NIOSH Evaluates Occupational Exposures to Alternative Dry-cleaning Solvents

NIOSH staff developed air and skin patch sampling methods for two alternative drycleaning solvents—SolvonK4 and DF-2000—for a recent health hazard evaluation (HHE) of occupational exposures in drycleaning shops. The HHE was requested by a manager of a local government program who was concerned about employee exposures to the two new drycleaning solvents.

During visits to three drycleaning shops, NIOSH personnel took air samples for butylal, the main ingredient in SolvonK4; formaldehyde and butanol, possible byproducts from using SolvonK4; and DF-2000. Investigators also tested workers’ skin under their protective gloves for butylal or DF-2000. Results showed air and skin exposures to butylal, but the NIOSH report notes that there are no occupational exposure limits (OELs) for the chemical and the long-term human health effects of SolvonK4 are unknown. Air concentrations of DF-2000 proved to be well below OELs. According to the HHE report, the highest air concentrations of SolvonK4 and DF-2000 were measured when employees were loading and unloading the drycleaning machines and pressing fabrics.

Read more: https://www.osha.gov/as/opa/quicktakes/qt041515.html
Common MSDS-to-SDS Conversion Questions

As a sales associate, I spend a lot of time discussing GHS regulations with clients. Most of the questions I field are industry specific, and they often pertain to individual products or formulations. However, there are a few themes that dominate my conversations with potential clients: label requirements, international validity, trade secrets, mixture composition, and physical hazards.

Read more:
http://ohsonline.com/articles/2015/05/01/msds-to-sds-conversion.aspx?admgarea=news

Food & Drug Administration Seeks Safety Data on Skin Sanitizers

Federal regulators are planning to reevaluate the safety of long-term daily exposure to skin sanitizers, such as hand washes and surgical hand scrubs, used by workers in hospitals and other health care settings.

FDA has no data suggesting that active ingredients in health care
Army Industrial Hygiene News and Regulatory Summary

antiseptics are unsafe or ineffective. But the use of these products has skyrocketed since the agency first evaluated them in the 1970s.

Read more: http://cen.acs.org/articles/93/i19/Food-Drug-Administration-Seeks-Safety.html

Tracking Organophosphates: New Method for Assessing Long-Term Dietary Exposures

Researchers often use urinary biomonitoring as the basis for estimating exposures to organophosphate pesticides (OPs), including dietary exposures. In this issue of EHP investigators report a new method to estimate long-term exposure to OPs via produce. This method appears to be an improvement over estimates based on urine biomarkers, which reflect exposure only in the previous few days.

Read more: http://ehp.niehs.nih.gov/123-A135/

NIOSH Study Confirms Firefighters' Higher Cancer Risk

A new NIOSH study evaluating firefighters in the statewide California Cancer Registry found they had increased risks for several major cancers, and that black and Hispanic firefighters had increased risks for more types of cancer than white firefighters. For the purposes of the study, only adult male subjects were included. The study identified 3,996 male firefighters with cancer.

Read more: http://ohsonline.com/articles/2015/05/12/niosh-study-confirms-firefighters-higher-cancer-risk.aspx?admgarea=news
Profiles in Cytotoxicity: A First Step toward Chemical-Specific Adjustment Factors

Human risk assessment of chemicals has traditionally relied on expensive and time-consuming methods to determine toxicity and set regulatory limits for exposure. High-throughput cell-based screening assays are a practical option for rapidly assessing individual chemicals and establishing reliable safety limits.\textsuperscript{1,2,3} A new study in EHP demonstrates that these assays can also be used to estimate the range of responses within human populations.\textsuperscript{4}

Read more: \url{http://ehp.niehs.nih.gov/123-A136/}

Exposure to Crystalline Silica at Alberta Work Sites: Review of Controls

From 2009 to 2013, Alberta Jobs, Skills, Training, and Labour (JSTL) conducted a project to evaluate exposure to crystalline silica and assess controls to protect workers. Information on exposure results has been previously reported; this article discusses the data collected on workplace controls.

Information on work site controls was collected during exposure assessments consisting of qualitative information on controls in place and used by workers at the time of the assessments. Where there was sufficient data, the information was further analyzed to evaluate the impact of a particular control.
While many types of controls were observed, they were not always effective or in use. The control available most often was respiratory protective equipment (RPE). Generally, when respirators were used, they were correctly selected for the level of measured exposure. However, not all workers who were potentially overexposed wore respirators at the time of the assessments. When the use of respirators was taken into account, about one-third of workers were still potentially exposed over the Alberta occupational exposure limit. The industries with the highest levels of exposure tended to be those with the most unprotected workers. Issues were identified with the use of improper work practices such as dry cleaning methods, lack of documented work procedures, poor housekeeping, and lack of training which may have contributed to worker exposure levels.

There is a wide range in the efficacy of controls, particularly engineering controls. Most of the literature focuses on engineering controls; however, administrative controls also play a role in reducing worker exposure. Data collected in this work indicated that simple changes to work procedures and behavior (such as improved housekeeping) may be effective, low-cost ways to reduce workplace exposure. More study is required to evaluate the impact and efficacy of administrative controls such as housekeeping and training. Employers must select and evaluate controls in the context of overall workplace health and safety programs and ensure that they are supported by supervision, good work practices, and training.

Read more: Accepted author version posted online 27 Jan 2015 Published online 13 May 2015 (Available with AIHA membership).

**Radiation**

**INL Training Military for Response to Radiological Hazards**

Military branches from across the U.S. Department of Defense (DOD) sent candidates for an intensive Radiological Hazards and Operators Training and Field Exercise course (RHOT) conducted by the U.S. Army Medical Center and School. These students were brought to the Department of Energy’s Idaho National Laboratory (INL).
site where they begin training to use radiological monitoring equipment, perform radiological calculations, and implement protective measures. Two weeks of intense training have transformed these responders into a cohesive unit able to work together to take decisive actions to secure and survey an area for radiological hazar

**New Blood Test Quickly Determines Severity of Radiation Injury**

A novel blood test could greatly improve triage of victims of radiation accidents by rapidly predicting who will survive, who will die, and who should receive immediate medical countermeasures. In pre-clinical trials, the test was able to reveal within twenty-four hours whether survivable doses of radiation or doses that caused severe injury to the bone marrow and other organs would eventually prove fatal. Use of such a test, the researchers said, could “facilitate timely medical intervention and improve overall survival of exposed individuals.”

Fan-Efficiency Metrics

Better understanding of the usefulness and limitations of each fan-efficiency metric requires explanation of some terminology.

Application-dependent vs. application-independent. Fan-efficiency metrics can be broadly characterized based on whether they consider a fan’s operating point:
• An application-dependent efficiency metric considers a fan’s actual operating point.
• An application-independent efficiency metric does not consider a fan’s actual operating point.

As we will see, some metrics function better as one dependency type over the other.

Read more: http://hpac.com/iaq-ventilation/fan-efficiency-metrics

Fortifying Building HVAC Systems against Terrorist Attacks

How many of us have seen a fresh-air inlet located downwind of a bus stop, where buses routinely idle their engines? In the past, such design blunders were annoying, but—thanks to dilution—generally not life-threatening. Today, however, that scenario for a high-rise office building could be disastrous. What if, instead of low levels of carbon monoxide from idling buses entering the building, a terrorist (or criminal driven by non-political motives) released chlorine gas or Cesium-137—used in a variety of
medical and industrial applications and believed by many experts to be the most likely radioactive element in a dirty bomb—into an outside-air intake or interior return-air intake?

Read more: http://hpac.com/blog/fortifying-building-hvac-systems-against-terrorist-attacks

PPE

Potential Role of Infrared Imaging for Detecting Facial Seal Leaks in Filtering Facepiece Respirator Users

Infrared imaging (IRI) can detect airflow through and near respirator masks based upon temperature differences between ambient and exhaled air. This study investigated the potential usefulness of IRI for detecting leaks and providing insight into the sites and significance of leaks. Subjects (n = 165) used filtering facepiece N95 respirators (N95 FFR) in the course of a research study concerning training modalities. Short sequence video infrared images were obtained during use and with intentionally introduced facial seal leaks. Fit factor (FF) was measured with condensation nuclei count methods. IRI detected leaks were scored on a four-point scale and summarized as the Total Leak Score (TLS) over six coding regions and the presence or absence of a “Big Leak” (BL) in any location. A semi-automated interpretation algorithm was also developed. IRI detected leaks are particularly common in the nasal region, but these are of limited significance. IR imaging could effectively identify many large leaks. The TLS was related to FF. Although IRI scores were related to FF, the relationship is insufficiently close for IRI to substitute for quantitative fit-testing. Using FFRs infrared techniques have potential for identifying situations with very inadequate respiratory protection.

Read more: Journal of Occupational and Environmental Hygiene Accepted author version posted online 27 Jan 2015 Published online 11 May 2015 (Available with AIHA membership).
OSHA and NIOSH Release Hospital Respiratory Toolkit

OSHA and NIOSH have produced a Hospital Respiratory Protection Toolkit to be used by health care employers to protect staffers from airborne transmissible infectious diseases, chemicals, and certain drugs that may be used in hospitals. OSHA's Respiratory Protection Standard requires that health care employers establish and maintain a respiratory protection program in workplaces where workers may be exposed to respiratory hazards.


Noise

Link Observed between Waist Size and Noise Pollution

Traffic noise raises the risk of central obesity, suggests a Swedish study that surveyed over 5,000 men and women, collecting information on decibels of exposure and markers of obesity.

Living near a busy road, railroad or under aircraft noise was associated with bigger waist sizes and waist-to-hip ratios, and there was a cumulative risk found for being exposed to all three noise factors in the study published in Occupational and Environmental Medicine, a journal from The BMJ.

The researchers assessed how much environmental noise pollution from road traffic, trains, and planes had been experienced by 5,075 people living in five suburban and rural areas around Stockholm.
- using official measures tied to where the respondents lived since 1999.

Read more: http://www.medicalnewstoday.com/articles/294365.php

**Noise Dosimetry: On Hearing Conservation Programs**

To maintain compliance with OSHA 29 CFR 1910.95 (Hearing Conservation), monitoring must be conducted to determine areas of high noise levels and the presence of high noise sources. The effort is to reduce the potential that personnel have permanent damage to their hearing from noise induced hearing loss.

Read more: http://ehstoday.com/hearing-protection/noise-dosimetry-hearing-conservation-programs

**Preventive Medicine**

**NIOSH Bulletin: Employers Should Promote Workplace Health and Prevent Disease and Injury through Workplace Tobacco Policies**

The National Institute for Occupational Safety and Health has issued a new bulletin recommending that all workplaces become tobacco-free, and that employers make tobacco cessation programs available to their workers. NIOSH's recommendations, which also encompass the use of new Electronic Nicotine Delivery Systems — or e-cigarettes — are aimed at protecting workers from hazardous exposure to tobacco, including the effects of secondhand exposure to tobacco smoke and emissions from e-cigarettes.

Read more: http://www.cdc.gov/niosh/docs/2015-113/default.html
WHO Sets Guidelines For Preventing Stigma When Naming New Diseases

The WHO has issued a set of best practices for the naming of new diseases, with the aim of preventing the negative effects that can occur when diseases are associated with countries, regions, economic sectors, or groups of people.

"The use of names such as 'swine flu' and 'Middle East Respiratory Syndrome' has had unintended negative impacts by stigmatizing certain communities or economic sectors," said Keiji Fukuda, MD, the WHO's assistant director-general for health security, in a WHO statement.

Read more: [http://www.cidrap.umn.edu/news-perspective/2015/05/news-scan-may-08-2015](http://www.cidrap.umn.edu/news-perspective/2015/05/news-scan-may-08-2015) (scroll down to the 6th article)

Should Fliers Worry About Pesticide Spraying On Planes?

In fact, such "disinsection" occurs every day in countries all around the world. And, yes, even U.S. airlines engage in certain forms of the practice, though usually spraying is not done when passengers are onboard. As for the debate over the potential dangers of spraying vs. the potential dangers of airborne diseases? It's an issue many affected passengers clearly need to know more about—prior to booking.

Workplace Intervention Improves Sleep of Employees' Children

A workplace intervention designed to reduce employees' work-family conflict and increase schedule flexibility also has a positive influence on the sleep patterns of the employees' children.

The intervention, Support-Transform-Achieve-Results (STAR), includes training supervisors to be more supportive of their employees' personal and family lives, changing the structure of work so that employees have more control over their work time, and changing the culture in the workplace so that colleagues are more supportive of each other's efforts to integrate their work and personal lives.

Read more:
http://www.sciencedaily.com/releases/2015/05/150521121047.htm

E-Cigarette Vapor, Even When Nicotine-Free, Found To Damage Lung Cells

With the use of e-cigarettes on the rise, especially among young people, research to uncover the health effects of e-cigs is becoming increasingly important. In a new study, researchers find that e-cig solution and vapors—even those that are nicotine-free—damage lung health.

Read more:
http://www.sciencedaily.com/releases/2015/05/150526084955.htm
Recommended Levels of Activity Rarely Achieved in Busy Workplace Environment

Even a busy job may not provide enough exercise to meet current activity recommendations for the prevention of cardiovascular disease, according to a study. The study examined the activity patterns of 83 employees working in six occupational groups at a European hospital during a typical working week. Everyone wore a pedometer to record each step taken and energy expenditure was assessed according to the International Physical Activity Questionnaire.

Read more: http://www.sciencedaily.com/releases/2015/05/150514085711.htm

US Exposure to Extreme Heat is on the Rise

U.S. residents' exposure to extreme heat could increase four- to six-fold by mid-century, due to both a warming climate and a population that's growing especially fast in the hottest regions of the country, according to new research.

The study, by researchers at the National Center for Atmospheric Research (NCAR) and the City University of New York (CUNY), highlights the importance of considering societal changes when trying to determine future climate impacts.
New Study Examines the Air Quality Impacts of Fracking Wells

People living or working near active natural gas wells may be exposed to certain pollutants at higher levels than the Environmental Protection Agency considers safe for lifetime exposure, according to scientists from Oregon State University and the University of Cincinnati.

The researchers found that hydraulic fracturing – a technique for releasing natural gas from below-ground rock formations – emits pollutants known as PAHs (polycyclic aromatic hydrocarbons), including some that are linked with increased risk of cancer and respiratory ailments.

Read more: http://www.enn.com/pollution/article/48549

Greenhouse Gas Benchmark Reached

For the first time since we began tracking carbon dioxide in the global atmosphere, the monthly global average concentration of this greenhouse gas surpassed 400 parts per million in March 2015, according to NOAA’s latest results.

Read more: http://www.enn.com/ecosystems/article/48530
New EPA Water Rule Will Protect Streams and Add to Obama’s Environmental Legacy

A new EPA water ruling will protect streams and wetlands that are currently vulnerable to pollution and destruction. The rule, expected to be released this week, is a clarification of the Clean Water Act, specifying which streams and wetlands are under protection by the EPA. The move will add to President Barack Obama’s record of taking executive action on environmental protection.


Ergonomics

The Influences of Obesity and Age on Functional Performance during Intermittent Upper Extremity Tasks

In this study, the main and interactive effects of obesity and age on functional performance were assessed during intermittent exertions involving the upper extremity. The prevalence of obesity has doubled over the past 30 years and this increase is associated with higher health care costs, rates of workplace injury, and lost workdays. Obesity and aging can modify job demands and affect worker capacity in terms of muscular and psychomotor function. However, there is a lack of empirical studies quantifying the work-relevant (or ergonomic) impacts related to task demands, capacities, and their potential imbalance. Eight obese and eight non-obese participants from each of two age groups (18–25 and 50–65 years) completed three endurance tasks involving fixed levels of task demands: hand grip,
shoulder flexion, and a simulated assembly task using the upper extremity. Measures of functional performance including endurance, discomfort, motor control, and task performance were recorded for each of the task conditions. Endurance times were ~60% longer for the non-obese group, and older participants had longer endurance times; however there was no evidence of interactive effects of obesity and age. Obesity also impaired functional performance, as indicated by higher rates of strength loss, increases in discomfort, and declines in task performance. These observed impairments may reflect underlying physiological differences among individuals who are obese, but that are independent of age. Obesity-related impairments may have implications for the design of work duration and demand level to prevent fatigue development for workers who are obese. the jobs evaluated, including all jobs in evisceration, involved levels of hand repetition and force over the American Conference of Governmental Industrial Hygienists’ (ACGIH) action limit. These conditions put workers at increased risk for carpal tunnel syndrome and other MSDs. Jobs involving repetition and force at or above the action limit should be redesigned or use automation or other engineering (and/or administrative) controls to prevent MSDs.


### Whole-body Vibration Exposure Intervention among Professional Bus and Truck Drivers: A Laboratory Evaluation of Seat-suspension Designs

Long-term exposure to seated whole-body vibration (WBV) is one of the leading risk factors for the development of low back disorders. Professional bus and truck drivers are regularly exposed to continuous WBV, since they spend the majority of their working hours driving heavy vehicles. This study measured WBV exposures among professional bus and truck drivers and evaluated the effects of seat-suspension designs using simulated field-collected data on a vibration table. WBV exposures were measured and compared across three different seat designs:

1. an air-ride bus seat,
2. an air-ride truck seat, and
3. an electromagnetically active (EM-active) seat.

Air-ride seats use a compressed-air bladder to attenuate vibrations, and they have been in operation throughout the transportation industry for many years. The EM-active seat...
is a relatively new design that incorporates a microprocessor-controlled actuator to dampen vibration.

The vibration table simulated seven WBV exposure scenarios: four segments of vertical vibration and three scenarios that used field-collected driving data on different road surfaces—a city street, a freeway, and a section of rough roadway. The field scenarios used tri-axial WBV data that had been collected at the seat pan and at the driver's sternum, in accordance with ISO 2631-1 and 2631-5.

This study found that WBV was significantly greater in the vertical direction (z-axis) than in the lateral directions (x-and y-axes) for each of the three road types and each of the three types of seats. Quantitative comparisons of the results showed that the floor-to-seat-pan transmissibility was significantly lower for the EM-active seat than for either the air-ride bus seat or the air-ride truck seat, across all three road types. This study also demonstrated that seat-suspension designs have a significant effect on the vibrations transmitted to vehicle operators, and the study's results may prove useful in designing future seat suspensions.

Read more: Journal of Occupational and Environmental Hygiene Accepted author version posted online 27 Jan 2015 Published online 30 Apr 2015 (Available with AIHA membership).

Safety

NSC Says Cell Phones are involved in 27 Percent of All Car Crashes

The NSC has estimated that cell phone-related crashes have increased for the third consecutive year and now account for 27 percent of all crashes. This estimate includes crashes involving drivers who are texting or talking on handheld or hands-free cell phones.

More specifically, the National Safety Council estimates that texting-related crashes jumped from five percent to six percent while crashes involving drivers talking on cell phones remained at 21 percent.

ANSI Members Mark Building Safety Month

ANSI is highlighting some of its member companies' initiatives related to the 35th annual Building Safety Month, including a guide on deck safety issued by the American Wood Council to encourage compliance with the latest building codes. "Most deck failures occur during the warmer seasons," said John Showalter, AWC's vice president of technology transfer. "We are asking builders to take time this month to become highly conversant in proper deck design and to check that existing deck structures are still compliant with building codes."

Read more:

Nail Salon Workers Aren’t the Only Ones Who Need More Protections

Farm laborers, home health aides, and car wash workers are just a few of those who fall through regulatory cracks.

New York Gov. Andrew Cuomo announced emergency protections for the state's nail salon workers, just days after two New York Times reports detailed widespread wage theft and health risks. The stories, by reporter Sarah Maslin Nir, illuminated just how vulnerable these workers are: Often recent immigrants, with low English fluency and few marketable skills, they're essentially indentured to nail salons that take few measures to shield them from exposure to toxic chemicals used in manicures and pedicures.

Read more:
http://www.washingtonpost.com/blogs/wonkblog/wp/2015/05/12/nail-salon-workers-
Greening Trends Are Red Hot in Fire Safety

Experts in the fire safety field say systems have advanced on many technological fronts. Frequently, these advances contain an eco-friendly dimension, as corporations and municipalities respond to calls from customers and constituents for greater sustainability.

Read more:

ACOEM, UL Propose New Framework for Measuring Health and Safety Programs

The overall well-being of American workers could be significantly improved through the adoption of a new framework for integrating health and safety strategies in the workplace, including the use of a standardized index for measuring their business value, according to a paper published this month by the American College of Occupational and Environmental Medicine and UL (Underwriters Laboratories). The Journal of Occupational and Environmental Medicine paper's authors propose an Integrated Health and Safety model that features a new Integrated Health and Safety Index based on the methodology of the Dow Jones Sustainability Index.

Read more:
http://ohsonline.com/articles/2015/05/06/new-framework-proposed.aspx?admgarea=news
**OSHA and NCTE Form Alliance to Protect Safety, Health of Transgender Workers**

OSHA has entered into an alliance with the National Center for Transgender Equality (NCTE) in order to provide affiliates and others with information and resources to help foster safer and more healthful workplaces, a press release said.

*Read more: http://ohsonline.com/articles/2015/05/05/osha-and-ncte-form-alliance-to-protect-safety.aspx?admgarea=news*

**How Technology Megatrends Are Shaping the Future of Safety, Health, and Environmental Monitoring**

The convergence of wireless devices, low-cost sensors, Big Data, and crowdsourcing will change the way you assess risk in your workplace.

New ways to monitor, measure and control workplace hazards are emerging with the rapid development of consumer-driven technologies, and soon this will result in alternative ways to assess risk and exposure to a wide variety of potentially harmful conditions. Technology megatrends, including the rapid growth of the Internet of Things (IoT), where electronic devices become instantly addressable online and can "integrate" with other consumer products we use every day, are already starting to have influence on how we can assess the working environment in real time.

Hurricanes’ Centuries-Old Patterns May Be Shifting

Climate change may be triggering an evolution in hurricanes, with some researchers predicting the violent storms could move farther north, out of the Caribbean Sea and the Gulf of Mexico, where they have threatened coastlines for centuries.

Hurricane season in the Atlantic Ocean began Monday, and forecasters are predicting a relatively quiet season. They say three hurricanes are expected over the next six months, and only one will turn into a major hurricane.

Read more:
http://www.emergencymgmt.com/disaster/Hurricanes-Centuries-Old-Patterns-Shifting.html

The Potential and the Limitations of Drone Use in Disaster Recovery

A study details how drones can help first responders and improve relief efforts following a disaster, while also highlighting the regulatory roadblocks that hamper their use in emergencies. The report, “Drones for Disaster Response and Relief Operations,” conducted by Measure, a 32 Advisors Company, in coordination with the American Red Cross, recommends potential uses for drones in disaster recovery in order to save lives and help communities recover more quickly after an emergency.

Read more:
Aeromedical Research Lab Works to Make Medevac Missions Safer

Medical evacuation operations are very complex and dangerous for evacuation helicopters, crewmembers, and patients. MedEvac missions consist of retrieving the wounded from a dangerous environment and transporting them to medical triage or a medical treatment facility.

In the event that a helicopter cannot land, MedEvac crewmembers are trained to send down a medic, who evaluates and packages the patient, and to then use a rescue hoist device to lift the medic and patient into the aircraft.

Read more: http://www.army.mil/article/140103

Evolving Toward Universal Blood

Hospitals keep stores of universal, type O blood for situations when a patient with an unknown blood type needs an emergency transfusion. The other types—A, B, and AB blood—can trigger a potentially fatal immune response in an unmatched recipient. Now, bioengineers have taken a step on the path toward making all blood universal—by broadening an enzyme’s ability to remove antigens on the surface of red blood cells (J. Am. Chem. Soc. 2015, DOI: 10.1021/ja5116088).

The quest for universal blood has tempted researchers since the discovery in the 1980s of coffee bean enzymes that could turn type B blood into O. The four main blood types each have distinctive sugar chains on the surface of their red blood cells. The
Nanosponges in Disguise Mop Up MRSA Staph Infections

A new gel filled with nanosponges that absorb toxins has proven effective against the “super bug” MRSA (methicillin-resistant Staphylococcus aureus), an antibiotic-resistant bacteria that can be life-threatening.

Tiny Device Could Save Lives on Battlefield

Getting rapid treatment for wounds or injuries suffered on the battlefield can mean the difference between life and death.

Army medical researchers recently developed "a device that will revolutionize triage," said Lt. Col. Robert Carter. In other words, it could lower casualties in the first few minutes dramatically.

Carter, task area manager for Tactical Combat Casualty Care Research at the U.S. Army Institute of Surgical Research, Joint Base San Antonio, Texas, spoke during Lab Day at the Pentagon, May 14.

He demonstrated the Compensatory Reserve Index, or CRI, device. It's about the size of a small matchbox with a computer display. A wire connects it to a plastic clip that's placed on an injured Soldier's finger.

Read more: http://www.army.mil/article/148670/Tiny_device_could_save_lives_on_battlefield/

Read more: http://www.army.mil/article/148670/Tiny_device_could_save_lives_on_battlefield/

Nanotechnology

The A-type sugar chain has a fifth sugar, N-acetylgalactosamine, tacked onto it, and B-type chains have galactose. AB-type red blood cells sport both A and B antigens.

Read more: http://cen.acs.org/articles/93/web/2015/05/Evolving-Toward-Universal-Blood.html

A new gel filled with nanosponges that absorb toxins has proven effective against the “super bug” MRSA (methicillin-resistant Staphylococcus aureus), an antibiotic-resistant bacteria that can be life-threatening.
Nanoengineers at the University of California, San Diego developed the new hydrogel – a gel made of water and polymers – packed with the toxin-absorbing nanosponges.

Read more: [http://ens-newswire.com/2015/05/19/nanosponges-in-disguise-mop-up-mrsa-staph-infections/](http://ens-newswire.com/2015/05/19/nanosponges-in-disguise-mop-up-mrsa-staph-infections/)

Risks to Health Care Workers from Nano-Enabled Medical Products

Nanotechnology is rapidly expanding into the health care industry. However, occupational safety and health risks of nano-enabled medical products have not been thoroughly assessed. This manuscript highlights occupational risk mitigation practices for nano-enabled medical products throughout their life cycle for all major workplace settings including (1) medical research laboratories, (2) pharmaceutical manufacturing facilities, (3) clinical dispensing pharmacies, (4) health care delivery facilities, (5) home health care, (6) health care support, and (7) medical waste management. It further identifies critical research needs for ensuring worker protection in the health care industry.

Read more: *Journal of Occupational and Environmental Hygiene* Volume 12, Issue 6, 2015 Published online: 07 May 2015 (Available with AIHA membership)

Chapter on Ethanol Processing Added to OSHA Technical Manual

In response to the rapid growth and recent changes in the ethanol manufacturing industry, OSHA has published a new chapter on ethanol processing in the OSHA Technical Manual. The new chapter provides technical information and guidance to help the agency’s compliance safety and health officers evaluate safety and health hazards in ethanol-for-fuel manufacturing facilities. According to OSHA, the content is based on currently available research publications, OSHA standards, and consensus standards.
AIHA: Happening on the Hill

Protecting America’s Workers Act. Sen. Al Franken (MN) and Rep. Joe Courtney (CT) have introduced what one can say is the “OSHA reform bill”. The bills, S 1112 and HR 2090, are very similar to bills that have been introduced in each of the last three sessions of Congress. There is a lot in this bill, but to summarize, the legislation would expand OSHA coverage to those workers not currently covered, increase penalties (both civil and criminal) to those who break the law and do not follow OSHA regulations, provide additional protection to whistleblowers, clarify an employer’s duty to provide a safe worksite for all workers onsite, and provide additional rights to victims of workplace hazards.

Grace Period to Abate Violations. HR 1932 has been introduced that would allow employers a grace period to abate certain occupational health and safety violations before being subject to a penalty. This issue has been more prevalent in the states with several states addressing the issue in the last couple of years. The bill has been introduced by Rep. Vicky Hartzler (MO).

Toxic Substances Control Act. Legislation to amend the Toxic Substances Control Act (TSCA) is moving forward. The bill would force EPA to complete risk assessments for dangerous chemicals within three years, issue risk management rules within 90 days of completing an assessment and preserve states’ rights to issue their own protections.
Regulation through Guidance. Seems the recent Supreme Court decision affirming agencies do not have to undergo notice-and-comment rulemaking when they issue guidance is not going to be accepted by all. Several Republican Senators have announced plans to investigate the approach that is used by many federal agencies, including OSHA. Opponents of the use of “guidance” say the process does not allow the public to have input on what may be significant regulations. Supporters of the process say use of guidance is needed because the process for regulatory action just takes too long and that employers want to know how agencies plan on addressing and enforcing regulations.

Regulatory Reform Legislation. If there is one issue that seems to be on everyone’s radar in Congress it is “regulatory reform”. Here is quick look at some of the recommendations:

- Require federal agencies to submit rules that annual impact of $100 million or more to Congress for approval
- Require federal agencies to issue the “least costly” regulation
- Require agencies to cut or modify existing regulations before they can issue new ones
- Require any proposed regulation to include the internet address of a 100-word, plain-language summary
- Require publication of project costs and benefits for at least six months before a new rule can take effect
- Direct agencies to review existing rules to determine those that are obsolete, duplicative, unnecessary or conflicting with other rules

Read more: AIHA Happenings on the Hill May 20, 2015 (Available with AIHA membership).

Democrats Reject Proposal to Cut Benefits for Injured Federal Workers

A proposal by the U.S. Department of Labor to cut workers’ compensation benefits for some injured federal workers is rejected by Democrats on the Subcommittee on Workforce Protections.

The Subcommittee on Workforce Protections held a hearing on May 20 to review the Department of Labor’s (DOL) proposal that would cut workers’ compensation benefits for some federal workers who have been disabled due to job-related injuries.

Democratic committee members rejected the proposal, claiming it would leave most workers considerably worse off than if they had not incurred the injury. Rep. Robert C. (Bobby) Scott of Virginia, a ranking member of the full committee, and Rep. Frederica Wilson of Florida, a ranking member of the
subcommittee, emphasized how essential the Federal Employees’ Compensation Act (FECA) is to federal workers and their families.

Read more:

OSHA

NIOSH, ASSE Release 'Overlapping Vulnerabilities' Report

"Overlapping Vulnerabilities: The Occupational Health and Safety of Young Immigrant Workers in Small Construction Firms" is the title of a new report from NIOSH and ASSE Report examining why Latino immigrant workers younger than 25 who are employed by small construction firms have higher injury and fatality rates than those of the construction industry as a whole. Their rates are higher than the rates of almost any other employee segment or industry in the United States, it shows.

Read more:

NIOSH

NIOSH Requests Technical Review of Draft Skin Notation Profiles

NIOSH has requested a technical review of draft skin notations for 19 chemicals. These skin notation profiles provide information supplemental to chemicals' skin notations, including summaries of all relevant data used to help determine the hazards associated with skin exposures. Some of the chemicals are dichlorvos, heptachlor, disulfoton, atrazine, and morpholine.

Read more:
http://ohsonline.com/articles/2015/05/14/niosh-requests-technical-review-of-draft-
Potential EPA Ban on Chlorinated Paraffins by May 2016

The EPA is proposing a ban on chlorinated paraffin, also known as chlorinated alkanes, by May 2016. Studies have shown risks to environmental organisms, persistence and bioaccumulation potential. Human health is not a concern. Chlorinated paraffin/alkanes are used as flame retardants for rubber, plastics, industrial coatings, sealants, adhesives and textiles; plasticizers for PVC; additive for paint, coatings, and textiles to impart water repellency and chemical resistance; as an extreme pressure additive for metal working fluids; and in explosives and ammunition.

These chemicals are used by DoD and defense contractors as fasteners in aircraft assemblies and jet engines. There are currently no suitable substitutes. Potential substitute do not exhibit the same robust properties of chlorinated paraffins.

If substitutes and operational modifications are made in response to the ban, the resulting impact across DoD could be enormous. Fasteners used for DoD applications must be made in the USA, so finding new suppliers will be limited and costly. DoD employees involved with industrial processes using metalworking and metal working fluids need to be informed about this potential ban and start to consider alternatives.

Read more: Emerging Contaminants in the News (Individuals can register to receive the EC in the News at https://www.ecportalinfo.org/distlist_new.asp distribution authorized to the DoD and U.S. DoD contractors only)

New CIHs at the AIPH

Spring has proved to be a good season to take the CIH exam. The Army Institute of Public Health has five new CIHs: Tanya Hodges, Lindsey Kneten, Irellys Martí-Sanchez, Rachael Seymour, successfully passed the spring 2015 exam and Shih-Houng Young pass in the fall 2014. Congratulation goes out to these five individuals for their hard work and accomplishment.
May's DOEHS-IH Super Stars: Ft. Drum and Korea

Fort Drum's DOEHS-IH ventilation data is being used as the example of "HOW TO DO IT RIGHT" in USAPHC's new 40 hour Industrial Ventilation Course. After searching for examples of correctly entered ventilations systems for a variety of setup like drive through paint booths, operating room air changes, welding and motor pool ventilation surveys, Fort Drum's data provided a shining example of how to effectively and efficiently capture data appropriately in DOEHS-IH.

In addition, Korea is May's other DOEHS-IH Super Star. The four IH Program Offices in Korea - Yongsan, Camp Stanley/Uijongbu, Camp Humphreys and Camp Walker/Daegu - have diligently completed and documented IH assessments in DOEHS-IH. Over the last 18 months, their Public Health Enterprise metric (PHE-IH05) has steadily improved and reached a green status for the first time in March 2015. This means that the four IHPOs have assessed around 80% of the 1000 hazards associated with priority one shops, which greatly improves workers exposure history reports.

The PHE-IH05 metric measures the percentage of hazards associated with a priority one shop and including those that have had a qualitative or quantitative assessment performed in DOEHS-IH. IH assessments data populate workers' exposure history reports, which will be an authoritative source for the Individual Longitudinal Exposure Record (ILER). The ILER is a DoD initiative with VA participation. It is used to create an occupational and environmental exposure record for individuals over the course of their military careers that enhance both health care and disability determination efforts.

How to become a DOEHS-IH Super Star

- Do feel like you use DOEHS-IH more than other program offices?
- Do you feel unnoticed?
- Do you feel like you have done great IH things with DOEHS-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 DOEHS-IH Super Star.
Upcoming Training

Did you know that AIPH has self-paced, self-enroll, self-development opportunities that provide academic CEUs, and in some cases CNEs and CMEs? The Army Institute of Public Health has a large selection of free online courses. That's right FREE!

Using the Army Blackboard Learn platform, AIPH is able to offer you much sought after courses like the 8 hour HAZWOPER Refresher Course, industrial ventilation, statistics and many many more. In the past, the AIPH Blackboard courses were dependent on Defense Connect Online recordings; however as DCO sunsets, our existing material is now being converted to a new format that automatically allows recording to play within Blackboard. As we transition to our new lesson format, you will see our existing material being refreshed and will notice brand new material being developed and made available.

Want to self-enroll? Visit https://aiph-dohs.ellc.learn.army.mil and browse the AIPH-DOHS catalog (hovering over a self-enroll course will provide a grey drop down arrow that when selected will automatically put the course in your 'my courses' list)