive programs really work. But companies that choose to

use those programs in good faith deserve better guidance from OSHA.

*Read more:*

<http://ehstoday.com/osha/osha-s-warning-safety-incentive-programs-are-wide-mark>

## Write It and Light It: Signs, Labels and Lighting for a Safe and Productive Workplace



Well-designed and prominently placed safety signs – when viewed under good lighting – can make a big impact on workplace safety and productivity.

For industrial or manufacturing workers, labels and signs reduce wasted time spent searching for inventory, prevent accidental handling of toxic chemicals and guide us to the nearest exits in the event of a fire.

But like workers, labels and signs can't do their job in poor lighting. Industrial buildings need well-planned lighting systems for different tasks with appropriate light quantity and quality to keep workers safe and productive.

*Read more:*

<http://www.osha.gov/as/opa/quicktakes/qt08012012.html#14>

## Emergency Preparedness

### Red Cross Groups to Launch Global Disaster Preparedness Center

The American Red Cross, along with the International Federation of Red Cross and Red Crescent Societies, will host a launch

event for a Global Disaster Preparedness Center. The event include high-level speakers and activities related to current

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efforts and initiatives around the world in disaster preparedness.

ARC's announcement described the center as a "globally focused reference center that will support learning and knowledge sharing for disaster preparedness practitioners. With Red Cross and Red Crescent national societies as its primary target audience, the center will focus on a host of services and initiatives in the next year, including an interactive website that will foster learning, exchange of materials and networking. Additionally, a research program will fund studies on topics such as the value of social media in public awareness and cost benefit analysis of disaster preparedness interventions

Read more:

<http://ohsonline.com/articles/2012/10/03/red-cross-groups-to-launch-global-disaster-preparedness-center.aspx?admgarea=news>

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- Administrators
- Client Greeters
- Computer Technicians
- Client Flow Assistants
- Translators

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## Millions Participating in Great ShakeOut Drills



Residents of 13 U.S. states and citizens of some other countries, including Canada and

Italy -- more than 13 million people in all -- will participate in the Oct. 18 Great ShakeOut earthquake drills, according to data posted at [www.shakeout.org](http://www.shakeout.org). The U.S. Geological Survey, FEMA, the National Science Foundation, and partner agencies are involved in this effort to make people better prepared for earthquakes. Five eastern states, including some jolted by the 5.8 magnitude quake centered in Virginia on Aug. 23, 2011, are participating this year for the first time, and 1.1 million people have registered to participate in those states.

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Read more:

<http://ohsonline.com/articles/2012/10/15/>

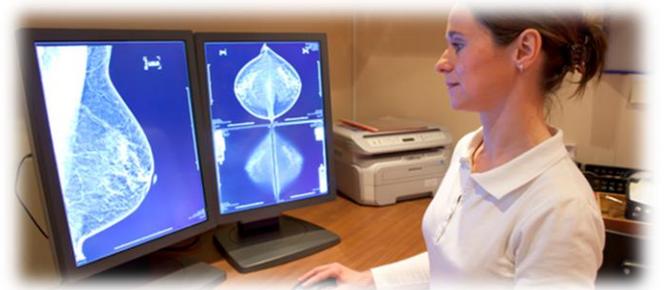
[millions-participating-in-great-shakeout-drills.aspx](http://millions-participating-in-great-shakeout-drills.aspx)

## Deployment Health

### Alarming Breast Cancer Rates among Troops

If you think breast cancer is just something for your grandmother, mom and aunts to worry about, think again. Not only is breast cancer striking relatively young military women at alarming rates, but male service members, veterans and their dependents are at risk, as well.

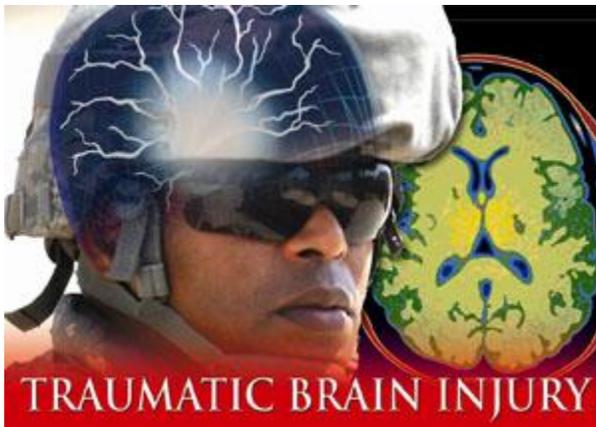
With their younger and generally healthier population, those in the military tend to have a lower risk for most cancers than civilians, including significantly lower colorectal, lung and cervical cancer rates in certain groups.



Read more:

<http://www.armytimes.com/news/2012/10/offduty-how-you-can-give-breast-cancer-the-boot-100112w/>

### 6 Promising Advances to Save Soldiers' Brains



From a helmet swallowed as a pill to binoculars that provide automatic eye

exams, out-of-the-box thinking may help prevent traumatic brain injury in U.S. warfighters.

The mildest form of such injury, known as a concussion, is a problem familiar with sports fans. But military medical experts often refer to traumatic brain injury, or TBI, as the signature injury from Afghanistan and Iraq. In September, the departments of Defense and Veterans Affairs combined more than \$100 million to fund two new consortia, one aimed partly at improving diagnosis and treatment of TBI.

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Here are six promising TBI-related technologies they might consider, under development by U.S. Army Medical Research and Materiel Command (USAMRMC).

*Read more:*

<http://www.foxnews.com/tech/2012/10/04/6-promising-advances-to-keep-soldiers-safe/#ixzz29ZRfgthE>

### As Military Suicides Rise, Focus Is on Private Weapons

With nearly half of all suicides in the military having been committed with privately owned firearms, the Pentagon and Congress are moving to establish policies intended to separate at-risk service members from their personal weapons.



The issue is a thorny one for the Pentagon. Gun rights advocates and many service members fiercely oppose any policies that could be construed as limiting the private ownership of firearms.

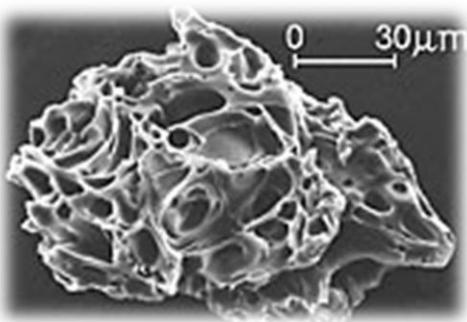
*Read more:*

[http://www.nytimes.com/2012/10/08/us/with-military-suicides-rising-new-policies-take-shape.html?\\_r=2&partner=rss&emc=rss&](http://www.nytimes.com/2012/10/08/us/with-military-suicides-rising-new-policies-take-shape.html?_r=2&partner=rss&emc=rss&)

But as suicides continue to rise this year, senior Defense Department officials are developing a suicide prevention campaign that will encourage friends and families of potentially suicidal service members to safely store or voluntarily remove personal firearms from their homes.

## Nanotechnology

### Building a Safer Nanoparticle



As questions swirl about the safety of using super-small particles in everything from breakthrough medical treatments to sunscreens, a new goal has emerged: Take the bad out, and keep the good, at the earliest building-block level.

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It's a great idea in theory. But can it work in practice? Recently, officials from the National Institute for Occupational Safety and Health pulled scientists, industry representatives and advocates for workers and consumers together to try and answer that question.

According to the organizers — trailblazers in the effort to protect workers from risks associated with nanotechnology — the

three-day meeting was the first time such a wide swath of interests had convened in one place.

*Read more:*

<http://gwynethshaw.org/blog/2012/09/24/building-a-safer-nanoparticle/>

### Researchers Studying Nanotube Toxicity Develop Method for Finding Them in Soils

In an effort to determine the toxicity of these materials, a group of Texas Tech researchers has successfully built a testing apparatus that can quantify the presence of CNT in a given sample. It is a process easier said than done.

A CNT is a carbon allotrope, just like graphite, charcoal, diamonds or graphene — the world's strongest known substance.

To the layman, graphene is a super-thin sheet of carbon atoms arranged in a hexagonal "honeycomb" pattern.

Conventional pencil graphite is simply many layers of graphene stacked together. When rolled into a tube, graphene forms a CNT, a fiber 100 times stronger than steel and six times lighter.



*Read more:*

<http://phys.org/news/2012-10-nanotube-toxicity-method-soils.html>

*Regulatory Research & Industrial Hygiene Professional News*

**NIOSH**

**Addendum to Components for Evaluation of Direct-Reading Monitors  
for Gases and Vapors: Hazard Detection in First Responder  
Environments**



The *Components for Evaluation of Direct-Reading Monitors for Gases and Vapors* (hereafter referred to as the *Components* document) [NIOSH 2012], presents methods to be used in evaluating direct-

reading monitors\* for use in workplace compliance determinations.

This *Addendum* to the *Components* document expands the applicability of the *Components* by presenting methods to be used in evaluating direct-reading monitors for hazard detection in First Responder environments, including those related to incidents involving weapons of mass destruction (WMD). The *Addendum* contains a standardized test protocol and performance acceptance criteria for evaluating commercially available, direct-reading monitors in a style similar to the *Components* document.

*Read more:*

<http://www.cdc.gov/niosh/docs/2012-163/>

**DOL**

**DOL Launched the Workplace Flexibility Toolkit**

The Labor Department launched an online Workplace Flexibility Toolkit to promote

inclusive workplaces and to help employees, job seekers, employers,

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policymakers, and researchers with information, resources, and what DOL describes as a unique approach to workplace flexibility.

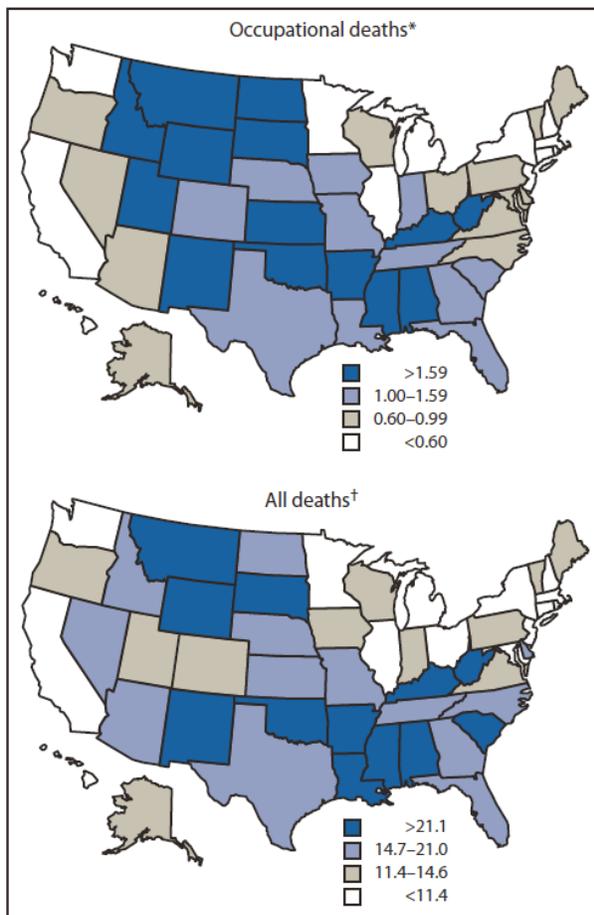
Workplace flexibility policies and practices, its release explains, typically focus on when and where work is done. The toolkit adds an

emphasis on flexibility of job tasks and what kind of work is done.

*Read more:*

<http://ohsonline.com/articles/2012/10/15/online-toolkit-promotes-inclusive-workplaces.aspx?admgarea=news>

### Bureau of Labor Statistics' 2011 preliminary National Census of Fatal Occupational Injuries announced



The Bureau of Labor Statistics has released the preliminary results of its National Census of Fatal Occupational Injuries. Findings show that the number of fatal work injuries in 2011 was slightly lower than final results from 2010. Last year, 4,609 workers died from work-related injuries, down from a final count of 4,690 in 2010. The rate of fatal work injury for U.S. workers in 2011 was 3.5 per 100,000 full-time equivalent (FTE) workers, as compared to a final rate of 3.6 per 100,000 for 2010. Final 2011 data from the CFOI program will be released in spring 2013.

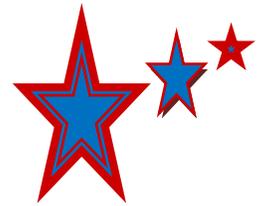
*Read more:*

[http://www.osha.gov/as/opa/quicktakes/qt\\_10012012.html#1](http://www.osha.gov/as/opa/quicktakes/qt_10012012.html#1)

# Army Industrial Hygiene News and Regulatory Summary

USAPHC

## October's DOEHRS-IH ***SUPER STAR***



This month's DOEHRS-IH Super Star goes to the Industrial Hygiene Office at Fort Gordon. The IH team has begun a two week "stand down" to ensure that the installation's shop data is properly captured in DOEHRS-IH. The IH staff have been instructed to ensure all priority 1 and 2 shops contains processes, hazards,

personnel, exposure data, engineering controls, and PPE etc. The shop data then would be aligned with the Master Schedule. Fort Gordon's IH personnel commitment to better managing their DOEHRS data gives them the star for the month.

### How to become a DOEHRS-IH Super Star

- ✓ Do feel like you use DOEHRS-IH more than other program offices?
- ✓ Do you feel unnoticed?
- ✓ Do you feel like you have done great IH things with DOEHRS-IH?
- ✓ Do you wear a unitard and cape under your clothes? (Don't answer this question please)

Email the [Industrial Hygiene Training Coordinator](#) a brief synopsis about a new idea, a faster way, or a milestone you just met. Your Program Office just may be nominated as the monthly DOEHRS-IH ***Super Star***.

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## Training

This monthly summary is published by the Industrial Hygiene and Medical Safety Management Program (IHMSMP) for the U.S. Army Public Health Command.

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<http://phc.amedd.army.mil/topics/workplacehealth/ih/Pages/default.aspx>



## Upcoming Courses

- **Army Noise Measurements and Assessments** - Instruction on how to identify situations with the potential to cause noise-induced hearing loss or vibration-related injury, to conduct appropriate measurements to evaluate worker exposure, and to discuss evaluation methods. Course opens in Blackboard from 3-31 December 2012. Applications must be received by 16 November. Incomplete applications will not be processed. To [register for Noise Measurement and Assessments](#)
- **Industrial Hygiene Noise Instrument Basics**- knowledge of the basic concepts and logic of statistical reasoning, and a practical ability to choose, generate, and properly interpret appropriate descriptive and inferential methods. The course also helps students recognize the diverse applications of statistics in the DOEHS-IH data repository, and its relevance to Army Industrial Hygiene staff member job duties. Course opens in Blackboard from 3-31 December 2012. Applications must be received by 16 November. Incomplete applications will not be processed. To [register for the Industrial Hygiene Noise Instrument Basics course.](#)
- **Industrial Hygiene, Occupational Health, and Safety Professionals: Making the Connection with Health Promotion - the Healthy Worker** - This Defense Connect Online Course is designed to provide participants with the knowledge, skills and tools necessary to assist in developing, implementing health promotion activities designed to eliminate or mitigate health risks in the workplace and to ensure that worker exposures documented by the IH are not unknowingly affected by confounders that may be potentiated. Course opens in Blackboard from 3-31 December 2012. Applications must be received by 16 November. Incomplete applications will not be processed. To [register for the Healthy Worker course.](#)
- **Industrial Hygiene Statistics** - This online course provides the basic concepts and logic of statistical reasoning, and a practical ability to choose, generate, and properly interpret appropriate

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descriptive and inferential methods. The course also helps students recognize the diverse applications of statistics in the DOEHS-IH data repository, and its relevance to Army Industrial Hygiene staff member job duties. Course opens in Blackboard from 3-31 December 2012. Applications must be received by 16 November. Incomplete applications will not be processed. To [register for the Industrial Hygiene Statistics course.](#)

- **Ventilation Fundamentals** - Instruction on basic ventilation units, mathematics, engineering properties and testing equipment. Course opens in Blackboard from 3-31 December 2012. Applications must be received by 16 November. Incomplete applications will not be processed. To [register for the Ventilation Fundamentals course.](#)

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