NEW JERSEY DEPARTMENT OF HEALTH AND SENIOR SERVICES

Occupational Health Surveillance Update

Christine Todd Whitman
Governor

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Commissioner

December 1999

Division of Epidemiology, Environmental and Occupational Health

Dear Reader,

Welcome to another issue of the *Occupational Health Surveillance Update.* As the new State Epidemiologist and Assistant Commissioner for the Division of Epidemiology, Environmental and Occupational Health, it is my pleasure to introduce some of the Department's recent initiatives in the field of hazard surveillance. Hazard surveillance (detecting worker exposure to a chemical or hazardous operation) is being used more and more to supplement traditional disease surveillance systems (detecting disease in workers) and is the method of choice when disease surveillance is not productive. With some limitations, it is an innovative approach to workplace intervention and provides a unique opportunity for occupational health professionals to prevent illnesses and injuries in the work environment.

The cover article on forklift fatalities demonstrates how the Department was able to identify patterns of unsafe practices and issue a statewide *Hazard Alert* to industries that use forklift trucks. The articles on cadmium and methylene chloride show how effective it is to identify these chemical users and target them for consultation and evaluate their compliance with the respective OSHA standards. Also highlighted are important initiatives in the area of latex allergy, a serious concern for many of our health-care workers. Finally, the staff of the Occupational Health Surveillance Program has compiled a concise list of occupational and environmental health and safety resources. It contains numerous Internet web sites and is detachable. We hope you find it useful.

Yours truly,

Eddy A. Bresnitz, MD, MS

Death on the Job: Forklift Fatalities in 1998

Brenda had everything to live for. At 40, she had a loving husband, three children, and a good job. She was the company's most experienced equipment operator and had recently received a commendation for safety. After 20 years on the job, running a forklift was as routine as driving to work.

Inside . . .

One day, Brenda was assigned to pick up three pallets of equipment stored outside a building. A co-worker directed her to a forklift on the building's loading dock. Walking to the forklift, she stepped over a warning tape that marked the area as being under construction. She backed the forklift to a ramp leading outside, driving over several sheets of plywood lying across the loading dock floor. What she did not know was that the plywood covered a five-foot deep trench dug earlier that day. The 4,000 pound forklift broke through the plywood and fell into the trench, crushing Brenda as the impact forced the lift's protective cage against her.

This was one case investigated by the New Jersey Fatality Assessment and Control Evaluation (FACE) project, a research project funded by NIOSH (National Institute for Occupational Safety and Health). The FACE project maintains a database of all reported work-related fatal injuries in New Jersey. FACE investigates selected fatalities, including fatal falls, machine-related incidents, tree-trimming fatalities, and incidents involving public employees. The goal of the FACE Program is to prevent injuries by identifying the risk factors that cause workplace fatalities and recommend ways to prevent future incidents. Information is disseminated to the public through *Investigation Reports* and *Hazard Alert Bulletins*. Names and other identifiers are withheld to protect the confidentiality of those who participate in the program.

Injury Surveillance

Brenda (a pseudonym) was the ninth New Jersey worker killed in a forklift incident in 1998. From April 1992 to

Continued on page 2

December 1998, the FACE project recorded 29 fatal occu-pational injuries in New Jersey involving forklift trucks. (See Figure 1) Being a forklift operator or working near a forklift were equally hazardous. (See Table 1)

Table 1
Forklift Truck Fatalities by Incident Type
New Jersey, April 1992- December 1998

Forklift Operators		*Other Workers*	
Forklift fell from loading dock	4	Struck by load falling from forks	5
Forklift overturned	4	Fell while being raised on forks	4
Crushed between forklift and objects	4	Struck by forklift	3
Fell from raised forklift cab	2	Struck by objects knocked over by forklift	2
Collision with another forklift	1		
TOTAL	15	TOTAL	14

Prevention Efforts

In 1994, NIOSH targeted machine-related incidents for investigation by the state FACE projects. The New Jersey FACE project conducted its first forklift fatality investigation in January 1995 and has investigated 12 of these incidents to date. As the investigations progressed, it became apparent that more was needed to educate the thousands of New Jersey workers who use forklifts. FACE published a fact sheet, *Hazard Alert Bulletin: Forklift Truck Fatalities*, which briefly described eight forklift incidents and listed recommendations (see page 3) for preventing future injuries. The bulletin was mailed to over 1,600 trucking companies, warehouses, and manufacturers that use forklifts. A letter was included with the bulletin to update the reader on recent cases and changes in the OSHA regulations for forklifts.

FACE's routine prevention activities include sending investigation reports and fact sheets to various safety organizations, universities, government agencies, and private employers. FACE investigators also present case studies at conferences and educational seminars. In 1998, New Jersey FACE reports became available on the NJDHSS' web site at w*ww.state.nj.us/health/eoh/survweb/face.htm*

New Regulations

The federal Occupational Safety and Health Administration (OSHA) recently published the Powered Industrial Truck Operator Training standard (see bottom of page 3 for summary) to reduce injuries among the 1.5 million workers who operate forklifts and other industrial trucks. Effective March 1, 1999, these regulations cover all powered industrial truck operators in the general industry, construction, and maritime industries. Employers must complete the training and evaluation of their operators by December 1, 1999.

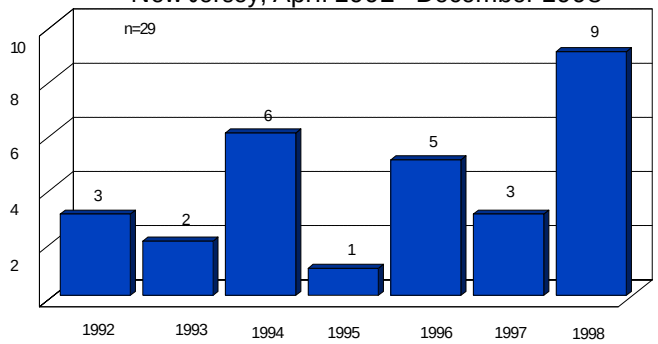
For More Information

The new Powered Industrial Truck Operator Training standard may be obtained by calling OSHA Publications at (202) 693-1888 (Publication #6742). The standard may also be downloaded from the OSHA internet website at *www.osha.gov*.

New Jersey FACE reports and publications can be obtained by calling the Occupational Health Service at (609) 984-1863. FACE and other occupational health publications are included on the NJDHSS internet web site, *www.state.nj.us/health/eoh*.

If you have any questions or comments, please contact Patrick Bost, MS, at (609) 984-1863.

Figure 1
Forklift Fatalities by Year
New Jersey, April 1992 - December 1998



Forklift Safety Recommendations

- Develop a written safety program for the use of forklift trucks.
- Make sure that only fully trained and authorized workers operate forklift trucks.
- Regularly inspect and maintain operating controls and safety devices.
- Equip forklifts with backup alarms and flashing lights to warn pedestrians.
- Workers should never be lifted on the forks unless a properly designed forklift personnel platform is used.
- Properly position and secure loads prior to lifting and moving.
- Operators should always wear safety belts.

This forklift fell from a loading dock while trying to raise pipes to the roof. It struck and overturned a second forklift on the ground, crushing the operator of the second lift.

Summary of the OSHA Powered Industrial Truck Operator Training Standard

- Operators must successfully complete a training program and pass a performance evaluation.
- Training must include classroom and "hands-on" instruction.
- Once certified, operators must be re-evaluated at least every three years.
- Operators must be retrained if involved in an accident.
- Operators must be retrained if the equipment or workplace has significantly changed.
- Employers must certify that the training and evaluations have been done.

Occupational Health Surveillance Update

A newsletter of the Occupational Health Surveillance Program, Occupational Health Service (OHS), Division of Epidemiology, Environmental and Occupational Health, New Jersey Department of Health and Senior Services.

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If you would like to be added to or removed from our mailing list, please fax your name and address to: Surveillance UPDATE, Fax (609) 292-5677 or call (609) 984-1863.

Methylene Chloride Hazard Surveillance and Interventions in Small Businesses

Methylene chloride is a colorless volatile liquid with a pleasant odor that is used in various industrial processes in many different industries: paint stripping, furniture refinishing, polyurethane foam manufacturing, polycarbonate resin production, adhesives manufacturing and use, metal cleaning and degreasing, pharmaceutical manufacturing, and formulating and distributing solvents. The Occupational Safety and Health Administration (OSHA) estimates that 237,496 workers handle methylene chloride in 91,624 worksites.[1]

In January 1997, OSHA adopted new comprehensive standards for methylene chloride (1910.1052, 1915.1052, and 1926.1052) covering all occupational exposures in all workplaces in general industry, maritime employment, and construction. OSHA acted on the basis of emerging scientific data indicating that the existing exposure limit of 500 parts per million parts of air (ppm) did not adequately protect workers from adverse health effects including irritation of the eyes, nose, and throat; headache, nausea, fatigue, dizziness, drowsiness and unconsciousness; liver, brain, and lung damage; and both liver and lung cancer.

The new OSHA standards set 12.5 ppm as an Action Level (AL) and exposure limits of 25 ppm as an 8-hour Permissible Exposure Limit (PEL) and 125 ppm as a 15-minute Short-Term Exposure Limit (STEL).[1] In addition, the new standards require exposure monitoring, medical surveillance, regulated work areas, engineering, work practice, and administrative controls, leak and spill detection, respiratory protection, hygiene facilities and practices, protective work clothing and equipment, recordkeeping, and employee information and training.

Goals of Methylene Chloride Hazard Surveillance

- Identify small employers in New Jersey who use methylene chloride
- Gather information on methylene chloride exposures in identified workplaces
- Make comprehensive information on the OSHA methylene chloride standards available to employers
- Make comprehensive information on the control of workplace exposure to methylene chloride available to employers
- Reduce hazardous exposure to methylene chloride in New Jersey
- Test the effectiveness of this intervention model.

In August 1997, the New Jersey Department of Health and Senior Services (NJDHSS) undertook a project to identify and educate small employers in New Jersey that use large quantities of methylene chloride concerning the require-ments of the new OSHA standards and methods to control exposure to the chemical. Methylene chloride was chosen because 1994 New Jersey Community Right to Know (NJCRTK) data showed that use of this chemical, compared to other OSHA-regulated chemicals, was reported by many (1,880) New Jersey employers. In addition, it was believed that many employers, particularly small employers, would be unfamiliar with the new OSHA requirements for methylene chloride and were also unlikely to be inspected by OSHA.

Hazard Surveillance Protocol

The surveillance and intervention steps for the project were as follows:

- Small employers (less than 50 employees) that reported large (greater than 1,000 pounds) inventories of methylene chloride were identified through the NJCRTK database.

- A mailing was conducted to identified employers including a cover letter, a *Chemical Survey*, a NJDHSS Hazardous Substance Fact Sheet on methylene chloride, and a postage-paid return envelope. The *Chemical Survey* asked such questions as whether methylene chloride was used, pounds used, number of days used, number of employees exposed, and whether or not medical surveillance, biological monitoring, or air sampling had been performed. If air sampling was performed, summary information was requested.
- Returned *Chemical Surveys* were checked for completeness. If

not returned or incomplete, employers were contacted by phone or fax to request a response or obtain missing information. Completed *Chemical Surveys* were coded, data entered, and analyzed.

• All employers who reported using methylene chloride on their *Chemical Survey* were interviewed over the telephone. This phone call by a NJDHSS industrial hygienist also served as a consultation to encourage compliance with the OSHA methylene chloride standards and the use of NJDHSS' *Industrial Hygiene Fact Sheets*. The industrial hygienist discussed with the employer the basic information contained in each of these publications. Also, covered in the phone call were the major provisions of other related OSHA standards, such as respiratory protection and personal protective equipment.

Worker cleaning machine components with methylene chloride in a local exhaust ventilation booth.

The interviews were done using a five-page telephone interview form covering the employer's industrial hygiene control program in detail. Each type of industrial hygiene control was assigned one of four ratings, by the NJDHSS industrial hygienist, based on whether or not essential elements of the control were in place. The four codes were: "in place, effective," "in place, needs upgrading," "not in place, needed," "not in place, not needed." For example, in order for the item "regulated area" to be rated "in place, effective," the workplace would need to have established regulated areas with respirators required and in use, appropriate signs posted at the boundaries, and food, tobacco, etc., prohibited. The interview/coding form contained a list of essential elements for each type of control with coding instructions. In the absence of air sampling data, all controls were considered "needed" for coding purposes.

• A follow-up letter containing workplace-specific industrial hygiene recommendations for reducing methylene chloride exposures was mailed to each interviewed employer. A copy of all educational materials discussed during the phone interview was enclosed including a form on which the employer is asked to summarize methylene chloride air sampling data, if performed. The employer was requested to respond within 60 days.

• The information from employers' interviews was coded, entered into a database, and analyzed.

Findings

Hazard surveillance

The NJCRTK database identified a total of 59 workplaces with less than 50 employees and inventories greater than 1,000 pounds of methylene chloride. Twenty-four (57%) of the 51 employers who completed a *Chemical Survey* stated that they still use methylene chloride while the other 27 companies stated that they discontinued use of the chemical. One hundred sixty-seven (30%) of 565 employees in the 24 workplaces using methylene chloride were reported as potentially exposed. Results also showed employers were using methylene chloride an average of 127 days and 110,719 pounds per year. For air monitoring, the *Chemical Survey* results showed 25% of these employers stated that they had performed initial air sampling for methylene chloride.

Employer interviews

Six (25%) of the 24 employers were not interviewed because they stated discontinued usage since our initial follow-up. The majority of the employers who were interviewed did the best job of implementing employee training, with 15 of 18 (83%) receiving scores of "in place, effective." For six types of controls (regulated area, respirators, engineering controls, hygiene, personal protective equipment, and house-keeping), 9-13 employers (50 to 72%) received the score of "in place, needs upgrading." Em-ployers had made the least progress in implementing air monitoring and medical surveillance with 12 of 18 (67%) and 14 of 18 (78%) respectively being rated "not in place, needed."

Outlined on page 6 are examples of exposure scenarios that were derived based on information collected from *Chemical Surveys* and employer interviews. The examples include three workplaces with exposure data and four companies that did not provide air sampling data.

Discussion

Continued on page 6

Continued from page 5

Although small employers constitute a significant number in the private sector, they often lack the sophisticated industrial hygiene programs found in large companies. This study showed that small employers need assistance in coming into compliance with the OSHA methylene chloride standards. This innovative ap-proach provided such assistance with relatively few staff resources.

Not all employers may have been required by OSHA standards to implement all controls. However, without air sampling, neither the NJDHSS nor the employer could know which control measures were required.

A significant number (25%) of the small employers were eliminating the use of methylene chloride at the time of our follow-up although they reported otherwise on their *Chemical Surveys*.

Since no state has a disease surveillance system for methylene chloride toxicity, hazard sur-veillance provides an alternative method for identifying employers using methylene chloride.

For more information, please contact Eileen Senn, MS,CIH, at (609) 984-3565.

References

[1] Occupational Exposure to Methylene Chloride, Final Rule, USDOL-OSHA, *Federal Register*, January 10, 1997.

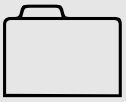
Exposure Scenarios ***with*** Exposure Data

- A manufacturer of polyurethane cushioning uses 85,000 pounds/year of methylene chloride as a blowing and flushing agent. Twenty of 35 workers are exposed 260 days a year without any respiratory protection program. Exposure has been ongoing for nine years and is decreasing. Air samples were said to have been collected but no data were provided. The employer eliminated methylene chloride as a flushing agent by substituting hot water and decreased the amount used as a blowing agent.

- A manufacturer of pipe nipples uses 36,000 pounds/year of methylene chloride for vapor degreasing. Five of 43 workers are exposed 250 days a year with an inadequate respiratory protection program. Use has been ongoing for ten years and remains constant. Two 4-hour personal samples were collected in the cutting department. Results were 100 and 140 ppm, both well over the AL and PEL; the second result is also over the STEL. Periodic sampling and improvement to the respiratory protection program were recommended by NJDHSS.

- A solvent recycler reclaims by distillation 1,746,752 pounds/year of methylene chloride. Twenty-four of 35 workers are exposed 120 days a year with an inadequate respiratory protection program. Use has been ongoing for 29 years and remains constant. Three full-shift area samples were 4.9 in still control, 0.96 in lab, and 0.58 ppm in #400 tank farm -- all below the AL. A 30-minute personal sample was 53.2 ppm, below the STEL.

Exposure Scenarios ***without*** Exposure Data



- A manufacturer of kitchen and bath counter tops uses 24,450 pounds/year of methylene chloride-containing adhesive to glue Formica to counter tops. Eight of 14 workers are exposed 250 days a year with an inadequate respiratory protection program. Use has been ongoing for 20 years and remains constant.

- A manufacturer of paint and finish removers uses 330,160 pounds/year of methylene chloride to mix with other solvents to produce finished products. One of three workers is exposed 146 days a year with an inadequate respiratory protection program. Use has been ongoing for 11 years and is decreasing.

- A manufacturer of aerosols uses 150,000 pounds/year of methylene chloride to mix chemical formulations. Ten of 42 workers are exposed 50 days a year with an inadequate respiratory protection program. Use has been ongoing for 40 years and is decreasing.

- A manufacturer of aluminum foil containers used 400 pounds/year of a degreaser containing 16% methylene chloride to clean dies and die parts. Six of 75 workers are exposed 130 days a year with an inadequate respiratory protection program. Use has been ongoing for 15 years and is decreasing.

Occupational and Environmental Health & Safety Resources

Abbreviations

CDC - Centers for Disease Control and Prevention
EOHSI - Environmental & Occupational Health Sciences Institute
EPA - Environmental Protection Agency
NIOSH - National Institute for Occupational Safety & Health
NJDCA - New Jersey Department of Community Affairs
NJDEP - New Jersey Department of Environmental Protection
NJDHSS - New Jersey Department of Health & Senior Services
NJDOL - New Jersey Department of Labor
OSHA - Occupational Safety and Health Administration
PEOSH - Public Employees Occupational Safety & Health
UMDNJ - University of Medicine and Dentistry of New Jersey

Asbestos

Abatement worker training; school inspections — Consumer and Environmental Health Services, NJDHSS, (609) 984-2193;
Web: www.state.nj.us/health/eoh/leadasb/index.html
Licensing of abatement contractors and worker permits — NJDCA, (609) 633-3760
Transport and disposal — NJDEP, (609) 984-6620
Worker exposure issues — See OSHA or PEOSH under Workplace Inspections and Enforcement

Americans with Disabilities Act (ADA)

The ADA prohibits employers from discriminating against qualified people with a disability who would be able to perform their job, even if they need a "reasonable accommodation."
ADA Technical Assistance Center, (800) 949-4232;
Web: www.disabilityact.com
Job Accommodation Network, (800) 526-7234 (TDD); (800) 232-9675
NJ Office of Disabilities Management, (609) 292-7299
U.S. Department of Justice - ADA Information Line (202) 514-0301 (TDD)
Web: www.usdoj.gov/crt/ada/adahom1.htm

Cancer

American Cancer Society, consult your telephone directory for local chapter or call the national office at 1-800-227-2345
Web: www.cancer.org/bottomcaninfo.html
Cancer information specific to New Jersey — Office of Cancer Epidemiology, NJDHSS, (609) 588-3500;
Web: www.state.nj.us/health/cancer.htm

Environmental Consultation and Enforcement

For a comprehensive NJDEP directory, request their *Easy Access* guide by calling (609) 633-1317; also accessible on the Internet at: www.state.nj.us/dep

Emergency Response 24-Hr Hotline	(609) 292-7172
Hazardous Waste Hotline	(609) 984-1351
Medical Waste	(609) 984-6620
Safe Drinking Water	(609) 292-5550
Underground Storage Tanks	(609) 292-8761
X-ray machines	(609) 984-5634

Home Health Issues

Consumer and Environmental Health Services, NJDHSS, (609) 984-2193 or (609) 633-2043
Landlord-Tenant information, NJDCA, (609) 292-4174
Radon Hotline, NJDEP, 1-800-648-0394

Indoor Air Quality

EPA Indoor Air Quality Information Clearinghouse
1-800-438-4318; Web: www.epa.gov/iaq/
Workplace exposure issues — See OSHA or PEOSH under Workplace Inspections and Enforcement

Information and Telephone Consultation

Duke University Occupational and Environmental Medicine
Web: http://occ-env-med.mc.duke.edu/oem. This site provides links to useful occupational and environmental health resources.
EOHSI Resource Center, Rutgers University/UMDNJ, (732) 445-0110; Web: www.eohsi.rutgers.edu/cet
NIOSH Technical Information Service
1-800-356-4674; Web: www.cdc.gov/niosh/inquiry.html
Occupational Health Surveillance Program, NJDHSS, (609) 984-1863; Web: www.state.nj.us/health/eoh/survweb/
Public Employees Occupational Safety & Health (PEOSH) Program, NJDHSS, (609) 984-1863;
Web: www.state.nj.us/health/eoh/peoshweb/
Right to Know (RTK) about hazardous substances:

- *Public sector workplaces* — RTK Program, NJDHSS, (609) 984-2202; Web: www.state.nj.us/health/eoh/rtkweb
- *Private sector workplaces* — Bureau of Chemical Release Information and Prevention, NJDEP, (609) 292-6714

Lead

Abatement worker training, abatement contractors, and worker permits — Consumer and Environmental Health Services, NJDHSS, (609) 984-2193 or (609) 633-2043;
Web: www.state.nj.us/health/eoh/leadasb/index.html
Adult lead poisoning — Occupational Health Surveillance Program, NJDHSS, (609) 984-1863
Childhood lead poisoning — NJDHSS, (609) 292-5666
List of certified lead evaluation & abatement contractors — NJDCA, (609) 633-6179 or the Lead Hotline at 1-877-DCA-LEAD
Web: www.state.nj.us/dca/codes/leadhom.htm
Worker exposure issues — See OSHA or PEOSH under Workplace Inspections and Enforcement

On-Site Safety and Health Consultation

FREE

NIOSH Health Hazard Evaluations
(513) 841-4382 or 1-800 356-4674;
Web: www.cdc.gov/niosh/hhe.html
NJDOL Consultation Services (for employers only):

- Safety consultation, (609) 292-0404
- Health consultation, (609) 984-0785

(OVER)

Web: www.state.nj.us/labor/consult.htm

Pesticides

Integrated pest management *:*

- NJ Environmental Federation (856) 767-1110
- Rutgers Cooperative Extension Pest Management Office, (732) 932-9801
- Pesticides Enforcement and Compliance, NJDEP, (609) 984-6507

Spills handling, disposal, health effects — National Pesticide Telecommunication Network, 1-800-858-7378 (9:30 am - 7:30 pm, seven days a week)

Poison Control Center

New Jersey Poison Information and Education System (NJPIES)
NJPIES is a statewide poison control center that handles emergency calls and provides information to the public. It is staffed by professionals specialized in poison control who are available 24 hours a day, 7 days a week at 1-800-962-1253 or 1-800-764-7661; Web: www.njpies.org

Publications

EPA Publications, 1-800-490-9198; Web: www.epa.gov
NIOSH Publications, 1-800-356-4674 or (513) 533-8328; Web: www.cdc.gov/niosh/homepage.html
Occupational Health Service, NJDHSS, (609) 984-1863; Web: www.state.nj.us/health/eoh/odisweb/
NJ Right to Know Hazardous Substance Fact Sheets*,* Right to Know Program, NJDHSS, (609) 984-2202; Web: www.state.nj.us/health/eoh/rtkweb/
OSHA Publications, (202) 693-1888; Web: www.osha.gov

Schools

New York Healthy Schools Network*,* (518) 462-0632; Web: www.hsnet.org
Student exposure issues — Call the School Superintendent
Worker exposure issues — See OSHA or PEOSH under Workplace Inspections and Enforcement

Statistics

Bureau of Labor Statistics — for statistics on occupational injuries and illnesses by occupation and industry, and type of injury; (202) 606-6175; Web: http://stats.bls.gov/oshhome.htm
FACE (Fatality Assessment & Control Evaluation) Project -- for statistics on fatal injuries that occurred in New Jersey; Occupational Health Service, NJDHSS, (609) 984-1863; FACE reports are available on the Internet at: www.state.nj.us/health/eoh/survweb/face.htm
Occupational health and safety data (New Jersey) — NJDOL, (609) 292-8998 or (609) 984-3604; Web: www.state.nj.us/labor/lra/default.htm

Training and Education

EOHSI-CET(Centers for Education and Training), Rutgers University/ UMDNJ, (732) 235-9450; offers a variety of publications and training courses, including asbestos and lead removal, noise control and hearing conservation.
Web: www.eohsi.rutgers.edu/cet
Labor Education Center, Rutgers University
Offers a variety of educational services for employers, workers, and unions. Call (732) 932-9502
Web: http://web.rutgers.edu/rulabor
New Jersey State Safety Council, (908) 272-7712; provides courses on work-related safety and health.
New Jersey Work Environment Council
Phone: (609) 695-7100; Fax: (609) 695-4200
NYCOSH — New York Committee on Occupational Safety and Health, (212) 627-3900; serves Northern New Jersey; Web: www.nycosh.org
PHILAPOSH — Philadelphia Area Project on Occupational Safety and Health, (215) 386-7000; serves Southern and Central New Jers*ey.*

Workers' Compensation

Workers who are injured on the job may be entitled to workers' compensation to help cover the costs of medical bills and lost income.
Div. of Workers' Compensation, NJDOL, (609) 292-2516; Web: www.state.nj.us/labor/wc/default.htm

Workplace Inspections and Enforcement

- ***Private Sector***

OSHA, U.S. Department of Labor — Contact OSHA for information about workplace health and safety regulations or to file a complaint about working conditions in the private sector:
Avenel Area Office: Hunterdon, Middlesex, Somerset, Union, and Warren Counties, (732) 750-3270
Hasbrouck Heights Area Office: Bergen and Passaic Counties, (201) 288-1700
Marlton Area Office: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Monmouth, Ocean, and Salem Counties, (856) 757-5181
Parsippany Area Office: Essex, Hudson, Morris, and Sussex Counties, (973) 263-1003

- ***Public Sector***

PEOSH, State of New Jersey — Contact PEOSH for information about workplace health and safety regulations or to file a complaint about working conditions in New Jersey state, county, and municipal government, and public schools:
Health issues — PEOSH, NJDHSS, (609) 984-1863
Safety issues, record keeping, and discrimination complaints - PEOSH, NJDOL, (609) 292-7036 or 1-800-624-1644
Right to Know (RTK), State of New Jersey — Contact RTK for information about hazardous substance training, container labeling, and the RTK Survey (inventory of hazardous chemicals in the workplace) — RTK Program, NJDHSS, (609) 984-2202

Other Useful Resources

Sexual Harassment, Family Leave, Discrimination
Division on Civil Rights, NJ Dept. of Law and Public Safety
- Camden (856) 757-2850
- Paterson (973) 977-4500
- Newark (973) 648-2700
- Trenton (609) 292-4605

Smoking
CDC Office on Smoking and Health*,* 1-800-CDC-1311; Web: www.cdc.gov/tobacco
Division of Addiction Services, NJDHSS, (609) 292-4414
Wage and Hour
Division of Wage and Hour, NJDOL, (609) 292-2337
Enforces the state minimum wage law and wage collection.

Prepared by the Occupational Health Surveillance Program, Occupational Health Service, NJDHSS
December 1999

Cadmium Surveillance Findings Published

Workers exposed to hazardous levels of cadmium can experience acute (pulmonary edema, interstitial pneumonitis) and chronic (kidney disease, emphysema, bone lesions, and prostate and lung cancer) health effects. The OSHA cadmium standard covers employers who use cadmium, for example, in battery manufacture and recycling, pigment use and manufacture, electroplating, and refining. The NJDHSS recently issued a report on the results of cadmium surveillance conducted in New Jersey from January 1986 to September 1997. The project was funded by NIOSH under the "Experimental" category of SENSOR grants. Selected case studies from this effort are summarized below.

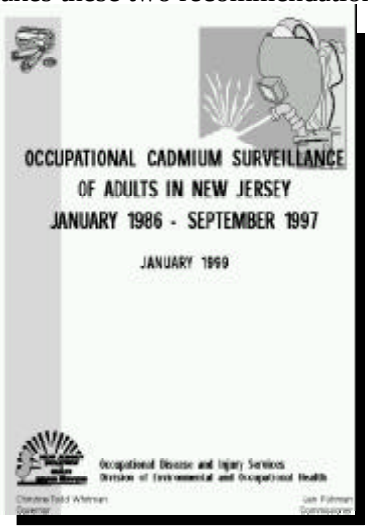
A full report is available by calling Eileen Senn, MS, CIH, at (609) 984-3565.

During the project, 51 companies were selected for follow-up, combining data from disease and hazard surveillance. NJDHSS conducted industrial hygiene evaluations by telephone followed by recommendations on how the employer could achieve better compliance with the OSHA cadmium standard. Some on-site evaluations and OSHA referrals were also done.

Based on our experiences over more than ten years, the NJDHSS makes these two recommendations to NIOSH and other state health departments concerning cadmium surveillance:

• A centralized national system of laboratory reporting and disease surveillance for cadmium is feasible and is recommended for consid-eration as a cost-effective alternative to state-by-state surveillance because of the small yield of reports.

• Hazard surveillance is more effective than disease surveillance for identifying employers using cadmium and should be considered as a tool to enhance disease surveillance whether performed at the state level or nationwide. SU



Scrap Metal Processor

Elevated cadmium reports were received on employees who were potentially exposed to cadmium and lead during metal cutting with acetylene torches. The employer was advised by NJDHSS to perform representative air monitoring and to use a proficient laboratory for analysis. Subsequently, OSHA found that cadmium air levels were above the action level but below the permissible exposure level and concluded that the employer had implemented adequate lead and cadmium compliance programs.

Solder and Brazing Products Manufacturers

This evaluation involved two businesses which manufactured these products under one roof for the jewelry and automotive industries, respectively. Wipe sample results in the lunch and locker rooms showed cadmium and lead contamination. There were unsatisfactory findings in many other areas. Lack of response to NJDHSS' recommendations led to referral to OSHA and issuance of willfull citations.

Decorative Glassware Manufacturer

This employer used cadmium and lead in its decorative operations. An on-site visit was conducted after elevated cadmium reports were received. Subsequent re-tests were normal and air sampling results were generally low. NJDHSS issued a report to the employer who agreed with many of the recommendations to lower cadmium and lead exposures.

Radiation Treatment Facility

This medical center routinely produces custom shielding blocks for patients undergoing radiation treatment. Reports of elevated urine cadmium levels were received on shield makers. As a result of this evaluation NJDHSS developed and mailed an informational bulletin entitled *Guidelines for Controlling Lead and Cadmium Exposures During Shielding Block Fabrication in Radiation Treatment Facilities* to 80 similar facilities.

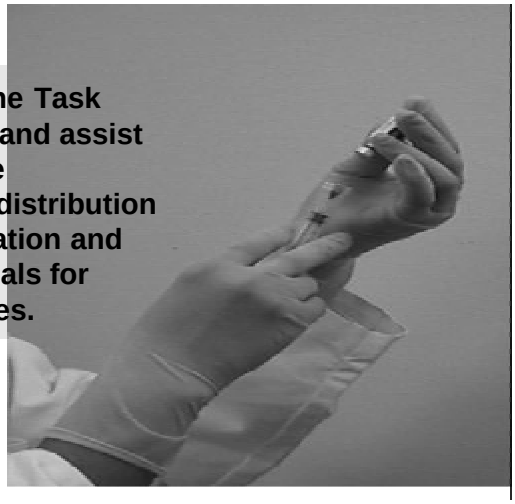
Precious Metals Refinery

An on-site evaluation was conducted to evaluate exposure to cadmium and platinum salts following reports of elevated cadmium levels at this refiner of precious metals. The employer responded positively to many of the NJDHSS' recommendations. The company has a sophisticated industrial hygiene program, is aware of problems areas, and continues to reassess these areas.

Department Establishes Latex Allergy Task Force

Natural latex gloves have proven effective in preventing transmission of many infectious diseases. Unfortunately, use of latex gloves in this preventive effort has contributed to the sensitization of at least 1-6% of the general population, and 7-10% of the health-care workers to natural rubber latex allergens (see sidebar). Latex is composed of various lipids, phospholipids, and proteins. The proteins can sensitize or induce IgE antibodies production in predisposed individuals. Chemicals, including antioxidants and accelerators, added during the manufacturing process may cause hypersensitivity. The amount of latex protein exposure needed to produce sensitization or an allergic reaction is unknown. Reductions in exposure to latex proteins have been reported to be associated with decreased sensitization and symptoms.

The objective of the Task Force is to advise and assist the NJDHSS in the development and distribution of relevant information and educational materials for health-care facilities.



Task Force Initiatives

To respond to the many health issues affecting health-care workers exposed to latex-containing products, the New Jersey Department of Health and Senior Services (NJDHSS) established a Latex Allergy Task Force. The members of the Task Force include representatives from medical and dental professional associations, medical schools, health-care facilities, industry, and affected workers. The objective of the Task Force is to advise and assist the NJDHSS with the development and distribution of relevant information and educational materials for health-care facilities. NJDHSS is also involved in providing consultations and referrals for affected workers and collecting information on prevention methods. The Task Force has also established subcommittees to address a number of areas, including case reporting, legal issues, policy development and implementation, workers' compensation, and dental office issues. A mailing was conducted in 1998 to approximately 2,100 health-care facilities in New Jersey, including hospitals, nursing homes, residential care and drug-treatment facilities, to alert these facilities about latex allergy.

The Latex Allergy Task Force has developed a set of slides and a brochure, *Latex Allergy, a Guide to Prevention,* that can be used for

Reactions to Latex

Irritant Contact Dermatitis This is a non-allergic skin rash characterized by hand erythema, pruritus, dryness, and cracking. This reaction is caused by skin irritation from using gloves and possibly by contact exposure to other workplace products and chemicals.

Allergic Contact Dermatitis (delayed hypersensitivity) This is a specific immune response to the chemical additives, such as accelerators and antioxidants (e.g., phenylenediamine, thiurams, carbamates) added to latex during harvesting, processing, or manufacturing. Acute dermal reactions include erythema and vesicle formation (similar to skin eruption after poison ivy exposure). The lesions typically appear 24-96 hours after exposure. Subsequently, chronic exposure to latex may cause the skin to become dry, crusted and thickened.

Latex Allergy (immediate hypersensitivity) Certain natural rubber proteins may cause sensitization or the induction of IgE antibodies. Reactions usually begin within minutes of exposure of a sensitized individual to latex, but they can occur hours later. Mild allergic reactions to latex involve skin redness, hives, or itching. More severe reactions may involve respiratory symptoms such as runny nose, sneezing, itchy eyes, scratchy throat, and asthma. Rarely, anaphylaxis and death may occur.

educational purposes in health-care facilities. Educational lectures have been conducted for health-care associations and exposed workers. A bibliography was assembled, including sources of natural rubber latex, prevention methods, current federal and state regulations, and "latex free" medical equipment, gloves and products, in response to information requests received from health-care facilities. The Task Force is also in the process of reviewing two draft documents: *Latex Allergy Management in Health Care Facilities* and *How to Select the Right Glove for the Right Task in Health Care Facilities* which will be distributed to health-care facilities to enhance existing prevention programs or to assist in developing new ones.

Reporting Requirements

Both the Federal Occupational Safety and Health Act (OSHA) (for private sector) and the New Jersey Public Employees Occupational Safety and Health Act (PEOSHA) (for public sector) require employers to record and report occupational injuries and illnesses. These regulations require employers to record on the OSHA or PEOSHA *Log and Summary of Occupational Injuries and Illnesses* cases of irritant contact dermatitis, allergic contact dermatitis, and any other illnesses caused by an occupational exposure. A random sample of employers also report these conditions annually on the *Occupational Injuries and Illnesses Survey* form, upon receipt from Federal OSHA or the New Jersey Department of Labor.

The NJDHSS conducts surveillance of many work-related occupational diseases including asthma attributable to latex exposure. We encourage physicians to report all cases of suspected illness related to latex exposure.

For more information, please visit our Home Page at www.state.nj.us/health/eoh/survweb/ or contact Barbara Gerwel, MD , at (609) 984-1863.

REMINDER

Physicians are required by law to report certain occupational diseases and injuries

For more information on reporting requirements or to obtain a copy of the *Occupational Disease and Injury Report for Physicians* form, call the Occupational Health Service at

1-800-772-0062

www.state.nj.us/health/eoh/survweb/

The Occupational Health Surveillance Program Home Page:

...describes surveillance activities for:
- Fatal occupational injuries
- Heavy metals
- Silicosis
- Occupational asthma
- Other occupational diseases

... summarizes occupational disease reporting requirements for:
- Hospitals
- Laboratories
- Physicians

... lists our publications (some are available on-line):
- Educational materials
- Industrial Hygiene Fact Sheets
- FACE* investigations reports
- FACE Facts and Hazard Alerts
- Program publications in professional journals
- Program special reports

... and provides links to related sites.

* FACE (Fatality Assessment and Control Evaluation)

Occupational Illness and Injury Reporting to New Jersey Department of Health & Senior Services												
	Number of New Cases Reported[1]											
Condition	From beginning of reporting through 1988	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	Cumulative Total
Fatal injuries[2]	756	136	101	112	138	145	114	118	99	101	103	1,923
Occupational asthma[3]	32	46	65	66	47	70	41	57	39	72	22	557
Silicosis[4]	691	53	66	74	46	46	26	25	47	43	40	1,157
Other pneumoconioses[5]	1,883	801	760	609	676	624	474	655	611	498	417	8,008
Acute lung conditions[5]	271	154	115	76	65	75	57	68	82	59	32	1,054
Chemical poisonings[5]	894	257	248	293	217	207	141	216	150	129	145	2,897
Elevated blood lead levels[6]	2,138	539	541	318	286	416	308	225	244	208	177	5,400
Elevated blood and urine mercury levels[6]	200	17	78	55	24	17	24	23	34	11	35	518
Elevated blood and urine cadmium levels[6]	46	37	144	17	2	16	14	30	17	18	16	357

1 Includes confirmed and unconfirmed cases.
2 Data sources: death certificates, medical examiners' reports, OSHA, workers' compensation reports, FARs, news clippings. Reporting began in 1983.
3 Data sources: physicians, hospital reports. Reporting began in 1988.
4 Data sources: hospital reports, physician reports, death certificates. Reporting began in 1979. Incomplete reporting from hospitals in 1993 and 1994.
5 Data source: hospital reports. Reporting began in 1985.
6 Data sources: physicians, laboratory reports. Reporting began in 1985.

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