

# NIOSH eNews

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## From the Director's Desk

### Protecting Emergency Responders and Workplaces



Labor Day provides an opportunity to reflect on the importance of preventing work-related injuries, illnesses, and deaths. Since September 11, 2001, this mission has encompassed an added dimension, that of countering the catastrophic threat of terrorist attacks in the occupational setting. NIOSH works closely with diverse outside partners to advance that mission, making the workplace more secure against the threat of terrorism.

Drawing from its technical expertise in meeting traditional occupational safety and health challenges, NIOSH has advanced new methods, techniques, and resources to bolster preparedness for emergency responders, employees, and businesses:

- In record time after 9/11, NIOSH established a new program to test and certify respirators for emergency responders against chemical, biological, radiological, and nuclear (CBRN) exposures. By Spring 2002, the first certifications for self-contained breathing apparatus (SCBA) began under the program; currently, as NIOSH continues SCBA testing and certification, similar regimens for air-purifying respirators and escape hoods are being established. For the latest information on new criteria, new certifications and ongoing dialogue with stakeholders, go to the website <http://www.cdc.gov/niosh/npptl/>.
- NIOSH has issued technical guidance to help building owners and safety managers safeguard ventilation systems in offices and other buildings from CBRN attacks. These recommendations can be found at <http://www.cdc.gov/niosh/bldvent/2002-139.html>. A more detailed guidance document for designing and maintaining air filtration components in ventilation systems can be found at <http://www.cdc.gov/niosh/docs/2003-136/2003-136.html>.
- NIOSH is working with other agencies and organizations to develop, validate, refine, and apply new technical methods that will provide early warning of workplace bioterrorism contamination, a more accurate basis for determining risks from bioterrorism exposures, and new tools for safeguarding buildings and other facilities.

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- NIOSH provides a special web-based topic page to help businesses prepare for terrorist-related emergencies, <http://www.cdc.gov/niosh/topics/prepared>. An additional online database, currently under development, will provide guidance on controlling chemical, physical, radiological, and biological hazards.
- NIOSH funded baseline medical monitoring of World Trade Center rescue and recovery workers through the Mount Sinai Center for Occupational and Environmental Medicine and a consortium of clinics across the nation. Additional funding for two separate long-term monitoring studies of rescue and recovery workers and firefighters will be awarded later this year. For more information on this program, go to <http://www.wtcexams.org> or call 888-702-0630.
- NIOSH issued an easy-to-read fact sheet on respirator use and selection as part of emergency preparedness at home, <http://www.cdc.gov/niosh/npptl/npptlrespfact.html>.

### Information on Heat Stress and Electrical Safety

While many businesses and employees were affected by the power outages that occurred on August 14 in the Northeast and Midwest, the situation was particularly dangerous for the men and women working in the hottest part of the year without air conditioning. Additionally, during the power recovery, electrical repair workers and others faced potential risks as electricity returned to power lines and to heavy machines with moving parts. As New York and other areas recovered from the massive outage, NIOSH posted useful information on these two topics on our home page. Information on heat stress can be found on the Heat Stress Topic Page <http://www.cdc.gov/niosh/topics/heatstress>. For more information on electrical safety, visit the topic page <http://www.cdc.gov/niosh/injury/traumaelec.html>.



### Hearing Device Protector Compendium Now Available Online

The new NIOSH Hearing Protector Device Compendium is now available for online use. Based solely upon data submitted by manufacturers, the updated compendium offers several new features. The new online database is searchable by product type, manufacturer, and Noise Reduction Rating (NRR). Also, for each protector type search, the database is searchable by product features, such as helmet-mounted earmuff, custom-molded earplug, or foam earplug. Additionally, if the user enters a noise exposure level, the database will calculate the attenuation needed to provide a protected level between 75 and 85 decibels (dBA) using the NIOSH derating factors and a list of hearing protectors will be generated. There is a special page of information for hunters and shooters. The tutorials on how hearing protectors are tested for rating, how the ratings are calculated, and how to use the ratings have also been updated. There are links to each manufacturer's web site. The database is downloadable as an Adobe .PDF file. The website will constantly be updated as manufacturers provide data about new products so that users have access to the latest products. The compendium website is <http://www.cdc.gov/niosh/topics/noise/hpcomp.html>.



## New Study Finds Emergency Responders Feel Inadequately Protected Against Terrorism

A recent NIOSH-funded study by the RAND Science and Technology Policy Institute finds that emergency responders feel inadequately protected against the dangers of chemical, biological and radiological terrorist attacks. This groundbreaking study is based on interviews with 190 first responders from 83 organizations across the United States. Collectively, the emergency responders interviewed agreed that measures can be taken to reduce these risks, including:

- Protective equipment that meets the emergency responders' operational needs.
- Improved equipment that detects and monitors hazards.
- Equipment appropriate for non-specialist responders.
- Better integrated communications equipment.
- Enhanced communication systems.
- Improved ways to handle, inventory, maintain, and effectively use and deploy equipment at disaster scenes.
- More information on field performance of protective equipment.

NIOSH is helping to disseminate the report to inform stakeholders and to guide its own program for research on personal protective equipment and other protective measures. To view the full report, go to

<http://www.cdc.gov/niosh/npptl/randrpts.html>.

## Results From a New Tool to Monitor Pesticide Effects

You may be aware that California recently approved nine clinical laboratories to conduct tests that will better flag potential health effects from pesticides in agricultural employees who mix, load, and apply such chemicals. You may not be aware that the new methods used in these tests were developed through innovative university research that was partially supported by the NIOSH-funded Western Center for Agricultural Health and Safety. The research first found, five years ago, that test methods then used by labs under state rules to measure the biomarker cholinesterase (ChE) in the blood of pesticide-exposed workers did not provide optimal results and were not comparable from lab to lab. As a result, the state changed its rules to require that tests be consistent, and that conversion factors be developed. In subsequent work, the university researchers devised the improved procedure now used, along with a new standard to help in comparing lab results. Barry Wilson, Ph.D., at the University of California at Davis, led the research in partnership with his colleagues, students, and others in state agencies. For more information on the NIOSH Western Center for Agricultural Health and Safety, visit the website <http://agcenter.ucdavis.edu>.

## Agricultural Database Updated

Through a cooperative agreement between NIOSH and the University of Florida and technical assistance from the Southern Coastal Agromedicine Center, a NIOSH grantee, the National Agricultural Safety Database (NASD) provides a repository of information about health, safety, and injury prevention in agriculture. NASD is supported in part by the U. S. Department of Agriculture-Cooperative State Research, Education, and Extension Service (USDA-CSREES). To access the database, visit the NIOSH website <http://www.cdc.gov/niosh/nasd.html>.



## NIOSH at the National Safety Council Congress and Expo

Look for the NIOSH exhibit booth (#151) during the National Safety Council Congress and Expo in Chicago IL on September 8-10. Be sure to stop by and tell us what you think of eNews. New NIOSH publications and safety information will be available and NIOSH staff will be on hand to answer your questions. For more information on the National Safety Council and Expo visit the website <http://www.appcluster05.com/nsc2003splash.cfm>.

## Around NIOSH

### Diversity

NIOSH had the pleasure of mentoring 11 outstanding college students this summer under CDC's Project IMHOTEP, which is designed to enhance the skills and experience of minority students in the public health areas of epidemiology, biostatistics, and occupational safety and health. Sponsored by the Public Health Sciences Institute at Morehouse College, Project IMHOTEP is a valued resource for inspiring bright young people to pursue careers in health and safety for the increasingly diverse U.S. workforce. The talented students who worked with NIOSH this summer, assisting with research projects in areas ranging from hearing loss prevention to chronic obstructive lung disease (COPD) prevention, were Lakisha Anderson, Acacia Bledsoe, Tara Brinck, Jennifer Delgado, Alea Holman, Nicole Johnson, Manssa Muhammad, Erika Richardson, Camillae Stockett, Christopher Walker, and Dena Williams. For more information on Project: IMHOTEP, visit the website

<http://www.morehouse.edu/publichealth/imhotep/program.html>.

### NIOSH Seeking Director, Office of Extramural Programs

NIOSH is currently seeking candidates for the position of Director, Office of Extramural Programs. This position is located in Atlanta, Georgia and the application deadline closes on September 16, 2003. For more information on this position, contact Allison Davis in the Office of Extramural Programs at [adavis@cdc.gov](mailto:adavis@cdc.gov). To view the vacancy announcement, including specific responsibilities, go to

<http://www2.cdc.gov/hrmo/viewdetail.asp?AnnouncementNumber=10-03-013>.

### **Division of Applied Research and Technology (DART)**

A new Silica Partnership has been formed between NIOSH, the National Asphalt Paving Association, the Laborers' Health and Safety Fund of North America, the International Union of Operating Engineers, the Association of Equipment Manufacturers, milling machine manufacturing companies, and the Harvard School of Public Health, building on the existing partnership which successfully reduced asphalt fume exposure at roadway construction sites. The initial goal of the Silica Partnership is to determine if current dust suppression devices on milling machines are adequate for controlling worker silica exposure. If researchers confirm the finding of high silica levels at some milling sites, they will make recommendations regarding appropriate work practices or engineering controls for minimizing silica exposures. The Silica Partnership will then work to implement those recommendations. Recent studies have indicated that silica exposures may be elevated for some workers involved in road milling (pavement recycling) operations. For more information on this research project, contact Alan Echt at [ase0@cdc.gov](mailto:ase0@cdc.gov). For more information on silica, visit the NIOSH topic page <http://www.cdc.gov/niosh/topics/silica/>.

### **Division of Respiratory Disease Studies (DRDS)**

DRDS welcomes three new CDC Epidemic Intelligence Service (EIS) Officers. Lisa Benaise is currently working on the Health Hazard Evaluations of flavorings-related lung disease among microwave popcorn plant workers; Vinicius Antao is evaluating the Coal Workers' X-ray Surveillance Program (CWXSP); and Germania Pinheiro is conducting mesothelioma surveillance as part of the Work-Related Lung Disease Surveillance Program. Nancy Sahakian and Margaret Kitt have entered their second year as EIS Officers. Nancy has recently been involved with two DRDS projects: hard metal pneumoconiosis and cobalt-induced asthma in a hard metal manufacturing plant. Margaret's work has included a study of chronic beryllium disease and she is currently deployed to Afghanistan in support of a CDC Epi-Aid. Richard Kanwal recently completed the EIS program with DRDS and is now co-leader of the flavorings-related lung disease program and recently participated in the SARS and monkeypox investigations. To learn more about EIS, visit the program's website <http://www.cdc.gov/eis> or <http://www.cdc.gov/niosh/pdfs/2001-112.pdf>.



### **Division of Safety Research (DSR)**

The NIOSH Alert: *Preventing Deaths, Injuries, and Illnesses of Young Workers* is now available. This Alert provides the most current information on preventing injuries and illnesses among young workers. Providing a comprehensive update to the 1995 Alert on the same topic, DSR researchers updated statistics, added illustrative case studies, included discussion of health risks to young workers and detailed information on child labor laws. Additionally, particular effort was made to ensure that this Alert would appeal to the widest possible audience including information for parents, educators, employers, and youth. To access the online version of the Alert, visit the NIOSH website <http://www.cdc.gov/niosh/docs/2003-128/2003-128.htm>.



### **Division of Surveillance, Health Evaluations and Field Studies (DSHEFS)**

The newly published NIOSH study suggests an association between occupational exposure to ethylene oxide (EtO), a disinfecting agent, and increased risk for breast cancer in women. The study of 7,578 women found that those at the highest levels of exposure had a nearly two-fold increase over the expected incidence of breast cancer. Results of the study will help scientists design further studies that would be needed to make a definitive link. EtO has been classified as a potential occupational carcinogen for many years, and has been associated in past studies



with mammary tumors in animals, but human evidence was limited. The new study is reported in the journal *Cancer, Causes, and Control* 2003; 14:531-539. For more information on this project, contact Elizabeth Whelan at [eaw0@cdc.gov](mailto:eaw0@cdc.gov).

### **Education and Information Division (EID)**



NIOSH has updated and expanded its widely used online resource NIOSHTIC-2. The database is updated daily as reports are published and now includes full text access to the NIOSH Health Hazard Evaluation reports and Fatality Assessment and Control Evaluation reports. Newly enhanced software enables users to conveniently email their search results to themselves or others. NIOSHTIC-2 is a searchable bibliographic database of occupational safety and health publications, documents, grant reports, and other communication products supported in whole or in part by NIOSH. To access the database, go to the NIOSHTIC-2 website <http://www.cdc.gov/niosh/nioshtic-2>.

### **Health Effects Laboratory Division (HELD)**

Some studies suggest that occupational exposures to welding fumes may pose increased risk of serious respiratory, neurological, and reproductive effects, but the available data generally are too limited to offer conclusive answers. To help fill these challenging gaps, HELD researchers are developing new research that will use a special robotic welding arm.



Designed and installed with the help of welding industry partners, the arm can be programmed to weld under given specifications. Once fumes are generated from a given weld, they would be used in exposure studies under the National Occupational Research Agenda (NORA) to determine if given concentrations or compositions of fumes are linked with cellular and genetic changes that may give early warning of long-term effects. Those results will significantly increase scientific certainty in answering current questions, such as the question of whether welding fumes contain levels of manganese high enough to pose a risk for damage to the nervous system. Further information on NIOSH's research on welding fumes is available at <http://www.cdc.gov/niosh/welddata.html> or you can contact James Antonini, Project Officer at [jga6@cdc.gov](mailto:jga6@cdc.gov).

### **National Personal Protective Technology Laboratory (NPPTL)**

Ziqing Zhuang, a General Engineer at NPPTL, has recently been appointed as the Editor for *The Journal of the International Society for Respiratory Protection* (JISRP, ISSN 0892-6298), the official journal of the International Society for Respiratory Protection (ISRP). The ISRP, <http://www.isrp.com.au/>, provides an educational and informational service to all individuals involved in respiratory protection. Ziqing Zhuang is responsible for maintaining the scientific integrity of the journal.

### **Pittsburgh Research Laboratory (PRL)**

PRL, in conjunction with the Bituminous Coal Operators Association, the United Mine Workers of America, the National Mining Association and the Mine Safety and Health Administration, sponsored a workshop on July 30, 2003 in Louisville, KY to discuss control technologies for reducing miners' exposures to particulate matter and gaseous emissions from the exhaust of diesel-powered vehicles in underground coal mines. This workshop was designed to help managers, maintenance personnel, safety and health professionals, and ventilation engineers in selecting and implementing diesel particulate filters and other control technologies in their mines. More than 130 persons, representing more than 20 different mining companies, were in attendance. For more information on the workshop, contact Bob Timko at [RTimko@cdc.gov](mailto:RTimko@cdc.gov).

## Spokane Research Laboratory (SRL)

More than 400 safety professionals, managers, state and federal regulatory personnel, legislators, university researchers met June 16-20 in Reno, Nevada for the Training Resources Applied to Mining (TRAM) conference. In addition to SRL, the conference was co-sponsored by the Mine Safety and Health Administration (MSHA), the Mine Safety Institute of America, and the National Society of State Mine Inspectors and Training Agencies. This was the first year that the conference was held in the western United States. Due to the outstanding success of the conference, plans are currently being made for next year's meeting in Salt Lake City, Utah with the theme of "Train the Trainer."

## Communication Products Highlight

### Mining Fact Sheets

NIOSH has begun producing one-page mining fact sheets covering a variety of topics of general interest relating to mining operations, workers, fatalities, nonfatal lost-time injuries, and occupational illness. Nine fact sheets are currently available at <http://www.cdc.gov/niosh/mining/data/facts.html>.



### Metalworking Fluids topic page

A new NIOSH website Topic Page provides a concentrated resource on metalworking fluids (MWFs) and a convenient portal to additional information. MWFs are used to reduce heat and friction and to improve product quality in industrial machining and grinding operations. Some 1.2 million workers are potentially exposed to MWFs resulting in a variety of health effects. For more information on this topic, including information on NIOSH recommended exposure limits and NIOSH published documents on MWFs, visit the topic page <http://www.cdc.gov/niosh/topics/metalworking/>.



### FACE Brochure

NIOSH has recently released a new brochure highlighting the Fatality Assessment and Control Evaluation (FACE) Program. FACE is a research program designed to identify and study fatal occupational injuries. Information gathered from either the in-house or the state-based FACE programs are used to make recommendations for preventing similar deaths in the future. To learn more about the FACE Program, visit the NIOSH website <http://www.cdc.gov/niosh/face/faceweb.html>. To access a printable version of the FACE Brochure, go to <http://www.cdc.gov/niosh/docs/2003-146/pdfs/2003-146.pdf>.



## Upcoming Events

### **September Workshop on Fire Detection Technology**

NIOSH will hold a workshop on September 4, 2003, at the Pittsburgh Research Laboratory (PRL) in Bruceton, Pennsylvania, to discuss fire detection technology for underground coal mines that utilize mine-wide monitoring systems. For more information on the workshop, contact Chuck Lazzara at (412) 386-6628 or email [clazzara@cdc.gov](mailto:clazzara@cdc.gov). To register for the workshop or for directions to PRL, contact Rose Ann Crotsley at (412) 386-6609 or email [rcrotsley@cdc.gov](mailto:rcrotsley@cdc.gov).

### **Design for Safety and Health in Construction Conference**

The *Designing for Safety and Health in Construction Conference* will be held in Portland, Oregon on September 15-16, 2003. NIOSH is co-sponsoring the conference along with the University of Oregon Labor Education and Research Center, the Center to Protect Workers' Rights, the Oregon State University Construction Engineering Management and Industrial Design and Construction. The conference brings together experts in design and construction, researchers and policy makers to assess current practices and identify future safety-in-design needs in the construction industry. For more information on the conference, go to <http://darkwing.uoregon.edu/~lerc/>.

### **International Fishing Industry Safety and Health Conference (IFISH II)**

The second International Fishing Industry Safety and Health Conference (IFISH) will be held in Sitka, Alaska on September 22-24, 2003. IFISH is an opportunity to learn the latest developments in commercial fishing safety and injury prevention research, help build an international fishing safety coalition and promote action to prevent injury in the commercial fishing industry. A stimulating program will include keynote speakers, the presentation of scientific papers and posters, and workshops. To learn about the conference, visit the IFISH II website <http://www.uaf.edu/seagrant/amsea/ifish/>.

### **The Future of Rural Peoples: Rural Economy, Healthy People, Environment, Rural Communities**

NIOSH, along with the University of Saskatchewan, is co-sponsoring the fifth international symposium on the future of rural peoples on October 19-23, 2003 in Saskatoon, Saskatchewan, Canada. The symposium will bring together researchers, policy makers, practitioners and rural people to look at current science and best practice approaches to achieving and maintaining healthy people, economies, environments, and communities in rural areas. To learn more, visit the conference website <http://iareh.usask.ca/symposium2003/index.php>

### **NOIRS 2003**

NIOSH, in association with its public and private sector partners, will host the third National Occupational Injury Research Symposium (NOIRS) on October 28-30, 2003 in Pittsburgh, Pennsylvania. This symposium is a means of implementing the National Occupational Research Agenda (NORA) for traumatic occupational injuries. NOIRS will provide a national forum for developing collaborations, identifying best practices, and sharing innovative technological approaches for injury research and prevention. The symposium will consist of contributed oral presentations in concurrent sessions, organized sessions around topics of special interest, and poster presentations. For more information on NOIRS 2003, visit the NIOSH website

<http://www.cdc.gov/niosh/noirs/noirsmain.html>.





### **First International Scientific Conference on Occupational and Environmental Health**

The first International Scientific Conference on Occupational and Environmental Health will take place in Hanoi, Vietnam on November 12-14, 2003. NIOSH is cosponsoring the conference along with organizations and agencies in United States and Vietnam. The conference will provide an opportunity for delegates to exchange scientific information on occupational and environmental health in southeast Asia. For more information on the conference, contact the Vietnam Association of Occupational Health at [nioeh@hn.vnn.vn](mailto:nioeh@hn.vnn.vn) or the University of Washington's Northwest Center for Occupational Health and Safety at [ce@u.washington.edu](mailto:ce@u.washington.edu).

### **National Chronic Obstructive Pulmonary Disease (COPD) Conference**

The first National Chronic Obstructive Pulmonary Disease (COPD) Conference will be held in November 13-15, 2003 in Arlington, Virginia. The goal of the conference is to provide scientific and societal background concerning COPD to further education, awareness, and improved care in the United States. The conference will provide an opportunity to meet and to actively participate in state-of-the-art workshops, lectures, and meetings. For more information, visit the conference website [http://www.uscopd.com/index\\_confer.html](http://www.uscopd.com/index_confer.html)

#### **Editor's Note**

In the August edition, it was incorrectly stated in the story on the Division of Surveillance, Hazard Evaluations and Field Studies (DSHEFS) that the paper "Indoor Particles and Symptoms Among Office Workers" received the 2003 Kenneth Rothman Epidemiology Prize. The paper received honorable mention for this prize.

