

The Research and Training Arm of the Building and Construction Trades Department, AFL-CIO

PRESIDENT'S COLUMN

Chrome You Don't Want

Hexavalent chromium (also called chrome 6) can kill, yet OSHA is proposing a construction standard for that metal that is weaker than the standard proposed for general industry. Under a court order to issue a health standard with a new permissible exposure limit (PEL) by January 2006, OSHA has proposed a PEL of 1 microgram per cubic meter of air—more than 50 times lower than the standard we have now (of 52).

That's good. But, in our industry, welders and others exposed to chrome 6 in the air will still be at risk of asthma and lung cancer. Chrome 6 is in stainless and other specialty steels, plus some paints.

The Building and Construction Trades Department, with the technical expertise of the Center to Protect Workers' Rights (CPWR), has been actively involved in this OSHA rulemaking for years; public hearings began in February.

We believe the rule should require employers to measure to make sure construction workers are not overexposed to the toxin and then protect them, as needed.

Equally serious in our view: the construction proposal excludes Portland cement, with OSHA saying it may issue "guidance documents" about the cement instead. Guidance documents don't require anything. Contact with chrome 6 in Portland cement causes severe, incurable skin problems in some cement masons, bricklayers, and others. The allergic dermatitis, known among workers as "cement poisoning," can force them to leave the trades. Yet cutting chrome 6 levels in cement in some other countries has sharply reduced the skin problems.

The general industry standard covers Portland cement and requires that employers



President Sullivan

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Vacuum Set-Up Helps Reduce Silica Dust

Using a ventilated grinder to remove old mortar from masonry can protect workers from dangerous levels of crystalline silica dust, a study at the University of Iowa has found. The researchers, led by William Heitbrink, PhD, present their draft recommendations for using the system in a new report for the Center to Protect Workers' Rights.

Mortar removal, called tuckpointing, is one of the dustiest construction jobs. Workers who inhale the dust are at risk of developing silicosis, a disabling, permanent, and sometimes fatal lung disease. Because the need for better worker protections is urgent, the authors and CPWR decided to share some interim findings before the study is complete.

The dust control system is an industrial vacuum cleaner, hose, and hood (shroud) affixed to the grinder. The researchers tested different vacuum cleaner models and monitored dust levels near tuckpointers who were trying the vacuums. The ventilated grinders lowered workers' silica exposures enough that they could wear a respirator with an assigned protection factor of 10. Such half-mask air-purifying respirators are much less heavy and bulky than the devices usually required for protection during tuckpointing.

The new system allows a clearer view of the work surface and reduces clean-up time. One company that has been using the ventilated grinder said the system they've used has not affected the rate of work, the report said.

The researchers warn that the ventilated grinders have limitations:

- Some of the vacuum cleaners can clog and quickly lose their ability to capture dust.
- Proper work practices are always needed for effective dust control.
- The equipment does not work well on uneven surfaces or on masonry missing a lot of mortar.
- Workers still need to wear respirators while tuckpointing with the ventilated grinders. The test data were collected during tuckpointing outdoors. During work indoors, much more protective respirators may be needed, even with the new system.

Exposure monitoring is needed to know which respirator is required. For more information on respiratory protection programs, see: www.osha.gov/SLTC/etools/respiratory/index.html.

The report, *Protecting Tuckpointing Workers from Silica Dust: Draft Recommendations for a Ventilated Grinder*, and a hazard alert on respirators for workers (in Spanish or English) are at www.cpwr.com or call CPWR at 301-578-8500.

To learn more about the study, contact: William-Heitbrink@uiowa.edu, 319-335-4213.



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New Law in New Jersey Bans Dry Cutting of Masonry

Research by CPWR and others has shown that dry cutting or dry grinding of masonry or concrete results in high exposures to silica dust among workers, with the highest measured personal exposure more than 200 times the NIOSH recommended exposure limit (REL) for silica. Use of tools that have local-exhaust ventilation and water-fed cutting systems can dramatically reduce exposures and the risk of silicosis—a sometimes deadly lung disease. (See Vacuum Set-Up, page 1.)

Early in 2004, the Bricklayers Union and other labor organizations in New Jersey worked with legislators to reduce worker exposures to silica. The proposal was to prohibit dry cutting of masonry and require use of water or engineering and work-practice controls for the dust,

unless a contractor can show that such controls are not feasible. Acting Governor Richard J. Codey signed the bill and it became law December 9, 2004. If no other protections are possible, the employer is to provide full-face respirators as part of a complete, OSHA-approved program.

OSHA has a permissible exposure limit (PEL) for silica and began a special emphasis program in 1996 focusing on silica hazards. The agency held stakeholder meetings in 1999 and has proceeded, but as of March 2005, still had not proposed a comprehensive standard.

New Jersey's move is believed to be the first such state law. A copy of the law can be downloaded from www.njleg.state.nj.us/2004/Bills/PL04/172_.PDF.

Report Calls for Studies of Mixed Exposures

Workers seldom come into contact with one hazard at a time. In most cases, a combination of hazards—"mixed exposures"—are encountered on the job. A new report from the National Institute for Occupational Safety and Health (NIOSH) says the old "one-chemical-at-a time" approach to occupational health doesn't always work, partly because toxic hazards can interact.

A construction worker exposed to noise and some metals or solvents, could have a higher risk of hearing loss than would be caused by the noise alone. Or, a pipefitter may be exposed to nickel fumes when using high-alloy welding rods on one job and asbestos on the next job, resulting in a career of mixed-exposure risk.

Government, university, and industry and labor representatives, including CPWR staff, produced the new

report, *Mixed Exposures Research Agenda—A Report by the NORA Mixed Exposures Team*. It says the construction industry contains many mixed-exposure environments with old threats from in-place materials like asbestos and new hazards from materials such as epoxy glues that can put many trades at risk. NORA, NIOSH's National Occupational Research Agenda, identified "mixed exposures" as a research priority area in 1996.

The report's recommendations include (1) research to characterize and rank mixed exposures in construction and other industries and (2) partnerships among union programs, materials engineers, and industry organizations to create and market engineering controls to reduce the risks. The report, number 2005-106, is at www.cdc.gov/niosh. Or call 1-800-35-NIOSH (356-4674) for a free copy by mail.

Chrome 6 Health Threat

(continued from page 1)

measure worker exposures; it makes no sense to treat construction workers differently.

For now, only construction workers employed by enlightened contractors are protected. The best way to reduce exposure to welding fume is through local exhaust ventilation (LEV). LEV is designed to capture fumes near the weld, before the worker

can inhale them. CPWR has been researching LEV in welding for a decade.

(For abrasive blasting, use ventilation along with type CE abrasive blasting respirators.)

To learn more, for instance, go to www.eLCOSH.org, a website CPWR coordinates; click on **Trade: Welder: Cheap Lightweight Unit....** To learn about cement-related skin problems, click on Hazard: Chemical: Cement.

The Building Trades Labor-Management

Organization of Washington State, www.builditsmart.org, has produced a welding awareness video that shows exposure levels without a respirator or LEV; the video will be posted on eLCOSH in the spring.

On www.cpwr.com, under **What's New**, there's a new CPWR report, *Protecting Tuckpointing Workers*—about the use of LEV to protect against some masonry dust. Under Hazard Alerts, you'll find fliers for workers—in English and Spanish—on skin problems, welding fumes, respirators, and 22 other topics.

Hispanics Lack Health Insurance; Union Members Are Better Off

Despite Hispanic workers' substantial contributions to the economy, they are suffering a health care crisis. Hispanic construction workers are less likely than non-Hispanic construction workers to have health insurance, a CPWR study has found, although union membership improves the situation. The gap in health insurance coverage has been getting worse (chart 1), even though studies have shown the importance of preventive health care.

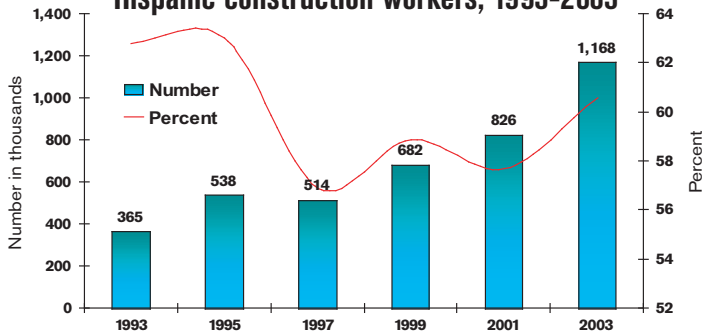
By 2003, more than one million, or 60%, of Hispanic construction workers lacked health insurance. The CPWR study, headed by Sue Dong, data center director, analyzed U.S. Bureau of Labor Statistics surveys.

The data show, however, that union membership greatly increases the chance that a Hispanic worker—or any worker—

will have health insurance. In 2003, 48% of Hispanic construction workers who were union members had employer- or union-provided health insurance compared with 18% of such workers who did not belong to a union. Employer- or union-provided health insurance is what most workers have (chart 2). Part-time status, work for small companies, working in an unskilled occupation, a low educational level, low income, and being under 40 years old are tied to lower chances of having health insurance, for all construction workers.

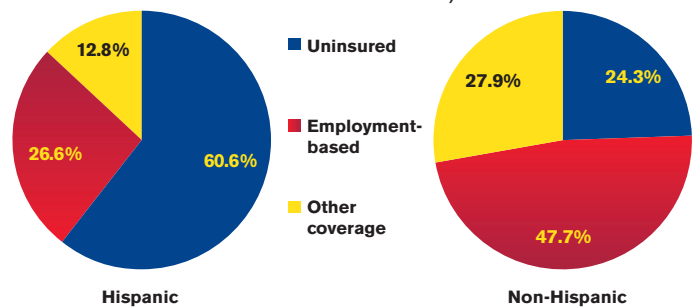
Findings of this research were presented at the 2004 NIOSH conference *Steps to A Healthier US Workforce* in Washington, D.C. A final report is being prepared for publication. (See injury claims story, page 4.)

1. Numbers and rates of the uninsured among Hispanic construction workers, 1993-2003



Source: March Supplement to BLS Current Population Survey, multiple years

2. Health coverage of Hispanic and non-Hispanic construction workers, 2003



Source: 2004 March Supplement to BLS Current Population Survey

Elevator Safety May Be on the Rise

The International Union of Elevator Constructors has since 1999 been working with other industry groups to establish licensing requirements for elevator mechanics. Among other things, the licensing requires three years' experience (as a helper or apprentice) and completion of an approved training program (or passing an exam). Continuing education is required for license renewal, every one or two years, depending on the jurisdiction.

"Licensing makes for a safer environment for workers and the public alike," said Dana A. Brigham, IUEC general president. "We all came to this trade to have a better life not a shorter one."

Thus far 20 states have adopted such laws: Alabama, California, Connecticut, Florida, Georgia, Hawaii, Illinois, Indiana, Massachusetts, Maine, Maryland, Michigan,

Minnesota, Nevada, New Hampshire, Oregon, Rhode Island, Vermont, Washington, and Wyoming.

The proposed laws require that participants follow national consensus codes on elevator safety and inspection of all conveyances, as well. The other participating organizations are the National Elevator Industry Inc, the Elevator Contractors of America, the National Association of Vertical Transportation Professionals, and the National Association of Elevator Safety Authorities International.

It is difficult to compare elevator-related death or injury statistics from year to year, especially over such a short time, but a CPWR report (*Deaths and Injuries Involving Elevators or Escalators, revised 2004*) found about 15 deaths per year among mechanics working on or near elevators or escalators in the decade through 2001.

Study: Training May Cut Injury Claims

Safety and health training appears to help reduce work-related injuries among construction laborers, especially the youngest ones, a new CPWR study has found. A pilot study of 8,000 construction laborers in Washington state showed a lower overall rate of workers' compensation claims compared with laborers who did not have the training (see chart).

Xiuwen (Sue) Dong, data center director, and her co-workers analyzed union training and health statistics and workers' comp claims in 1993 and 1994 by members of the Laborers' union. The numbers showed that younger male workers—up to age 34—had the highest risk of work-related injury.

Training appeared to make the most difference for workers aged 16 to 24; just over 17% of 100 full-time laborers in that group who were trained filed workers' comp claims in the two years studied, compared with 30% for the other laborers in that age group. The researchers controlled the statistics to rule out any effects of differences in age and gender in the groups being compared.

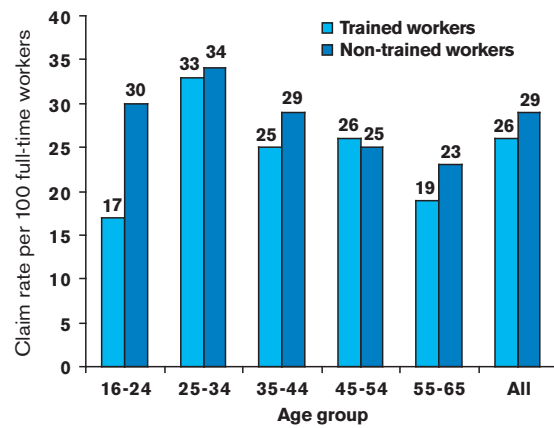
Laborers are in one of the most dangerous occupations, with 25 work-related deaths from injuries per 100,000 employed in 2003, compared with 11.7 for all of construction. The research results could be a breakthrough. While common sense says safety training can reduce worker injuries, it has

been difficult for scientists to demonstrate that idea statistically. Without such information, policymakers are not always sure how best to focus injury-prevention efforts.

What is known is, more research is needed, because the results cover only a short time.

This research was reported in the *Journal of Occupational and Environmental Medicine*, 46 (12): 1222-28, Dec. 2004.

Workers' compensation claim rates, by age and training status, Laborers, Washington state, 1993-94



Ether Cut from EPA List, But Still a Hazard

In November 2004, the U.S. Environmental Protection Agency (EPA) removed ethylene glycol monobutyl ether (EGBE) from the list of toxic air pollutants the agency regulates under the Clean Air Act. This action was in response to a 1997 petition from the American Chemical Council.

EGBE, also known as ethylene glycol butyl ether, 2-butoxy ethanol, and butyl Cellosolve®, is used in hydraulic fluids and water-based coatings. Look out for it in water-based varnishes, enamels, and spray lacquers and in vinyl and acrylic paints and varnishes. EGBE is used also as a solvent for some grease and grime cleaners. Painters, operating engineers, maintenance workers, and laborers may be most at risk of exposure.

EPA concluded that “potential outdoor exposures to EGBE may not reasonably be anticipated to cause human health or environmental problems.” But EPA’s ruling, affecting manufacturers, does not mean EGBE is safe for workers.

You can be exposed to EGBE through your skin, eye contact, and by swallowing—for instance, if it’s on your hands when you eat or smoke. You can inhale EGBE if you spray

coatings or are exposed to hot hydraulic fluids that contain it.

Immediate effects of exposure to EGBE include irritation of the eyes, nose, mouth and throat, and headaches, dizziness, lightheadedness, confusion and passing out (from large exposures). Long-term effects can include liver and kidney damage, anemia, and possible damage to sperm and developing fetus.

Ask to see the material safety data sheet (MSDS) for substances you’re using on the job.

OSHA requires engineering controls such as local-exhaust ventilation for construction workers if exposure to EGBE in the air is higher than the permissible exposure limit of 50 parts per million (ppm). (The National Institute for Occupational Safety and Health, NIOSH, recommends 5 ppm.) Respiratory protection is required when other controls don’t reduce the exposures enough.

Use neoprene gloves whenever handling liquids that contain EGBE. When spraying, wear a full-face respirator with an organic vapor cartridge and P-95 filter. Use ventilation or respirators when working on hot engines that may contain the hydraulic fluids.

NIOSH Worker Health Chartbook Adds Construction Focus

The National Institute for Occupational Safety and Health (NIOSH) has published its Worker Health Chartbook, 2004, which outlines occupational illnesses, injuries, and deaths nationwide. For this second edition, for the first time, a section focuses on construction. The Center to Protect Workers' Rights (CPWR) contributed the construction text and charts in chapter four.

CPWR provided information on factors associated with fatal and nonfatal injuries and illnesses in construction workers. Charts focus on 12 trades: brickmasons, carpenter, drywall installers, electricians, ironworkers, laborers, operating engineers, painters, plumbers, roofers,

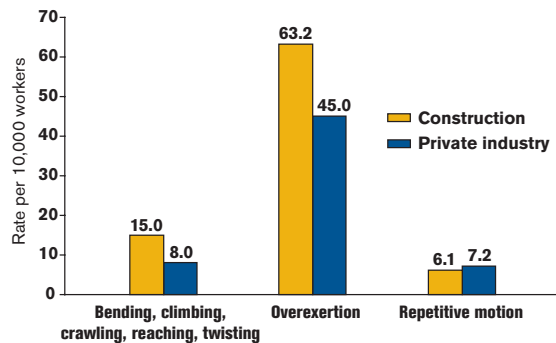
truck drivers, and welders/cutters. CPWR uses such information, from federal government surveys, to target its own research and other activities.

In 2001, the most recent year for which data were available when the book went to press, construction employed an estimated 9.6 million people. Most were 25 to 54 years old (75%), male (90%), and white (91%). Over the years, construction has ranked among industries with the highest rates of fatal and nonfatal work-related injuries. For instance, the U.S. Bureau of Labor Statistics (BLS) reported the construction death rate in 2001 was 13.3 per 100,000 workers, higher than in all industries, except agriculture and mining. The 1,265 fatal work-related injuries in construction that year were the highest recorded since 1992, when the BLS Census of Fatal Occupational Injuries was begun (although the number dropped in 2002).

For the decade leading up to 2001, carpenters made up the largest share of construction workers (13%), followed by construction laborers (9%). In 1992-2001, the largest proportion of fatal injuries shifted from construction workers aged 25 to 34 to those aged 35 to 44; the construction workforce is aging. Falls to lower levels accounted for the highest number (410) of fatal injuries among construction workers.

The chart book, DHHS NIOSH Publication 2004-146, is available by calling 1-800-35-NIOSH or online at www.cdc.gov/niosh/docs/chartbook/.

Rates of nonfatal occupational injury and illness cases with days away from work in construction by selected ergonomic events or exposures, 2001



NIOSH chartbook, 2004, figure 4-28

Medical Screening Programs Expanded

The Center to Protect Workers' Rights is arranging with the U.S. Department of Energy (DOE) to expand the Building Trades National Medical Screening Program. Free medical screening exams are to be provided for construction workers at these sites: Fernald, Ohio; Mound, Ohio; Kansas City Plant, Missouri; Pinellas, Florida; and INEEL, Idaho.

At the request of and with state and local building trades councils in these areas, the Building and Construction Trades Department has been pushing to establish these screening programs for construction workers throughout DOE's nuclear weapons complex. CPWR since 1996 has coordinated screenings at

other facilities. The screenings have covered former construction workers at Hanford, Washington; Savannah River, South Carolina; Oak Ridge, Tennessee; Portsmouth, Ohio; and Paducah, Kentucky. Grants from DOE pay for these programs. The goal is to identify possible work related illnesses—silicosis, beryllium disease, and some cancers—related to work at the sites.

CPWR, in partnership with the University of Cincinnati Medical Center, Duke Medical Center, and Zenith Administrators, Seattle, works with local building trades councils to arrange the screenings. The new program should start by summer 2005. For more information, call 1-800-866-9663.



U.S. Department of Labor To Take Over Comp Program for Ill DOE Workers

In October 2004, the president signed a law that replaces Part D of the Energy Employees Occupational Illness Compensation Program Act (EEOICPA) with a new program called Part E. Now, the Department of Labor is responsible for administering the new program. And the program will include compensation paid from the federal treasury. Under the old program, workers had to apply for state workers' compensation, a process that was notoriously slow.

The Building and Construction Trades Department estimates that at least 700,000 building trades members have worked at Department of Energy (DOE) facilities since World War II. An estimated 18 to 33% of those workers could be eligible for compensation, up to about 230,000 workers or their survivors. But only a small number have applied.

EEOICPA provides benefits to Department of Energy (DOE) contractor and subcontractor employees (or their eligible survivors) for illnesses caused by exposure to toxic substances while working at a DOE facility. Also, local health and welfare funds could get back from the government millions of dollars paid to treat illnesses caused by exposures in DOE facilities.

Part E grants employees who qualify a cash payment based on the level of impairment and/or wage

loss if they develop an illness as a result of exposure to a wide range of toxic substances at a DOE facility. Medical benefits will be available also to qualified employees for treatment and care of the occupational illness, including prescribed drugs, travel to and from medical providers, home health care, nursing home care, and assisted living. Eligible survivors may receive federal compensation, if the employee's death was caused or contributed to by the work-related illness.

The Department of Labor (DOL) has been administering EEOICPA Part B, which continues. DOL has issued more than \$1 billion in compensation and medical payments to more than 13,000 claimants. Part B provides a lump sum payment of \$150,000 and medical expenses to current and former DOE employees who became ill as a result of exposures to radioactive materials, beryllium, or silica. DOE contractor employees and some survivors may also be eligible. Some survivors of covered employees may be eligible for the lump sum compensation of \$150,000.

Everyone who filed claims under the old DOE program, Part D, should get a letter from DOL explaining how their claims will be addressed under the new program. To learn more, call 1-866-888-3322 or go to www.dol.gov/esa/owcp_org.htm. (And see the story on page 5.)

Web Site: www.cpwrr.com



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