



A Newsletter of
The University
of Iowa's
WORKSAFE

IOWA Occupational Medicine
Associates Network.

Iowa's university-affiliated
statewide network of
occupational medicine
providers.

Vol. 7 No. 1 Spring 2000



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OSHA Ergonomics Proposal Unveiled

Ergonomics is the science of fitting the job to the worker. Ergonomics programs can prevent work-related musculoskeletal disorders that occur when there is a mismatch between the worker and the task. Each year 1.8 million workers experience injuries related to overexertion or repetitive motion, and 600,000 are injured severely enough to require time off work. OSHA's proposed standard is designed to help prevent these injuries.

An average of 300,000 workers can be spared from painful, potentially disabling, injuries, and \$9 billion can be saved each year under a proposed ergonomics

program standard announced by the Occupational Safety and Health Administration.

"Work-related musculoskeletal disorders such as back injuries and carpal

tunnel syndrome are the most prevalent, most expensive and most preventable workplace injuries in the country," said Secretary of Labor (continued on page 4)



Iowa Incidents Highlight Carbon Monoxide Dangers

"Iowa public health officials investigated three sequential outbreaks of carbon monoxide (CO) poisoning during a 6-month period, resulting from exhaust emissions from LP gas-powered forklifts operated in enclosed industrial settings. A combination of poorly tuned forklifts coupled with inadequate ventilation exacerbated subsequent exposures to persons working in these facilities. Recognition of CO poisoning was delayed. Diagnosis and treatment was inadequate and inappropriate when patients entered the health care system. The investigation clearly shows that businesses need to improve forklift maintenance and install monitoring equipment. Likewise, the medical community needs to improve efforts to screen patients for suspected CO poisoning and refer affected patients to hyperbaric oxygen centers."

— Centers for Disease Control and Prevention

National officials are using three incidents in Iowa of carbon monoxide poisoning as a warning to businesses across the country that use propane-power forklifts. The three Iowa incidents all dealt with LPG forklifts that were either used

in a space lacking proper ventilation and/or machines that weren't properly tuned. Additionally, the Iowa incidents were compounded by medical providers not suspecting CO poisoning as the source of the illness when patients sought medical attention.

(continued on page 7)



Measures Urged to Reduce Workplace Needlestick Injuries

Federal health and safety officials recommended recently that employers adopt strategic measures to protect the nation's 8 million health care workers from job-related injuries caused by needles in syringes, intravenous delivery systems, and related medical devices.

"Today's health care workforce faces a multitude of risks," said Linda Rosenstock, director of the National Institute for Occupational Safety and Health (NIOSH). "We know that needleless devices and safe needle devices can save lives. We must do everything we can to protect the health care workers who have devoted their lives to keeping America

healthy."

Every year 600,000 to 800,000 occupational needlestick injuries are estimated to occur and can lead to serious or potentially fatal infections with bloodborne pathogens such as hepatitis B virus, hepatitis C virus, or human immunodeficiency virus (HIV). The precise number of injuries is not known because needlesticks often go unreported. The risk of a bloodborne infection may not be immediately recognized, and symptoms may not become apparent until weeks or months after the needlestick.

NIOSH recommendations for work-related needlestick injuries are outlined in a new

bulletin, "NIOSH Alert: Preventing Needlestick Injuries in Health Care Settings." Developed in collaboration with other centers in the Centers for Disease Control and Prevention (CDC) and with extensive outside scientific review by diverse industry, labor, and public health organizations, the Alert provides detailed guidance and assistance to employers, workers, and others in reducing needlestick injuries.

"Building on the success that some institutions have achieved in reducing such injuries by as much as 88 percent, these suggestions offer achievable, practical guidance for protect-

ing the nation's growing workforce of health care employees," said Rosenstock.

NIOSH recommends that the use of needles be eliminated where possible. If safe and effective alternatives to needles are not available, devices with safety features such as shields and sheaths should be used. Devices should be selected, used, and evaluated as part of a comprehensive program in which safe work practices, such as prohibiting recapping, are established under written procedures, and workers are trained in those practices. Each health care setting should have its own carefully tailored program, developed with front line worker input and review.

Hollow-bore needles such as those used in syringes present the greatest risk for needlestick, but potential for injury exists whenever any sharp device is used, the NIOSH Alert reports. Most reported needlesticks involve nurses, but laboratory staff, doctors, housekeepers, and other health care workers are also injured.

The Alert suggests examples of devices that may reduce the

risk of needlesticks, but advises that no one device will be appropriate or effective for every workplace. Examples of such devices include but are not limited to:

- Needle-less devices, such as connectors for intravenous delivery systems that use blunt or valved ends rather than needles for attaching one length of IV tubing to another.
- Devices in which safety features are an integral part of the design, such as sheaths and shields over needles.
- Devices that operate passively without requiring user activation, such as an IV connector with a permanent rigid housing over the needle.
- Devices designed so that the user can tell easily whether the safety feature is activated, such as a visually obvious needle cover or the audible sound of a protective sheath being engaged.

The NIOSH Alert is available online at www.cdc.gov/niosh.

Source: National Institute for Occupational Safety and Health.

OSHA Revises Bloodborne Pathogens Compliance Directive

A new directive issued by the Occupational Safety and Health Administration (OSHA) will help minimize serious health risks faced by workers exposed to blood and other potentially infectious materials. Among the risks are human immuno deficiency virus (HIV), hepatitis B and hepatitis C.

The directive guides OSHA's compliance officers in enforcing the standard that covers occupational exposure to bloodborne pathogens and ensures consistent inspection procedures are followed. It updates an earlier directive issued in 1992 and reflects the availability of improved devices, better treatment following exposure and OSHA policy



interpretations.

"We must do everything we can to protect workers who may be at risk of exposure to bloodborne diseases," said Secretary of Labor Alexis M. Herman. "This directive doesn't place new requirements on employers, but it does recognize and emphasize the advances made in medical technology. And it reminds employers that they must use readily-available technology in their safety and health programs."

The revised directive emphasizes the importance of an annual review of the employer's bloodborne pathogens program and the use of safer medical devices to help reduce needlesticks and other sharps injuries. OSHA does not advocate the use of one particular medical device over another. The directive also highlights basic work practices, personal protective equipment and administrative controls.

The emphasis on engineering controls

results from OSHA's request last year for ideas and recommendations on ways to better protect workers from contaminated needles or other sharp objects.

"We received nearly 400 comments from health care facilities, workers and others," said OSHA Administrator Charles N. Jeffress. "They told us that safe medical devices already available are effective in controlling hazards and that wider use of such devices would reduce thousands of injuries each year."

The revised directive also includes detailed instructions to compliance officers on inspections of multi-employer worksites, such as home health services, employment agencies, personnel services, physicians and health care professionals in

independent practices, and independent contractors.

Also included in the directive are decontamination requirements, guidelines on hepatitis vaccinations and post exposure treatments, and employee training.

OSHA issued a final regulation on occupational exposure to bloodborne pathogens in 1991 to protect nearly six million workers in health care and related occupations at risk of exposure to bloodborne diseases. Jeffress said the agency will review the standard to determine whether its revision is warranted.

The directive can be accessed from the OSHA home page at (<http://www.osha.gov>) under the "Directives" link. Copies can also be obtained from the agency's Publications Office by calling (202) 693-1888.

Source: Occupational Safety and Health Administration.

Occupational Health Symposium — March 22-23, 2000

The 2nd Annual Occupational Health Symposium is scheduled for March 22-23, 2000, at the Iowa Memorial Union on the campus of the

University of Iowa in Iowa City. Sponsored by the University of Iowa College of Public Health and College of Nursing, this symposium will provide

current information on health and safety regulations, workplace illnesses and injuries, and health care delivery, as well as management and

organizational issues. It is intended for health care providers, safety professionals, and administrators interested in improving the health and

safety of workers. For additional information, contact Laurie Walkner at 319-335-6836, or by e-mail to: laurie-walkner@uiowa.edu.

Ergonomics Proposal Unveiled

(continued from page 1)
Alexis M. Herman. "The good news is that real solutions are available."

The proposed OSHA ergonomics program would require general industry employers to address ergonomics for manual handling or manufacturing production jobs.

Employers also would need to fix other jobs where employees experience work-related musculoskeletal disorders.

About one-third of general industry worksites — 1.9 million sites — would be affected and more than 27 million workers would be protected by the standard. Fewer than 30 percent of general industry employers have effective ergonomics programs in place today.

"This proposal includes some unique provisions to expand flexibility for employers because one size doesn't fit all," noted Charles N. Jeffress, assistant secretary of labor for occupational safety and health. "We've given employers a Quick Fix option and included a grandfather clause — both designed to limit what

employers need to do while effectively protecting workers. Three-quarters of general industry employers would not need to do anything until a documented, work-related injury actually occurs."

The National Manufacturers Association, which has led the fight against regulatory intervention in the ergonomics arena, denounced the OSHA proposal as "unnecessary and unworkable."

"Good employers recognize that safety is good business and that their employees are their greatest asset. That's why the great majority of manufacturers, without an OSHA-mandated ergonomics regulation, have safety and health programs in place at their facilities that help them control and abate ergonomic-related injuries," said Jennifer Krese, NAM's director of employment policy. "We are deeply disappointed by the agency's decision to move ahead with this costly government rule based not on sound science, but on OSHA's overriding need to regulate."

Each year 1.8 million U.S. workers experience work-related musculoskeletal disorders, such as injuries from overexertion or repetitive motion. About one-third of these injuries — 600,000 — are serious enough to require time off work. Work-related musculoskeletal disorders (MSDs) account for one-third of all workers' compensation costs each year because these injuries can require a lengthy recovery time.

Women disproportionately suffer some of the most severe MSDs — not because their bodies are more vulnerable to MSDs — but because a large number of women work in jobs associated with heavy lifting, awkward postures or repetitive motion.

Under the OSHA proposal, about 1.6 million employers would need to implement a basic ergonomics program — assigning someone to be responsible for ergonomics; providing information to employees on the risk of injuries, signs and symptoms to watch for

and the importance of reporting problems early; and setting up a system for employees to report signs and symptoms. Full programs would be required only if one or more work-related MSDs actually occurred.

The proposal also offers a "Quick Fix" alternative to setting up a full ergonomics program. Correct a hazard within 90 days, check to see that the fix works and no further action is necessary. In addition, a "grandfather" clause gives credit to firms that already have effective ergonomics programs in place and are working to correct hazards.

The OSHA proposal identifies six elements for a full ergonomics program:

- management leadership and employee participation;
- hazard information and reporting;
- job hazard analysis and control;
- training;
- MSD management; and
- program evaluation.

OSHA intends that ergonomics programs be job-based, i.e., cover just the specific job where the risk of developing an MSD exists and jobs like it that expose other workers to the same

hazard. Ergonomics programs need not cover all the jobs at the workplace.

The proposal would require that workers who experience covered musculoskeletal disorders receive a prompt response, evaluation of their injury and follow-up by a health care professional, if necessary. Workers who need time off the job to recover from the injury could get 90 percent of pay and 100 percent of benefits — to limit economic loss as a result of their injuries. Workers on light duty would receive full pay and benefits. This provision is designed to encourage early reporting to catch problems before they result in injuries.

Most employers in general industry will incur minimal costs. Employers who need to correct problems will spend an average of \$150 per year per work station fixed. The total cost to employers would equal \$4.2 billion each year.

Copies of the proposed regulatory text are available on OSHA's website at <http://www.osha-slc/ergonomics-standard/>.

Sources: Occupational Safety and Health Administration, National Association of Manufacturers.

OSHA's Proposed Ergonomics Standard

WHO'S COVERED?

- General industry employers with workers involved in manual handling or manufacturing production jobs (about 1.6 million worksites).
- Other general industry employers with one or more workers who experience work-related MSDs after the final standard takes effect (about 300,000 employers each year).

WHAT WOULD THE PROPOSAL REQUIRE?

Basic Program — for employers with manual handling or manufacturing production jobs:

- **Management leadership and employee participation**
 - Name someone to be responsible for ergonomics and supply resources and training for the program.
 - Be sure company policies do not discourage employees from reporting problems and let employees know how they can be involved in the ergonomics program.
- **Hazard information and reporting**
 - Provide information to employees periodically on:
 - Ergonomic risk factors (force, repetition, awkward postures, static postures, contract stress, vibration, cold temperatures).
 - Signs and symptoms of musculoskeletal disorders.
 - Importance of reporting signs and symptoms early to prevent damage and how to make reports.
 - Requirements of this standard.
 - Set up a system for employees to report signs and symptoms of MSDs and respond promptly to reports.

Quick Fix — for problem jobs that can be fixed right away:

- Promptly care for an injured employee.
- Work with employees to eliminate the MSD hazard within 90 days.
- Verify that the fix worked within another 30 days.
- Keep a record of Quick Fix controls.
- Establish a full ergonomics program if the fix fails or another MSD of the same type occurs in that job within 36 months.

Full Program — for employers with a covered MSD. Includes the Basic Program plus:

- **Job hazard analysis and control**
 - Analyze problem jobs for ergonomic risk factors.
 - Work with employees to eliminate or materially reduce MSD hazards using

engineering, administrative and/or work practice controls.

- Use personal protective equipment to supplement other controls.
- Track progress, and when jobs change, identify and evaluate MSD hazards.
- **Training**
 - Train employees in jobs with covered MSDs, their supervisors and staff responsible for the ergonomics program.
 - Teach recognition of MSD hazards, the ergonomics program at the site and control measures used to reduce hazards.
 - Conduct training initially, periodically and at least every 3 years at no cost to employees and in language they understand (e.g., Spanish).
- **MSD Management** — for workers who have covered MSDs.
 - Provide prompt response to an injured employee and access to a health care professional, if needed, for evaluation, management and follow-up at no cost to the employee.
 - Provide information to the health care professional about the job, the MSD hazards and the ergonomics standard.
 - Obtain a written opinion from the health care professional on how to manage the employee's recovery and ensure that the health care professional shares it with the worker.
 - Provide necessary work restrictions and work restriction protection (WRP) during the recovery period (100% pay and benefits for employees put on light duty; 90% pay and 100% benefits for employees who must be removed from work). WRP benefits last until the employee can return to work OR the MSD hazards are fixed OR 6 months have passed — which-ever comes first. WRP can be offset by workers' compensation or similar benefits.
- **Program Evaluation**
 - Evaluate the program periodically—at least every 3 years.
 - Consult with employees on program effectiveness and deficiencies.
 - Correct any deficiencies.
- **Recordkeeping** — for employers with 10 or more employees. Retain most records for only 3 years.

Grandfather Clause — Employers who have already developed ergonomics programs won't

need to begin again, provided that their ergonomics programs:

- Meet the basic obligations and recordkeeping requirements of the standard.
- Were implemented and evaluated before the standard became effective.
- Are eliminating or materially reducing MSD hazards.

WHEN IS AN EMPLOYER IN COMPLIANCE?

An employer has met the requirements of the standard when the controls eliminate or materially reduce MSD hazards. Employers can opt for an incremental process, trying one control and adding others if an injured employee does not improve or another MSD occurs in that job.

WHEN CAN AN EMPLOYER DISCONTINUE AN ERGONOMICS PROGRAM?

IF MSD hazards are eliminated or materially reduced AND no covered MSD is reported for 3 years, employers may stop all but the following aspects of their ergonomics programs: For manufacturing or manual handling jobs:

- Management leadership and employee participation.
- Hazard information and reporting.
- Maintenance of implemented controls and training related to those controls.

For other general industry jobs where a covered MSD had been reported: maintenance of controls and training related to those controls.

WHEN WOULD THE ERGONOMICS PROGRAM STANDARD BECOME EFFECTIVE?

- 60 days after publication of the final standard.
- Phase-in of individual provisions:
 - Promptly-MSD management
 - 90 days-Quick Fixes
 - 1 year after effective date:
 - Management leadership and employee participation
 - Hazard information and reporting
 - 2 years after effective date:
 - Job hazard analysis
 - Training
 - Interim controls
 - 3 years after effective date:
 - Permanent controls
 - Program evaluation

Source: Occupational Safety and Health Administration

Workplace Injuries and Illnesses in 1998

A total of 5.9 million injuries and illnesses were reported in private industry workplaces during 1998, resulting in a rate of 6.7 cases per 100 equivalent full-time workers, according to a survey by the Bureau of Labor Statistics, U.S. Department of Labor.

Employers reported a 4 percent drop in the number of cases and a 3 percent increase in the hours worked compared with 1997, reducing the case rate from 7.1 in 1997 to 6.7 in 1998. The rate for 1998 was the lowest since the BLS began reporting this information in the early 1970s.

Among goods-producing industries, manufacturing had the highest incidence rate in 1998 (9.7 cases per 100 full-time workers). Within the service-producing sector, the highest incidence rate was reported for transportation and public utilities (7.3 cases per 100 full-time workers), followed by wholesale and retail

trade (6.5 cases per 100 workers).

Lost workday cases

About 2.8 million injuries and illnesses in 1998 were lost workday cases, that is, they required recuperation away from work or restricted duties at work, or both. The incidence rate for lost workday cases has declined steadily from 4.1 cases per 100 full-time workers in 1990 to 3.1 cases per 100 workers in 1998. The rate for cases with days away from work has declined for eight years in a row and, at 2.0 cases per 100 full-time workers in 1998, was the lowest on record.

By contrast, the rate for cases involving only restricted work activity rose from 0.7 cases per 100 workers in 1990 to 1.2 cases in 1997 and remained at that level in 1998. The latter types of cases may involve shortened hours, a temporary job change, or temporary restrictions on certain duties (for example, no heavy lifting) of a worker's regular job.

In 1998, the rate in manufacturing for

The following tabulation on incidence rates for injuries and illnesses shows the decline in rates per 100 full-time workers since 1994:

	1994	1995	1996	1997	1998
Private industry	8.4	8.1	7.4	7.1	6.7
Goods-producing	11.9	11.2	10.2	9.9	9.3
Service-producing	6.9	6.7	6.2	5.9	5.6

days-away-from-work cases was lower than the rate for restricted-activity-only cases, 2.3 for days-away-from-work cases and 2.5 for restricted-activity-only cases. In all other divisions, the rate for days-away-from-work cases was higher than the rate for restricted-activity-only cases.

Injuries and Illnesses

Injuries. Of the 5.9 million nonfatal occupational injuries and illnesses in 1998, 5.5 million were injuries. Injury rates generally are higher for mid-size establishments (those employing 50 to 249 workers) than for smaller or larger establishments, although this pattern does not hold within certain industry divisions. Eight industries, each having at least 100,000 injuries, accounted for about 1.5 million

injuries, or 28 percent of the 5.5 million total. All but one of these industries were in the service-producing sector.

Illnesses. There were about 392,000 newly reported cases of occupational illnesses in private industry in 1998. Manufacturing accounted for three-fifths of these cases. Disorders associated with repeated trauma, such as carpal tunnel syndrome and noise-induced hearing loss, accounted for 4 percent of the 5.9 million workplace injuries and illnesses. They were, however, the dominant type of illness reported, making up 65 percent of the 392,000 total illness cases. Seventy-one percent of the repeated trauma cases were in manufacturing

industries.

The BLS has generated estimates of injuries and illnesses combined and of injuries alone for nearly all 2-, 3-, and, for manufacturing, 4-digit private sector industries as defined in the 1987 edition of the Standard Industrial Classification Manual. The information is available from BLS staff at 202-691-6179 and from the BLS Internet site at <http://stats.bls.gov/oshhome.htm>.

Source: Bureau of Labor Statistics, U.S. Department of Labor.

Iowa Incidents Highlight Carbon Monoxide Dangers

(continued from cover)

In each of the cases, workers were exhibiting signs of CO poisoning, in some cases weeks before the problem was identified. In these incidents, workers noticed symptoms of CO exposure, but complaints weren't recognized as the initial symptoms of CO poisoning. Because of that, no corrective action was taken by the employees, managers or the health care community.

"Carbon monoxide poisoning is dangerous and can cause permanent brain damage, while at the same time is easily detectable through the use of properly positioned and maintained detectors," said Iowa State Epidemiologist Patricia Quinlisk.

Symptoms to be aware of are headaches, dizziness and weakness in otherwise healthy people. Additionally, people being slowly poisoned by CO may show neurological signs of a problem, such as confusion or irritability.

Sources: Centers for Disease Control and Prevention, Iowa Department of Public Health.

Cancer Review Includes Nine Substances

A national panel of toxicologists is in the process of reviewing nine substances – including three used to make products less flammable – for possible listing in the tenth edition of the federal Report on Carcinogens.

The National Toxicology Program Board of Scientific Counselors subcommittee on the Report on Carcinogens met in January to consider the substances. There will be a public comment period and an NTP Executive Committee review before recommendations are made to the Department of Health and Human Services on whether to list the substances as either "anticipated" or "known" human carcinogens in the federal report to Congress and the public.

The substances being considered are:

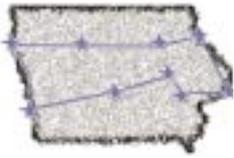
- beryllium and beryllium compounds used in fiber optics, aerospace and other industrial applications, for upgrading to a known human carcinogen;
- a fire retardant called 2,2-bis-(bromomethyl) 1,3-propanediol in unsaturated polyester resins, in molded products and in rigid polyurethane foam, for initial listing in the report, as are the remaining substances;
- a substance 2,3-dibromo-1-propanol used as a flame retardant and in preparing a flame retardant, as well as in pesticides and drug preparations;
- dimethoxybenzidine dyes used for leather, paper, plastics, rubber and textiles;
- dimethylbenzidine dyes used for the same products as above, for listing;
- IQ, a substance found in cooked meat and fish;
- styrene-7,8-oxide, used in preparing fragrances and in some epoxy resin formulations;
- vinyl bromide used primarily in making flame retardant synthetic fibers;
- vinyl fluoride, used in making polyvinylfluoride, which is used for plastics.



Publication of the tenth Report on Carcinogens is planned for 2002. The report has no direct regulatory authority, but it alerts Congress, state and federal agencies, businesses, unions and other citizens to review their uses, precautions and regulations.

Background documents on any of the substances under consideration may be obtained from William Jameson, Ph.D., at the National Institute of Environmental Health Sciences, Mail Drop EC-14, PO Box 12233, Research Triangle Park, NC 27709. Telephone: (919) 541-4096.

Source: National Institute of Environmental Health Sciences.



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The Workplace Health and Safety Report is published quarterly by WORKSAFE IOWA for members of its Occupational Medicine Associates Network. WORKSAFE IOWA is an occupational and environmental health outreach program of the Institute for Rural and Environmental Health, College of Public Health, The University of Iowa. For more information on the WORKSAFE IOWA Occupational Medicine Associate in your area, please refer to the list at left.

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