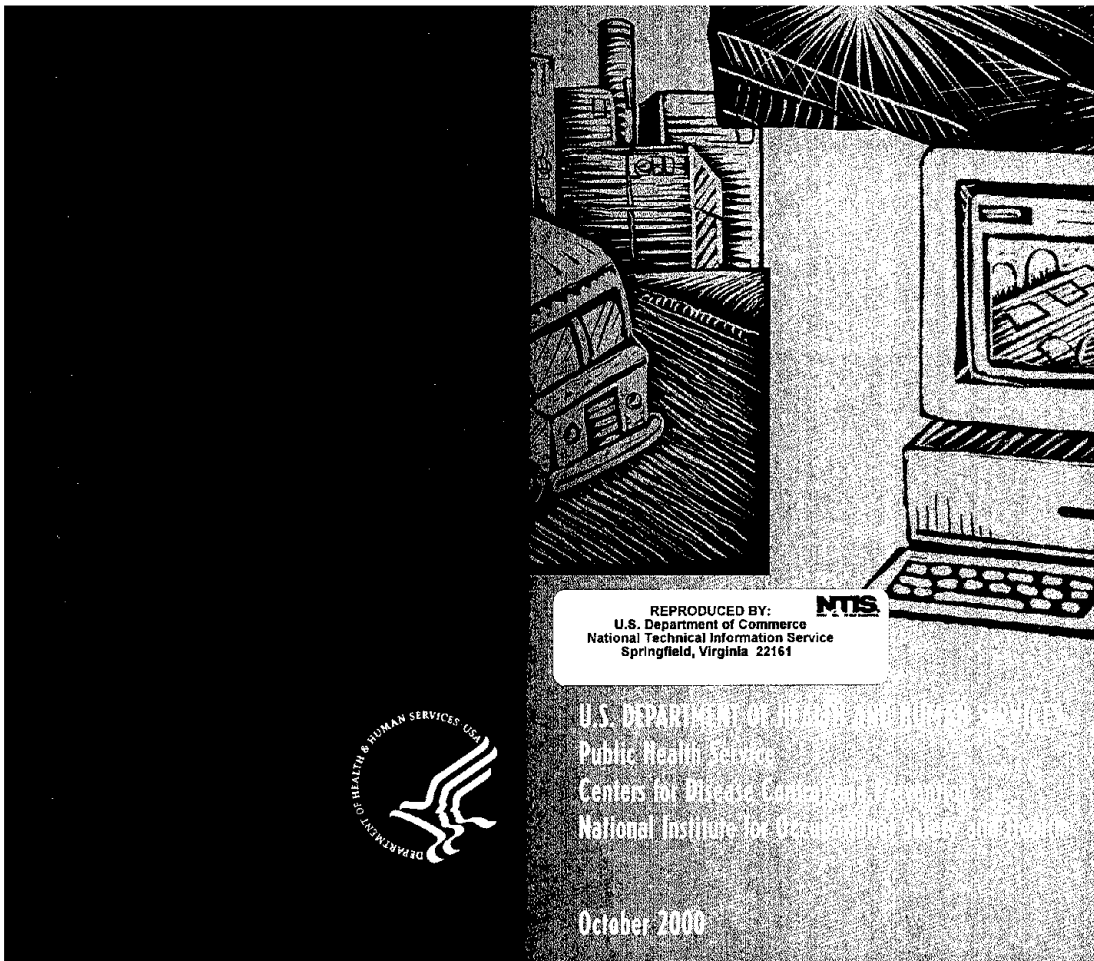


Includes information about

- Web sites
- Toll-free telephone numbers
- Free publications
- Training resources for owners & employees
- Resources for onsite consultations

# Safety and Health Resource Guide for Small Business



REPRODUCED BY:  
U.S. Department of Commerce  
National Technical Information Service  
Springfield, Virginia 22161

**NTIS**



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Public Health Service  
Centers for Disease Control and Prevention  
National Institute for Occupational Safety and Health

October 2000

## Mission Statement

Delivering

on the

Nation's

promise:

Safety and

health at work

for all people

through

research and

prevention

## ABOUT NIOSH

The National Institute for Occupational Safety and Health (NIOSH) is the Federal agency that conducts research and makes recommendations to prevent work-related illness and injury. NIOSH works with industries, labor organizations, and universities to understand and improve worker safety and health.

NIOSH is often confused with OSHA (the Occupational Safety and Health Administration). However, NIOSH and OSHA are separate agencies with different functions. NIOSH is a research agency in the U.S. Department of Health and Human Services. OSHA is a regulatory agency in the U.S. Department of Labor.

For information and publications about occupational hazards, please contact NIOSH at

Toll-free telephone:	1-800-35-NIOSH (1-800-356-4674)
Fax directory:	1-888-CDC-FAXX (1-888-232-3299)
Web site:	<a href="http://www.cdc.gov/niosh">www.cdc.gov/niosh</a>
E-mail:	<a href="mailto:pubstaff@cdc.gov">pubstaff@cdc.gov</a>

## PURPOSE OF THIS DOCUMENT

This Guide is intended to help small business owners, employers, and managers deal with occupational safety and health concerns. Others involved with the small business community may also benefit from using this resource. This guide contains telephone numbers, e-mail and Internet addresses, and mailing information that will connect small businesses to government agencies, private organizations, consultants, and others who can help with occupational safety and health issues.

# CONTENTS

<b>I. Introduction</b> .....	<b>1</b>
<b>II. What is a Small Business?</b> .....	<b>1</b>
Why focus on small businesses? .....	1
Numbers of workers in small businesses .....	2
Safety and health challenges for small businesses .....	3
Costs of work-related injuries and illnesses .....	3
<b>III. Services Offered by NIOSH to Small Businesses</b> .....	<b>5</b>
<b>IV. Other Government Agencies Offering Occupational     Safety and Health Services to Small Businesses</b> .....	<b>13</b>
<b>V. Educational Institutions, Organizations and     Commercial Establishments Offering Occupational     Safety and Health Services to Small Businesses</b> .....	<b>23</b>
<b>Appendix – NIOSH Publications</b>	
Alerts .....	33
Updates .....	33
Hazard Controls and Hazard IDs .....	33
Current Intelligence Bulletins .....	33
<b>Index</b> .....	<b>46</b>

## I. INTRODUCTION

Frequently, small businesses do not have the in-house capacity or other resources to address safety and health concerns in the workplace. To help small business owners, employers, and managers deal with these concerns, the National Institute for Occupational Safety and Health (NIOSH) has developed this *Safety and Health Resource Guide for Small Businesses*. The guide contains telephone numbers, e-mail and Internet addresses, and mailing information that will connect small businesses to the government agencies, private organizations, consultants, and others who can help them with occupational safety and health issues.

## II. WHAT IS A SMALL BUSINESS?

For the purposes of this document, NIOSH considers a small business establishment to be one with fewer than 100 employees at a single site. The success of small businesses relies partly on their small scale, which enables them to operate effectively with limited resources, respond quickly to demands for products and services, and interact with clients, employees, and vendors on a personal level.

### Why focus on small businesses?

NIOSH recognizes that small businesses can benefit from additional information about protecting the safety and health of their employees. The number of small businesses is expected to increase, and the U.S. workforce is predicted to grow to an estimated 147 million by the year 2005. In focusing on the important contributions of small businesses in the United States, Federal agencies have begun to develop programs that provide services and assistance to small businesses. Most of the agencies and organizations that provide occupational safety and health assistance and publications are included in this document.

Examples of Federal programs and legislation include the following:

- The Occupational Safety and Health Administration (OSHA) programs in consultation, voluntary protection, and expert advisor materials
- The Department of Labor Office of Small Business Program's *One Stop Approach to Providing Information on Enforcement Programs Which Apply to Small Business*
- The Small Business Administration's Office of Advocacy programs to provide financial assistance and information for small businesses
- The Small Business Regulatory Enforcement Fairness Act of 1996

These and other programs reflect a commitment to ensure that small businesses remain productive and safe.

**PROTECTED UNDER INTERNATIONAL COPYRIGHT  
ALL RIGHTS RESERVED  
NATIONAL TECHNICAL INFORMATION SERVICE  
U.S. DEPARTMENT OF COMMERCE**

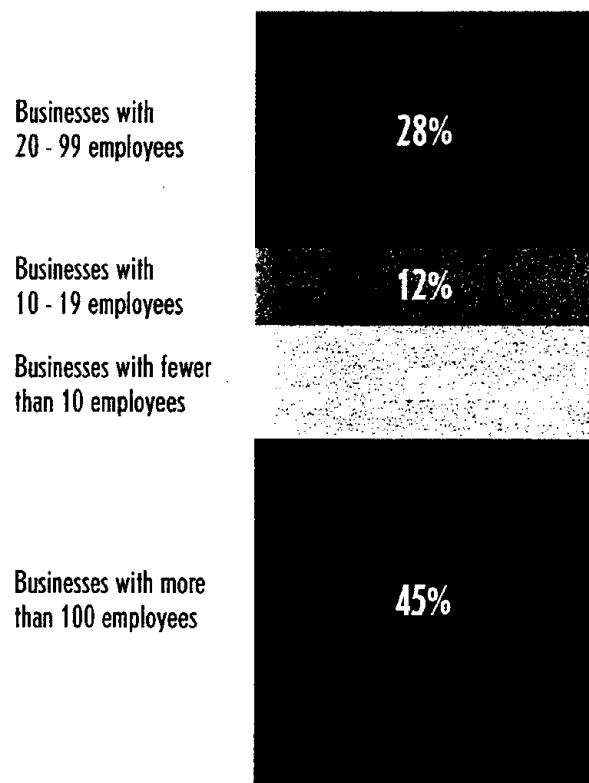


The best opportunity to prevent illness and injury in small business industries is for the owners, managers, and employees to identify and understand the hazards and risks that workers might encounter on the job. This guide provides many sources of free information to help reduce and prevent threats to worker safety and health.

### **Numbers of workers in small businesses**

---

More than half of all U.S. employees in private industry work in small business establishments with fewer than 100 employees (see Figure 1). Furthermore, nearly 98% of all private industry establishments in the United States have fewer than 100 employees. Of these, roughly 87% have fewer than 20 employees.



**Figure 1.**

Percentage of U.S. private industry employees working in business establishments of various sizes. (Source: U.S. Department of Commerce, Bureau of the Census, County Business Patterns 1994, CBP-94-1.)

## **Safety and health challenges for small businesses**

---

In small businesses, injuries and illnesses can exact a hefty toll. For a small business owner operating independently, the magnitude of the problem may not be apparent. However, a government survey of U.S. businesses in 1994-1995 found that workplaces with 10 or fewer employees experience about one-third of all work-related deaths, although they only employ 15% of all workers in private industry.

Small businesses often operate as a family, with concern for protecting each employee from harm at work. Yet, because of their size, these businesses frequently lack the services of occupational safety and health professionals who can identify and prevent hazards. In addition, small businesses have been traditionally underserved by occupational safety and health initiatives. Instead, many safety and health regulations and enforcement efforts designed to protect employees from hazards have focused on large employers.

As a result, safety and health issues may be more readily resolved in large businesses by complying with standards and using additional resources. Smaller businesses may be unable to recognize hazards as readily and may therefore be unable to find information about work-related hazards or develop solutions.

## **Costs of work-related injuries and illnesses**

---

For all businesses in the United States, work-related injuries and illnesses cost an estimated \$171 billion each year. This figure does not address the pain and suffering caused to workers and their families.

For small businesses, the average cost for an employee injury or illness varies by industry – for some small businesses the average cost is roughly \$300. The highest-risk small business industries average up to \$5,700 per employee injury or illness.

## HOW TO RESEARCH A PROBLEM

### QUESTION

---

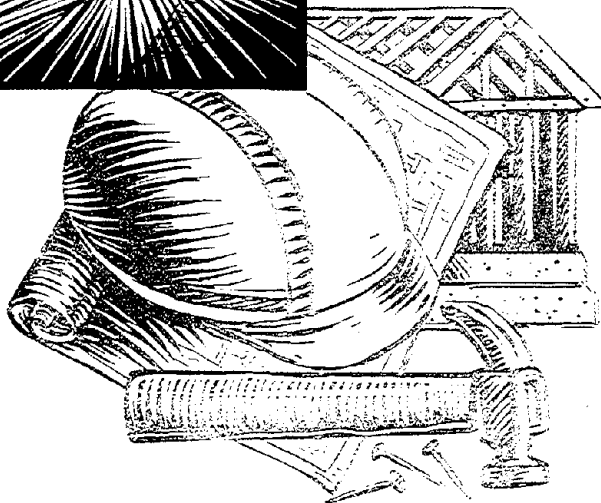
I manage a small printing plant and we recently changed one of our inks. A press operator says that she is having an allergic skin reaction to this new ink. How and where can I get more information?

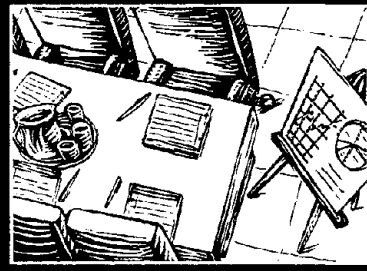
### ANSWERS

---

1. Contact the manufacturer or supplier of the ink and inquire as to whether they have received similar complaints about this ink or whether they have special recommendations for how to use it safely. Request a copy of the material safety data sheet (MSDS) from them.
2. Call the NIOSH 800-number with the names of the chemicals in the ink (found on the MSDS) for additional information. Refer the employee to an Occupational Medicine Specialist for evaluation.

NIOSH





## NIOSH Resources

### CONTACT INFORMATION

NIOSH provides several services for small businesses. These services include a wide selection of easy-to-read worker safety and health publications and information specialists who can provide in-depth responses to a variety of workplace safety and health concerns.

Web site: [www.cdc.gov/niosh](http://www.cdc.gov/niosh)  
E-mail: [pubstaff@cdc.gov](mailto:pubstaff@cdc.gov)  
Toll-free telephone: 1-800-35-NIOSH (1-800-356-4674)  
NIOSH fax directory: 1-888-CDC-FAXX (1-888-232-3299)

In addition to the above, the NIOSH Office for Mine Safety and Health Research conducts objective studies, research, experiments, and demonstrations related to the mining and minerals sector in the area of worker safety, worker health, and disaster prevention. A Common Information Service System (CISS) searchable database is at their Web site.

Web site: [www.cdc.gov/niosh/pit/welcome.html](http://www.cdc.gov/niosh/pit/welcome.html)

### NIOSH PUBLICATIONS

#### Summary Fact Sheets

---

These fact sheets are available through the NIOSH 800 number and are brief documents (generally 1 to 4 pages) describing occupational hazards or NIOSH research activities. The following NIOSH sheets are available from the CDC Fax Information Service. To request that a document be faxed to you, call 1-888-CDC-FAXX (1-888-232-3299) and follow the prompts, using the 6-digit document number listed below:

Agriculture Safety and Health (3 pages)	705030
Back Belts (1 page)	705004
Carpal Tunnel Syndrome (2 pages)	705001
Construction Safety and Health (3 pages)	705031
EMFs in the Workplace (3 pages)	705008
Hazards of Flood Cleanup Work (5 pages)	705032
Health and Safety for Kids on the Farm (2 pages)	705025
Indoor Environmental (Air) Quality (3 pages)	705002
Latex Allergy (2 pages)	705006
Mine Safety and Health (3 pages)	705033
Preventing Silicosis (2 pages)	760026
Violence in the Workplace (2 pages)	705003
Work-Related Musculoskeletal Disorders (3 pages)	705005
Working in Hot Environments (7 pages)	705007

#### Alerts

---

Alerts briefly present new information about occupational illnesses, injuries, and deaths. Alerts urgently request assistance in preventing, solving, and controlling newly identified

occupational hazards. Workers, employers, and safety and health professionals are asked to take immediate action to reduce risks and implement controls. NIOSH has published more than 40 Alerts on a variety of topics; see the Appendix. Topics include the following:

- Allergic Reactions to Natural Rubber Latex
- Carbon Monoxide Poisoning
- Confined Spaces
- Falls from Suspension Scaffolds
- Lead Poisoning in Construction Workers
- Preventing Homicide in the Workplace
- Preventing Injuries and Deaths of Loggers
- Traffic-Related Motor Vehicle Crashes

Alerts are available free from NIOSH:

By mail: Publications Dissemination, EID  
National Institute for Occupational Safety and Health (C-18)  
4676 Columbia Pkwy.  
Cincinnati, OH 45226-1998

Toll-free telephone: 1-800-35-NIOSH (1-800-356-4674)

Fax: 1-513-533-8573

Web site: [www.cdc.gov/niosh](http://www.cdc.gov/niosh)

### **NIOSH Pocket Guide to Chemical Hazards**

---

This Guide is a source of general industrial hygiene information for workers, employers, and occupational health professionals. It presents key information and data in abbreviated tabular form for 677 chemicals or substance groups that are found in many work environments. Copies of the latest edition of the printed and CD-ROM versions of the NIOSH Pocket Guide to Chemical Hazards are available for purchase from the Government Printing Office.

By mail: U.S. Government Printing Office  
Superintendent of Documents  
P.O. Box 371954  
Pittsburgh, PA 15250-7954

Telephone: 1-202-512-1800

Web site: [www.access.gpo.gov](http://www.access.gpo.gov)

### **Chemical Safety Cards**

---

*International Chemical Safety Cards* summarize essential safety and health information about chemicals for their use at the "shop floor" level by workers and employers. They are simpler than material safety data sheets (MSDSs) and designed specifically for workers' reference. The cards are available free from NIOSH.

Web site: [www.cdc.gov/niosh/ipcs/ipscard.html](http://www.cdc.gov/niosh/ipcs/ipscard.html)

Or they may be purchased from the National Technical Information Service:

By mail: National Technical Information Service  
5285 Port Royal Road  
Springfield, VA 22161

Toll free telephone: 1-800-553-6847

Web site: [www.ntis.gov](http://www.ntis.gov)

## Other Publications

---

NIOSH also publishes a series of Updates, Hazard Controls, Hazard IDs, and Current Intelligence Bulletins. A description of each of these types of publications is listed in the Appendix.

## TRAINING

NIOSH supports 16 university-based Education and Research Centers that offer short-term continuing education for occupational safety and health professionals and others with worker safety and health responsibilities.

### Alabama

---

Deep South Center for Occupational Health and Safety  
School of Public Health  
University of Alabama at Birmingham  
1530 3rd Ave., S  
Birmingham, AL 35294-2010  
**Telephone:** 1-205-934-7178  
**Web site:** [www.uab.edu/dsc](http://www.uab.edu/dsc)

### California

---

Center for Occupational and Environmental Health, CE Program  
University of California – Berkeley  
Richmond Field Station  
1301 S. 46th St., Bldg. 102  
Richmond, CA 94804  
**Telephone:** 1-510-231-5645  
**Web site:** <http://socrates.berkeley.edu/~coehce/>

Southern California Education and Research Center  
University of California, Los Angeles  
School of Public Health  
Room 56-071, 650 Charles E. Young Drive South  
Los Angeles, CA 90095-1772  
**Telephone:** 1-310-206-2304  
**E-mail:** [niosherc@ucla.edu](mailto:niosherc@ucla.edu)  
**Web site:** [www.ph.ucla.edu/coeh](http://www.ph.ucla.edu/coeh)

### Florida

---

South Florida (Sunshine) Education and Research Center  
College of Public Health  
University of South Florida, MDC56  
13201 Bruce B. Downs Blvd.  
Tampa, FL 33612-3805  
**Telephone:** 1-813-974-6624  
**Web site:** [www.hsc.usf.edu/crc](http://www.hsc.usf.edu/crc)

## Illinois

---

Great Lakes Center for Occupational and Environmental Safety and Health  
School of Public Health  
University of Illinois at Chicago  
2121 West Taylor St.  
Chicago, IL 60612-7260  
**Telephone:** 1-312-996-6904  
**Web site:** [www.uic.edu/sph/glakes](http://www.uic.edu/sph/glakes) or [www.uic.edu/spha/glakes/cc](http://www.uic.edu/spha/glakes/cc)

## Iowa

---

Department of Occupational and Environmental Health  
College of Public Health  
University of Iowa  
100 Oakdale Campus-108 IREH  
Iowa City, IA 52242-5000  
**Telephone:** 1-319-335-4429  
**E-mail:** [nancy-sprince@uiowa.edu](mailto:nancy-sprince@uiowa.edu)

## Maryland

---

Johns Hopkins Education and Research Center  
School of Hygiene and Public Health  
The Johns Hopkins University  
615 North Wolfe St., Room W6001  
Baltimore, MD 21205  
**Telephone:** 1-410-955-0423  
**Web site:** [www.jhsph.edu/~c-crc](http://www.jhsph.edu/~c-crc)

## Massachusetts

---

Harvard Education and Research Center  
Harvard School of Public Health  
677 Huntington Ave.  
Boston, MA 02115-6096  
**Telephone:** 1-617-432-1171  
**Web site:** [www.hsph.harvard.edu/ccpe/](http://www.hsph.harvard.edu/ccpe/)

## Michigan

---

Center for Occupational Health and Safety Engineering  
University of Michigan  
1205 Beal, IOE Bldg.  
Ann Arbor, MI 48109-2117  
**Telephone:** 1-734-936-0148  
**Web site:** [www.engin.umich.edu/dept/ioe/COHSE/](http://www.engin.umich.edu/dept/ioe/COHSE/)

## Minnesota

---

Midwest Center for Occupational Health & Safety  
University of Minnesota School of Public Health  
Box 197 Mayo  
420 Delaware St., SE  
Minneapolis, MN 55455  
**Telephone:** 1-612-626-4515  
**Web site:** [www.umn.edu/mcohs](http://www.umn.edu/mcohs)

## New York/New Jersey

---

New York/New Jersey Educational Resource Center  
317 George St., 2nd Floor  
New Brunswick, NJ 08901  
**Telephone:** 1-732-235-9450  
**Web site:** [www.eohsi.rutgers.edu/cet](http://www.eohsi.rutgers.edu/cet)

## North Carolina

---

North Carolina Education and Research Center  
University of North Carolina at Chapel Hill  
P.O. Box 16218  
Chapel Hill, NC 27516-6218  
**Telephone:** 1-919-962-2101  
**Web site:** [www.sph.unc.edu/osherc/](http://www.sph.unc.edu/osherc/)  
**E-mail:** [oshercww@sph.unc.edu](mailto:oshercww@sph.unc.edu)

## Ohio

---

University of Cincinnati Education and Research Center  
Department of Environmental Health  
P.O. Box 670056  
Cincinnati, OH 45267-0056  
**Toll-free telephone:** 1-800-207-9399  
**Web site:** [www.uc.edu/www/envhealth/conted/](http://www.uc.edu/www/envhealth/conted/)

## Texas

---

Southwest Center for Occupational and Environmental Health  
School of Public Health  
University of Texas – Houston Health Science Center  
1200 Herman Pressler  
Houston, TX 77030  
**Telephone:** 1-713-500-9463  
**Web site:** [www.sph.uth.tmc.edu:8052/swcoeh.htm](http://www.sph.uth.tmc.edu:8052/swcoeh.htm)

## Utah

---

Rocky Mountain Center for Occupational and Environmental Health  
University of Utah  
75 South 2000 East  
Salt Lake City, UT 84112-5120  
**Telephone:** 1-801-581-5710  
**Web site:** [www.rmcoeh.utah.edu](http://www.rmcoeh.utah.edu)

## Washington

---

Northwest Center for Occupational Health and Safety  
University of Washington  
4225 Roosevelt Way N.E., Suite 100  
Seattle, WA 98105-6099  
**Telephone:** 1-206-543-1069  
**Web site:** [depts.washington.edu/envhlth/](http://depts.washington.edu/envhlth/)  
**E-mail:** [ce@u.washington.edu](mailto:ce@u.washington.edu)

### NIOSH VIDEOTAPES

NIOSH has produced a number of videotape training programs. All NIOSH video programs can be borrowed and copied free of charge. Your only expense is return postage.

By mail: National Institute for Occupational Safety and Health  
NIOSH – TV, C12  
4676 Columbia Pkwy.  
Cincinnati, OH 45226-1998

Fax: 1-513-533-8560

Examples of available video titles include the following:

- Protecting Workers in **Auto Body Shops**, 7 minutes, NIOSH Video No. 155
- Plain Talk About a Serious Problem . . . **Silicosis**, 18 minutes, NIOSH Video No. 156
- Control of Nitrous Oxide in **Dental** Operatories, 9 minutes, NIOSH Video No. 157
- As It Should Be Done (Workplace Precautions Against **Bloodborne Pathogens**), 25 minutes, NIOSH Video No. 170
- **Asbestos**: What You Don't See (for removal contractors), 15 minutes, NIOSH Video No. 175
- **Hand-Arm Vibration** Syndrome, 25 minutes, NIOSH Video No. 178
- Hazards of **Gas Welding**, 16 minutes, NIOSH Video No. 183
- The Finest Tools (**cumulative trauma disorders of hand and wrist**), 22 minutes, NIOSH Video No. 188-B
- Dual Protection (**spray painting**), 14 minutes, NIOSH Video No. 192-A
- Chemical Control Room (**chemical handling**), 23 minutes, NIOSH Video No. 200-B
- New Control For **Orbital Hand Sanders**, 9 minutes, NIOSH Video No. 208
- Caution: **Foundry** at Work, 10 minutes, NIOSH Video No. 210 (Spanish available)
- **Hot Roofing** Safety and Health, 15 minutes, NIOSH Video No. 789

### CONSULTATION

NIOSH employees perform free industrial hygiene surveys of plants upon request of employers or employees. The process is initiated by requesting a Health Hazard Evaluation (HHE). The request form and a description of the program are available through the CDC Fax Information Service by calling 1-888-232-3299. The HHE request form is document 750000; the program description is document 750010. Some HHEs may not require a site visit by NIOSH researchers. Sometimes a referral or providing information is enough to address the concerns of the HHE request.

## HOW TO RESEARCH A PROBLEM

### QUESTION

---

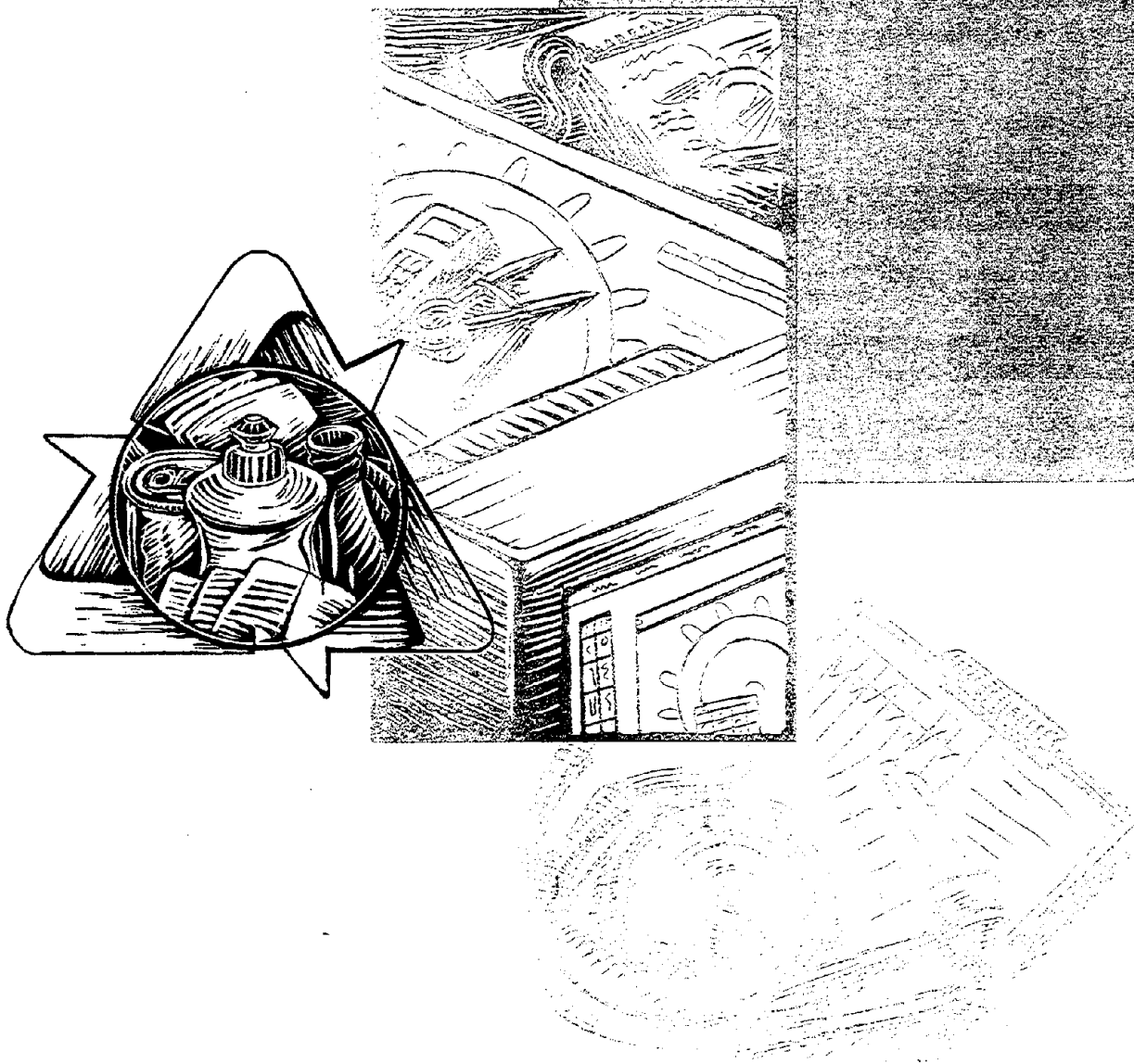
We are technicians at a doctor's office. We are not sure we are disposing of needles and other sharps correctly. What procedures should we be following?

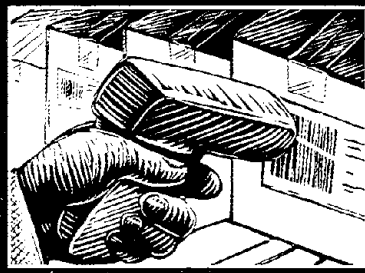
### ANSWERS

---

1. Request a copy of the NIOSH Publication *Selecting, Evaluating, and Using Sharps Disposal Containers* (NIOSH Publication No. 97-111).
2. Check with OSHA for the requirements related to sharps that are included in OSHA's bloodborne pathogens standard, (29CFR 1910.1030).
3. In some areas, employers also need to contact their local landfill or waste site disposal site.
4. Contact EPA for requirements regarding final disposal.

# Resources Offering Health Services





## State & Federal Resources

### DEPARTMENT OF ENERGY (U.S. DOE)

The *Handbook for Occupational Health and Safety During Hazardous Waste Activities* (DOE/ETI-0535) provides tools and guidance to establish and implement comprehensive, cost-effective, hazard-based worker health and safety programs that are an integral part of accomplishing work on time and within budget.

Web site: [www.doe.gov/](http://www.doe.gov/)

### DEPARTMENT OF LABOR (U.S. DOL)

See Occupational Safety and Health Administration and Mine Safety and Health Administration

### DEPARTMENT OF TRANSPORTATION (U.S. DOT)

By using the DOT Hazardous Materials Info-Center 800 telephone number, you can obtain hazardous materials transportation information, copies of rulemakings, and training materials. Info-Center specialists are on duty Monday through Friday from 9 a.m. to 5 p.m. eastern time; however, you may call anytime (24 hours a day, 7 days a week) and leave a message. They will return your call before the end of the next business day.

Toll-free telephone: 1-800-467-4922  
Web site: [www.hazmat.dot.gov](http://www.hazmat.dot.gov)

### ENVIRONMENTAL PROTECTION AGENCY (U.S. EPA)

#### Contact Information and Consultation

---

Through the Internet, small businesses can access the EPA's small business ombudsman, who provides documents, guidance, and explanation of environmental regulations.

By mail: EPA  
Office of the Small Business Ombudsman  
401 M St., S.W.  
Washington, DC 20460

Web site: [www.epa.gov/sbo](http://www.epa.gov/sbo)

EPA's Small Business Hotline answers questions about any EPA regulation.

Toll-free telephone: 1-800-368-5888

## Publications

---

The National Service Center for Environmental Publications (NSCEP) is a center for all EPA documents, with more than 5,500 titles available for free distribution.

By mail:           Publications and Information  
                      National Center for Environmental Publications  
                      P.O. Box 42419  
                      Cincinnati, OH 45242-2419

Toll-free telephone:   1-800-490-9198

The National Environmental Publications Internet Site (NEPIS) allows users to search, view, and print more than 6,000 documents, including some that are no longer in print.

Both the NSCEP and the NEPIS are accessible through the Internet.

Web site:           [www.epa.gov/epahome/index.html](http://www.epa.gov/epahome/index.html)

## FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

The *Emergency Management Guide for Business and Industry* provides a step-by-step approach to emergency planning, response, and recovery for companies of all sizes. The approaches described in this guide are recommendations, not regulations.

Web site:           [www.fema.gov/fema/](http://www.fema.gov/fema/)

## HEALTHFINDER® (U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES)

Healthfinder® is a free gateway to reliable consumer health and human services information developed by the U.S. Department of Health and Human Services. Healthfinder can lead you to selected online publications, clearinghouses, databases, Web sites, and support and self-help groups as well as the government agencies and nonprofit organizations that produce reliable information for the public.

Web site:           [www.healthfinder.gov](http://www.healthfinder.gov)

## NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES (NIEHS)

NIEHS seeks to prevent environmental illness through biomedical research. Contact NIEHS for information about their Community Outreach and Education Program Centers.

By mail:           NIEHS  
                      P.O. Box 12233  
                      Research Triangle Park, NC 27709

Telephone:       1-919-541-3345  
Web site:         [www.niehs.nih.gov/external/outreach.htm](http://www.niehs.nih.gov/external/outreach.htm)

## **MINE SAFETY AND HEALTH ADMINISTRATION (MSHA/DOL)**

### **Contact Information**

---

MSHA has a Web site that offers information, fact sheets, and a description of its technical assistance services.

By mail: Mine Safety and Health Administration  
4015 Wilson Blvd.  
Arlington, VA 22209

Telephone: 1-703-235-1452  
Web site: [www.msha.gov](http://www.msha.gov)

### **Publications**

---

Nine MSHA Fact Sheets covering various aspects related to mining (including historical safety and health information) are available at their Web site.

Web site: [www.msha.gov/MSHAINFO/MSHAINFO.HTM](http://www.msha.gov/MSHAINFO/MSHAINFO.HTM)

### **Consultation**

---

MSHA provides a variety of technical assistance support services. Besides working directly with individual mining operations, MSHA conducts investigations, performs laboratory studies, performs safety-related tests of mining equipment, and provides special onsite assistance during mine emergencies. For more information, consult their Web site.

Web site: [www.msha.gov/MSHAINFO/FACTSHET/MSHAFCT5.HTM](http://www.msha.gov/MSHAINFO/FACTSHET/MSHAFCT5.HTM)

## **OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA/DOL)**

### **Contact Information**

---

Select the *OUTREACH* topic on OSHA's Web site for information about consultation services, voluntary protection programs, State programs, programs and assistance for small businesses, training, and education; or contact your local OSHA office. Select *About OSHA Offices* to locate regional and area offices. OSHA area offices are full service offices that offer interpretations of OSHA standards, examples of sample programs, OSHA publications training, etc.

Web site: [www.osha.gov](http://www.osha.gov)

### **Publications**

---

A compilation of OSHA regulations, documents, and technical information is available on CD-ROM (Order No. S/N 729-013-00000-5, single copy or subscription, issued quarterly).

By mail: U.S. Government Printing Office  
Superintendent of Documents  
P.O. Box 371954  
Pittsburgh, PA 15250-7954

Telephone: 1-202-512-1800  
Web site: [www.access.gpo.gov](http://www.access.gpo.gov)

Publication lists and single copies of OSHA materials may be obtained by sending a self-addressed label to the OSHA Publications Office.

By mail: OSHA Publications Office  
P.O. Box 37535  
Washington, DC 20013-7535

Telephone: 1-202-693-1888  
Fax: 1-202-693-2498

OSHA publications of interest to small businesses include the following documents:

Asbestos Standard for General Industry	(OSHA 3095)
Consultation Services for the Employer	(OSHA 3047)
How to Prepare for Workplace Emergencies	(OSHA 3088)
Hearing Conservation	(OSHA 3074)
Employee Workplace Rights	(OSHA 3021)

OSHA local area offices distribute these titles as well as other free publications about safe work practices and control of hazardous substances. Publications available in **Spanish** include the *Heat Stress Card* and the *Cold Stress Card*.

Two other publications from OSHA are *Keeping Your Workplace Safe: Q's and A's for Small Business Employers* and the *OSHA Handbook for Small Businesses* (OSHA 2209). They may be purchased from the U.S. Government Printing Office or downloaded from the OSHA Web site at [www.osha.gov](http://www.osha.gov). You may also order the *Regulations, Documents, and Technical Information* on CD-ROM from the U.S. Government Printing Office.

By mail: U.S. Government Printing Office (GPO)  
Superintendent of Documents  
P.O. Box 371954  
Pittsburgh, PA 15250-7954

Telephone: 1-202-512-1800  
Web site: [www.access.gpo.gov/su\\_docs/](http://www.access.gpo.gov/su_docs/)

## Training

---

The OSHA Training Institute in Des Plaines, Illinois, and Training Education Centers provide basic and advanced courses in safety and health. Small business owners or managers might consider the basic 10-hour training course, which is provided by authorized trainers in addition to many other courses on specific subjects. Local area offices offer audiovisual materials, technical advice, and speakers.

For more information about this training, contact the OSHA Training Institute.

By mail: OSHA Training Institute (scheduled to move in late 2000)  
1555 Times Dr.  
Des Plaines, IL 60018

Telephone: 1-847-297-4810  
Web site: [www.osha.gov](http://www.osha.gov)

On the following page is a partial list of OSHA Training Education Centers. Additional Centers are being established. Please check the OSHA Web site: [www.osha.gov](http://www.osha.gov) for a current list.

**Georgia**

Georgia Tech Research Institute  
613 Cherry St.  
Atlanta, GA 30332-0837  
**Toll-free telephone:** 1-800-653-3629

**Illinois**

Northern Illinois University  
Office of External Programming, EB-318  
DeKalb, IL 60115-2854  
**Toll-free telephone:** 1-800-656-5317

Construction Safety Council  
4415 West Harrison St., Suite 403  
Hillside, IL 60162  
**Toll-free telephone:** 1-800-552-7744

National Safety Council  
P.O. Box 3201  
Itasca, IL 60143-3201  
**Toll-free telephone:** 1-800-621-7615

**Maryland**

George Meany Center for Labor Studies, Inc.  
10000 New Hampshire Ave.  
Silver Spring, MD 20903  
**Toll-free telephone:** 1-800-462-4237

**Michigan**

Eastern Michigan University  
Centers for Corporate Training  
2000 Huron River Dr., Suite 101  
Ypsilanti, MI 48197  
**Toll-free telephone:** 1-800-932-8689

**Minnesota**

Midwest Center for Occupational  
Health and Safety  
640 Jackson St.  
St. Paul, MN 55101  
**Toll-free telephone:** 1-800-493-2060

Minnesota Safety Council  
474 Concordia Ave.  
St. Paul, MN 55103  
**Toll-free telephone:** 1-800-444-9150

**New Hampshire**

Keene State College  
175 Ammon Dr., Room 212  
Manchester, NH 03103-3308  
**Toll-free telephone:** 1-800-449-6742

**New York**

Niagara County Community College  
50 Maine St.  
Lockport, NY 14094  
**Toll-free telephone:** 1-800-280-6742

**Ohio**

University of Cincinnati  
Kettering Laboratory  
3223 Eden Ave.  
Cincinnati, OH 45267-0056  
**Toll-free telephone:** 1-800-207-9399

**Texas**

Southwest Education Center  
15515 IH-20 at Lumley  
Mesquite, TX 75181  
**Toll-free telephone:** 1-800-723-3811

**Washington DC**

Center To Protect Workers' Rights  
111 Massachusetts Ave., N.W., 5th floor  
Washington, DC 20001  
**Toll-free telephone:** 1-800-367-6724

**West Virginia**

West Virginia University  
130 Tower Lane (P.O. Box 6615)  
Morgantown, WV 26506-6615  
**Toll-free telephone:** 1-800-626-4748

**Consultation (see also States)**

---

The OSHA Consultation Service provides site visits. They are always at the request of the employer. OSHA also offers workplace safety and health training and technical assistance. **Consultation is free and is completely separate from OSHA's inspection effort.** No citations or penalties are involved (in July 1999 OSHA proposed changes to the consultation program that could (potentially) tie complimentary consultation to an inspection and citation). The onsite consultants will not issue citations, propose penalties, or report violations. The *OSHA Handbook for Small Businesses* describes how this works. Contact your local OSHA office, or download the handbook from the OSHA Web site. OSHA local area offices can provide speakers at public events, advice about maintaining and calibrating some monitoring measuring equipment, off-site advice about controlling various hazards, and information about applying for variances. You can identify your local OSHA office by calling the following:

Toll-free telephone: 1-800-321-6742  
Web site: [www.osha.gov](http://www.osha.gov)

## **SMALL BUSINESS ADMINISTRATION (SBA)**

SBA offers financial assistance programs to help companies comply with OSHA regulations. For more information, contact the Small Business Office of Advocacy, located in the SBA offices listed below.

### **California** (also Arizona, Guam, Hawaii, Nevada)

Regional Advocate

SBA

455 Market St., #2200

San Francisco, CA 94105

**Telephone:** 1-415-744-2301

**Fax:** 1-415-744-2306

### **Colorado** (also Montana, North Dakota,

South Dakota, Utah, Wyoming)

Regional Advocate

SBA

721 19th St., #400

Denver, CO 80202-2599

**Telephone:** 1-303-844-0503

**Fax:** 1-303-844-0506

### **Georgia** (also Alabama, Florida, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)

Regional Advocate

SBA

1720 Peachtree Rd., N.W., #496

Atlanta, GA 30309-2482

**Telephone:** 1-404-331-3081

**Fax:** 1-404-331-2354

### **Illinois** (also Indiana, Michigan, Minnesota, Ohio, Wisconsin)

Regional Advocate

SBA

500 W. Madison St., #1240

Chicago, IL 60606-6611

**Telephone:** 1-312-353-6070

**Fax:** 1-312-353-3426

### **Massachusetts** (also Connecticut, Maine, New Hampshire, Rhode Island, Vermont)

Regional Advocate

SBA

10 Causeway St., #812

Boston, MA 02222-1093

**Telephone:** 1-617-565-8415

**Fax:** 1-617-565-8420

### **Missouri** (also Iowa, Kansas, Nebraska)

Regional Advocate

SBA

323 W. 8th St., #307

Kansas City, MO 64105

**Telephone:** 1-816-374-6380

**Fax:** 1-816-374-6339

### **New York** (also New Jersey, Puerto Rico, Virgin Islands)

Regional Advocate

SBA

26 Federal Plaza, #3108

New York, NY 10278

**Telephone:** 1-212-264-7750

**Fax:** 1-212-264-0038

### **Pennsylvania** (also Delaware, District of Columbia, Maryland, Virginia, West Virginia)

Regional Advocate

SBA

900 Market St., 5th floor

Philadelphia, PA 19107

**Telephone:** 1-215-580-2805

**Fax:** 1-215-580-2800

### **Texas** (also Arkansas, Louisiana, New Mexico, Oklahoma, Texas)

Regional Advocate

SBA

4300 Amon Carer Blvd., #108

Fort Worth, TX 76155

**Telephone:** 1-817-684-5579

**Fax:** 1-817-885-6588

### **Washington** (also Alaska, Idaho, Oregon)

Regional Advocate

SBA

1200 Sixth Ave., #1805

Seattle, WA 98101-1128

**Telephone:** 1-206-553-5231

**Fax:** 1-206-553-4155

## STATES

All States provide free onsite consultation. Twenty-five States have developed and operate their own job safety and health plans under approval and monitoring by OSHA. If your business is located in one of these 25 States, the consultation is conducted by State staff. Most of these agencies provide telephone consultation, onsite nonregulatory visits, publications, and other assistance.

### State Agencies or State-Sponsored Universities Providing Occupational Safety and Health Consultation

State Agency or University	Web site	Telephone number
ALABAMA, University of	<a href="http://www.bama.ua.edu/~deip/safest.html">www.bama.ua.edu/~deip/safest.html</a>	1-205-348-3033
ALASKA Department of Labor	<a href="http://www.state.ak.us/local/akpages/LABOR/home.html">www.state.ak.us/local/akpages/LABOR/home.html</a>	1-907-269-4957
ARIZONA Industrial Commission	<a href="http://www.osha.gov">www.osha.gov</a>	1-602-542-5795
ARKANSAS Department of Labor	<a href="http://www.state.ar.us/labor/">www.state.ar.us/labor/</a>	1-501-682-4522
CALIFORNIA Department of Industrial Relations	<a href="http://www.dir.ca.gov/DIR/OSandH/DOSH/consultation.html">www.dir.ca.gov/DIR/OSandH/DOSH/consultation.html</a>	1-415-972-5270
COLORADO State University	<a href="http://www.bernardino.colostate.edu/enhealth/7c1.html">www.bernardino.colostate.edu/enhealth/7c1.html</a>	1-970-491-6151
CONNECTICUT Department of Labor	<a href="http://www.ctdol.state.ct.us/osha/osha.htm">www.ctdol.state.ct.us/osha/osha.htm</a>	1-860-566-4550
DELAWARE Department of Labor	<a href="http://www.delawareworks.com">www.delawareworks.com</a>	1-302-761-8219
DISTRICT OF COLUMBIA Department of Employment Services	<a href="http://does.ci.washington.dc.us">does.ci.washington.dc.us</a>	1-202-576-6339
FLORIDA Department of Labor and Employment Security	<a href="http://www.fdles.state.fl.us/">www.fdles.state.fl.us/</a>	1-850-922-8955
GEORGIA Institute of Technology	<a href="http://www.gtri.gatech.edu/safety.htm">www.gtri.gatech.edu/safety.htm</a>	1-404-894-2643
GUAM Department of Labor	<a href="http://www.mail.admin.gov.gu/webdol/">www.mail.admin.gov.gu/webdol/</a>	011-671-475-0136
HAWAII Department of Labor and Industrial Relations	<a href="http://www.state.hi.us/dlir/hiosh/">www.state.hi.us/dlir/hiosh/</a> <a href="http://www.aloha.net/~edps0/annual.html">www.aloha.net/~edps0/annual.html</a>	1-808-586-9100
IDAHO Boise State University	no web site	1-208-426-3283
ILLINOIS Department of Commerce and Community Affairs	<a href="http://www.commerce.state.il.us/">www.commerce.state.il.us/</a>	1-312-814-2337 1-800-972-4216
INDIANA Division of Labor	<a href="http://www.ai.org/labor/">www.ai.org/labor/</a>	1-317-232-2688
IOWA Bureau of Labor	<a href="http://www.state.ia.us/iwd/labor">www.state.ia.us/iwd/labor</a>	1-515-965-7162
KANSAS Dept. of Human Resources	<a href="http://www.hr.state.ks.us">www.hr.state.ks.us</a>	1-785-296-7476
KENTUCKY Labor Cabinet	<a href="http://www.state.ky.us/agencies/labor/oshcons.htm">www.state.ky.us/agencies/labor/oshcons.htm</a>	1-502-564-6895
LOUISIANA Department of Labor	<a href="http://www.laworks.net">www.laworks.net</a>	1-225-342-9601
MAINE Bureau of Labor Standards	<a href="http://www.janus.state.me.us/labor/">www.janus.state.me.us/labor/</a>	1-207-624-6460
MARYLAND Division of Labor and Industry	<a href="http://www.dlir.state.md.us/labor/mosh.html/">www.dlir.state.md.us/labor/mosh.html/</a>	1-410-880-6131 1-301-483-8406
MASSACHUSETTS Department of Labor and Workforce Development	<a href="http://www.state.ma.us/dos">www.state.ma.us/dos</a>	1-617-727-3982
MICHIGAN Department of Consumer and Industry Services	<a href="http://www.cis.state.mi.us/bsr/divisions/occ/occons.htm">www.cis.state.mi.us/bsr/divisions/occ/occons.htm</a>	1-517-322-1809 1-517-322-6823
MINNESOTA Department of Labor and Industry	<a href="http://www.doli.state.mn.us/wsc.html">www.doli.state.mn.us/wsc.html</a>	1-651-297-2393 1-800-657-3776
MISSISSIPPI State University	<a href="http://www.msstate.edu/">www.msstate.edu/</a>	1-601-987-3981

MISSOURI Department of Labor and Industrial Relations	<a href="http://www.dolir.state.mo.us/lr/onsite/index.html">www.dolir.state.mo.us/lr/onsite/index.html</a>	1-573-751-3403
MONTANA Department of Labor and Industry	<a href="http://www.dli.state.mt.us">www.dli.state.mt.us</a>	1-406-444-6418
NEBRASKA Department of Labor		1-402-471-4717
NEVADA Department of Business and Industry	<a href="http://www.state.nv.us/bandi/ir/index.htm">www.state.nv.us/bandi/ir/index.htm</a>	1-702-486-9140
NEW HAMPSHIRE Department of Health and Human Services	<a href="http://www.state.nh.us/dhhs/ohm/dphs.htm">www.state.nh.us/dhhs/ohm/dphs.htm</a>	1-603-271-2024
NEW JERSEY Department of Labor	<a href="http://www.state.nj.us/labor/consult.htm">www.state.nj.us/labor/consult.htm</a>	1-609-292-3923
NEW MEXICO Environment Dept.	<a href="http://www.nmenv.state.nm.us/env_prot.html">www.nmenv.state.nm.us/env_prot.html</a>	1-505-827-4230
NEW YORK Department of Labor	<a href="http://www.labor.state.ny.us">www.labor.state.ny.us</a>	1-518-457-2238
NORTH CAROLINA Dept. of Labor	<a href="http://www.dol.state.nc.us/osha/consult/consult.htm">www.dol.state.nc.us/osha/consult/consult.htm</a>	1-919-807-2905
NORTH DAKOTA Division of Environmental Engineering	<a href="http://www.ehs.health.state.nd.us/ndhd/environec/oshc/index.htm">www.ehs.health.state.nd.us/ndhd/environec/oshc/index.htm</a> or <a href="http://www.health.state.nd.us">www.health.state.nd.us</a>	1-701-328-5188
OHIO Bureau of Workers' Compensation Division of Safety and Hygiene		
OKLAHOMA Department of Labor	<a href="http://www.state.ok.us/~okdol/osha/index.htm">www.state.ok.us/~okdol/osha/index.htm</a>	1-405-528-1500
OREGON Department of Consumer and Business Services	<a href="http://www.cbs.state.or.us/external/osha/consult/consult2.htm">www.cbs.state.or.us/external/osha/consult/consult2.htm</a>	1-503-378-3272
PENNSYLVANIA Indiana University	<a href="http://www.iup.edu/gradua/iracs/osha.htmlx">www.iup.edu/gradua/iracs/osha.htmlx</a>	1-724-357-2396
PUERTO RICO Department of Labor and Human Resources	<a href="http://fortaleza.govpr.org">fortaleza.govpr.org</a> (primarily Spanish)	1-787-754-2171
RHODE ISLAND Dept. of Health	<a href="http://www.state.ri.us/dohrad.htm">www.state.ri.us/dohrad.htm</a> or <a href="http://www.health.state.ri.us">www.health.state.ri.us</a>	1-401-222-2438
SOUTH CAROLINA Department of Labor, Licensing, and Regulation	<a href="http://www.llr.state.sc.us/uash.htm">www.llr.state.sc.us/uash.htm</a>	1-803-734-9614
SOUTH DAKOTA State University	<a href="http://www.web.sdstate.edu">www.web.sdstate.edu</a>	1-605-688-4101
TENNESSEE Department of Labor	<a href="http://www.state.tn.us/labor-wfd">www.state.tn.us/labor-wfd</a>	1-800-325-9901 1-615-741-7036
TEXAS Worker's Comp. Commission	<a href="http://twcc.state.tx.us/services/oshcon.html">twcc.state.tx.us/services/oshcon.html</a>	1-512-440-3854
UTAH Labor Commission	<a href="http://www.labor.state.ut.us/">www.labor.state.ut.us/</a>	1-800-530-5090 1-801-530-6901
VERMONT Department of Labor and Industry	<a href="http://www.state.vt.us/labind/vosha.htm">www.state.vt.us/labind/vosha.htm</a>	1-802-828-2765
VIRGINIA Department of Labor and Industry	<a href="http://www.dli.state.va.us/programs/consultation.htm">www.dli.state.va.us/programs/consultation.htm</a>	1-804-786-6359
VIRGIN ISLANDS Dept. of Labor	<a href="http://www.gov.vi/vild">www.gov.vi/vild</a>	1-340-772-1315
WASHINGTON Dept. of Labor and Industries	<a href="http://www.lni.wa.gov/wisha">www.lni.wa.gov/wisha</a>	1-800-423-7233 1-360-902-5638
WEST VIRGINIA Department of Labor	<a href="http://www.state.wv.us/labor">www.state.wv.us/labor</a>	1-304-558-7890
WISCONSIN Department of Health and Family Services (HEALTH)	<a href="http://www.dhfs.state.wi.us/">www.dhfs.state.wi.us/</a>	1-608-266-8579
WISCONSIN Department of Commerce (SAFETY)	<a href="http://www.commerce.state.wi.us/Index.html">www.commerce.state.wi.us/Index.html</a>	1-262-523-3040
WYOMING Dept. of Employment	<a href="http://wydoe.state.wy.us/wscd/osha/evtap.htm">wydoe.state.wy.us/wscd/osha/evtap.htm</a>	1-307-777-7786

## HOW TO RESEARCH A PROBLEM

### QUESTION

---

I work with lead and for years have heard about the hazards of lead. How do I protect myself and my family?

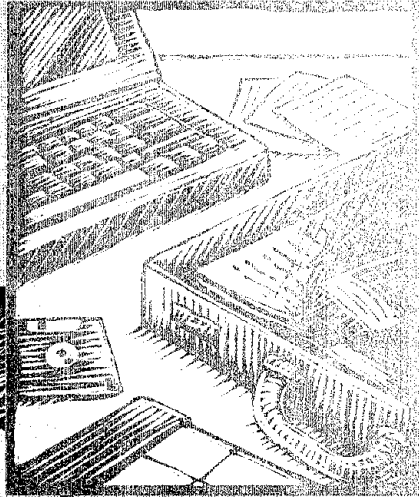
### ANSWERS

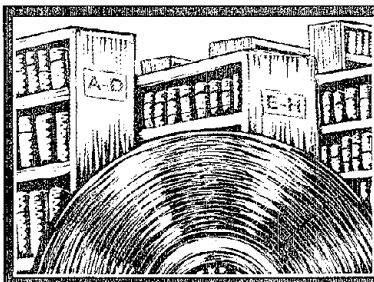
---

1. Contact NIOSH for information about working with lead, including health effects and protective equipment (such as respirators).
2. Contact OSHA for information about the requirements of the OSHA lead standard (29 CFR 1910.102).
3. Lead may be transported from the workplace to your home on your body or your clothes and can affect your family. Such contamination is often called "take-home lead." Make sure you wash and change clothes before going home and launder your clothes separately from those of your family. For information about dealing with take-home lead, request a copy of the NIOSH publication *Reduce Contamination at Home* (NIOSH Pub. No. 97-125).

Department of Health and Human Services  
Centers for Disease Control and Prevention

Administrative, Professional, and Commercial  
National Safety and Health





## Educational, Organizational & Commercial Resources

### ALLIANCE OF AMERICAN INSURERS

The Alliance is a property and casualty insurance trade association that works with interested safety professionals and stakeholders from the public sector, private industry, labor, and academia. They organize local coalitions interested in developing new public policy approaches to protect employees working in small businesses.

By mail: Alliance of American Insurers  
Safety and Environment Department  
3025 Highland Parkway, Suite 800  
Downers Grove, IL 60515-1289

Telephone: 1-630-724-2138  
Web site: [www.allianceai.org](http://www.allianceai.org)

### AMERICAN ASSOCIATION OF OCCUPATIONAL HEALTH NURSES (AAOHN)

This group is an association of registered professional nurses employed by business and industrial firms; nurse educators, nurse editors, nurse writers, and others interested in occupational health nursing. AAOHN provides workplace information referrals and related services. In addition, they have several publications of interest to small businesses, and they provide a speakers bureau.

By mail: AAOHN  
Suite 100  
2920 Brandywine Rd.  
Atlanta, GA 30341

Telephone: 1-770-455-7757  
Fax: 1-770-455-7271  
Web site: [www.aaohn.org](http://www.aaohn.org)

### AMERICAN COLLEGE OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE (ACOEM)-MEDICAL REFERRALS

This group of physicians specializes in occupational and environmental medicine. ACOEM promotes maintenance and improvement of the health of workers, works to increase awareness of occupational medicine as a medical specialty, and provides referrals to physicians. The ACOEM represents more than 7,000 medical specialists.

By mail: ACOEM  
55 West Seegers Road  
Arlington Heights, IL 60005

Telephone: 1-847-818-1800  
Fax: 1-847-818-9266  
Web site: [www.acoem.org](http://www.acoem.org)

## AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (ACGIH)

ACGIH is a professional society of occupational and environmental safety and health professionals devoted to the development of administrative and technical aspects of worker health protection. ACGIH functions mainly as a medium for the exchange of ideas and the promotion of standards and techniques in industrial health.

By mail: ACGIH  
1330 Kemper Meadow Dr., Suite 600  
Cincinnati, OH 45240

Telephone: 1-513-742-2020  
Fax: 1-513-742-3355  
Web site: [www.acgih.org](http://www.acgih.org)

## AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA)

AIHA is a professional society of industrial hygienists that promotes the study and control of environmental factors affecting the health and well-being of workers. AIHA sponsors continuing education courses in industrial hygiene, a government affairs program, and public relations.

### Contact Information and Publications

---

The *AIHA Hygienic Guide Series* includes data sheets about substances; they include standards, properties, practices, procedures, and references. Other AIHA publications may also be helpful. These data sheets and other AIHA publications are available for sale.

By mail: American Industrial Hygiene Association  
2700 Prosperity Ave., Suite 250  
Fairfax, VA 22031-4319

Telephone: 1-703-849-8888  
Fax: 1-703-207-3561  
Web site: [www.aiha.org](http://www.aiha.org)

### Consultation and Site Visits

---

The AIHA also gives referrals for industrial hygiene consultants, worksite monitoring, and related activities.

## AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI serves as a clearinghouse for nationally coordinated voluntary standards for fields ranging from information technology to building construction. ANSI gives American National Standards status to standards developed for definitions, terminology, symbols, and abbreviations; materials, performance characteristics, procedures, and methods of rating; methods of testing and analysis; size, weight, volume, and rating; practice, safety, health, and building construction. ANSI provides information on foreign standards and represents U.S. interests in international standardization work.

Guides of interest include the following:

*ANSI Z11.7-1995 Confined Spaces*  
*ANSI Z88.2-1992 Respiratory Protection*

By mail: American National Standards Institute  
11 West 42nd St.  
New York, NY 10036

Telephone: 1-212-642-4900  
Fax: 1-212-398-0023  
Web site: [www.ansi.org](http://www.ansi.org)

---

### AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE)

ASSE is a professional society of safety engineers, safety professionals, safety directors, and others concerned with accident prevention, environmental protection, and safety and health programs. ASSE develops and publishes ANSI safety-related standards and other technical literature.

---

### Contact Information and Publications

ASSE publishes a manual called *Safety and Health Management Guide for Small Business*, which has been endorsed and recognized by regulators at the State level. Other ASSE publications and materials may also be helpful.

By mail: American Society of Safety Engineers  
1800 East Oakton Street  
Des Plaines, IL 60018

Telephone: 1-847-699-2929  
Fax: 1-847/768-3434  
Web site: [www.asse.org](http://www.asse.org)

---

### Training

ASSE offers courses leading to a certificate in safety management and has correspondence courses approved by the American Council on Education (ACE) for college credit. ASSE also offers a series of training programs for all levels of safety and health management, including group and private seminars.

---

### Consultation

For referrals for safety consultation and related activities, ASSE offers *The National Directory of Safety Consultants* which is an extensive catalog of safety and health consultants listed by geographic location, expertise, and credentials. ASSE also serves as the Registrar of the National Registry of Safety Professionals and other Registrants.

---

### AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM establishes standards for materials, products, systems, and services. ASTM has 131 technical committees (each having five to 50 subcommittees). New committees are organized periodically to keep pace with technological advances. ASTM has developed more than 10,000 standard test methods, specifications, classifications, definitions, and recommended practices now in use.

Information is available about the prices of ASTM standards with related material.

By mail: American Society for Testing and Materials (ASTM)  
100 Barr Harbor Dr.  
West Conshohocken, PA 19428-2959

Telephone: 1-610-832-9585  
Fax: 1-610-832-9555  
Web site: [www.astm.org](http://www.astm.org)

### ASSOCIATION OF OCCUPATIONAL AND ENVIRONMENTAL CLINICS (AOEC)

This association seeks to enhance the practice of occupational and environmental medicine by sharing information and providing educational and research programs.

Information is available about occupational safety and health clinics.

By mail: Association of Occupational and Environmental Clinics  
1010 Vermont Ave. N.W., #513  
Washington, DC 20005

Telephone: 1-202-347-4976  
Web site: [www.aocc.org](http://www.aocc.org)

### CENTER FOR SAFETY IN THE ARTS

Publications about hazards in the arts and crafts industry are available.

By mail: Center for Safety in the Arts  
Art Hazards Information Center  
c/o New York Foundation for the Arts  
155 Avenue of the Americas, 14th floor  
New York, NY 10013

Web site: [www.artswire.org](http://www.artswire.org)

### COMMITTEES FOR OCCUPATIONAL SAFETY AND HEALTH (COSHS)

COSHS are usually nonprofit groups that assist workers, labor leaders, occupational safety and health professionals, medical professionals, and community activists with occupational safety and health concerns. COSHS are good sources of current information, and many maintain libraries or offer technical assistance.

**Alaska**  
Alaska Health Project  
218 E. 4th Ave.  
Anchorage, AK 99501  
**Telephone:** 1-907-276-2864

**California**  
Worksafe  
c/o San Francisco Labor Council  
1188 Franklin St., #203  
San Francisco, CA 94109  
**Telephone:** 1-510-465-7728 (messages only)

**LACOSH**  
5855 Venice Blvd.  
Los Angeles, CA 90019  
**Fax:** 1-323-931-2255

**SA-COSH**  
c/o Fire Fighters Local 522  
3101 Stockton Blvd.  
Sacramento, CA 95820  
**Fax:** 1-916-446-3057

**SCCOSH**  
760 N. First St., 2nd floor  
San Jose, CA 95112  
**Fax:** 1-408-998-4051

**Connecticut**  
ConnectiCOSH  
77 Huyshope Ave., 2nd floor  
Hartford, CT 06106  
**Telephone:** 1-860-549-1877

**Illinois**  
CACOSH  
c/o UIC School of Public Health  
2121 West Taylor St., M/C-922  
Chicago, IL 60612-7260  
**Telephone:** 1-312-666-1611

**Maine**  
Maine Labor Group on Health  
P.O.Box 5197  
Augusta, ME 04332  
**Telephone:** 1-207-622-7823

**Maryland**  
Alice Hamilton Occupational Health Center  
1310 Apple Ave.  
Silver Spring, MD 20910-3354  
**Telephone:** 1-301-565-4590

**Massachusetts**  
MassCOSH  
555 Amory St.  
Boston, MA 02130  
**Telephone:** 1-617-524-6686

Western MassCOSH  
458 Bridge St.  
Springfield, MA 01103  
**Telephone:** 1-413-731-0760

**Michigan**  
SEMCOSH  
1550 Howard St.  
Detroit, MI 48216  
**Telephone:** 1-313-961-3345

**Minnesota**  
MnCOSII/Lyle Krych  
5013 Girard Ave. North  
Minneapolis, MN 55430  
**Fax only:** 1-612-572-9826

**New Hampshire**  
NHCOSH  
110 Sheep Davis Road  
Pembroke, NH 03275  
**Telephone:** 1-603-226-0516

**New York**  
ALCOSH  
20 W. 3rd St., #21  
Jamestown, NY 14701  
**Telephone:** 1-716-488-0720

CNYCOSH  
615 W. Genessee St.  
Syracuse, NY 13204  
**Telephone:** 1-315-471-6187

NYCOSH  
275 Seventh Ave., 8th floor  
New York, NY 10001  
**Telephone:** 1-212-627-3900

ROCOSH  
46 Prince St.  
Rochester, NY 14607  
**Fax only:** 1-716-244-0956

WYNCOSH  
2495 Main St., #438  
Buffalo, NY 14214  
**Fax only:** 1-716-833-7507

**North Carolina**  
NCOSH  
P.O. Box 2514  
Durham, NC 27715  
**Telephone:** 1-919-286-9249

**Oregon**  
c/o ICWU-Portland  
7440 SW 87 St.  
Portland, OR 07223  
**Telephone:** 1-503-244-8429

**Rhode Island**  
RICOSH  
741 Westminster St.  
Providence, RI 02903  
**Telephone:** 1-401-751-2015 (messages only)

**Wisconsin**  
WisCOSH  
734 N. 26th St.  
Milwaukee, WI 53230  
**Telephone:** 1-414-933-2338

**Ontario, Canada**  
WOSH  
547 Victoria Ave.  
Windsor, Ontario N9A 4N1  
**Fax:** 1-519-254-4192

## **EDUCATION AND RESEARCH CENTERS (ERCs)**

See NIOSH Resources/Training

## **ENVIRONMENTAL AND OCCUPATIONAL HEALTH SCIENCES INSTITUTE (EOHSI)**

EOHSI offers 19 INFOletters and 30 INFOsheets on a wide variety of topics in the environmental and occupational health sciences. More information is available through the EOHSI Web site.

Web site: [www.eohsi.rutgers.edu/rc/publication.html](http://www.eohsi.rutgers.edu/rc/publication.html)

## **THE HEALTH INFORMATION RESOURCE DATABASE**

The Health Information Resource Database includes 1,100 organizations and government offices that provide health information upon request.

Entries include:

- contact information
- short abstracts
- information about publications and services
- toll-free numbers for health information
- Federal health information centers and clearinghouses

You may use key words to search the database.

Web site: <http://nhic-nt.health.org/Index.htm>

## **INSURANCE CARRIERS (SEE ALSO ALLIANCE OF AMERICAN INSURERS)**

Many insurance carriers offer information about safety, loss prevention, and risk management. Check their Web sites, or ask your agent with which your business is affiliated if they provide checklists or educational or reference material regarding workplace safety and health.

## **NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)**

NFPA develops, publishes, and disseminates standards (prepared by approximately 250 technical committees) that are intended to minimize the possibility and effects of fire and explosion. NFPA also conducts fire safety education programs for the general public. NFPA provides information on fire protection, prevention, and suppression; compiles annual statistics on causes and occupancies of fires, large-loss fires (over \$1,000,000) fire deaths, and fire fighter casualties. NFPA provides field service by specialists on electricity, flammable liquids and gases, and marine fire problems. NFPA also sponsors seminars on the Life Safety Code, the National Electrical Code, hotel/motel fire safety, shipyard fire protection, fire safety in detention and correctional facilities, and other timely topics.

For information about fire protection and fire prevention contact

By mail: National Fire Protection Association  
11 Tracy Dr.  
Avon, MA 02322

Toll-free telephone: 1-800-344-3555 (publications only)  
Web site: [www.nfpa.org](http://www.nfpa.org)

## NATIONAL SAFETY COUNCIL (NSC)

The NSC is a not-for-profit public service organization dedicated to improving the safety and health of all people. The mission of NSC is to educate and influence society to adopt safety, health, and environmental policies, practices, and procedures that prevent and mitigate human suffering and economic losses arising from preventable causes.

By mail: National Safety Council  
P.O. Box 558  
Itasca, IL 60143-0558

Toll-free telephone: 1-800-621-7619  
Web site: [www.nsc.org](http://www.nsc.org)

## Contact Information and Publications

---

NSC disseminates a wide variety of safety education programs, periodicals, technical books, manuals, and motivational materials that assist members and non-members in fulfilling their safety, health, and environmental responsibilities.

## Training

---

The NSC offers a wide variety of training options to meet occupational safety and health needs. NSC also offers specialty training, as well as customized and packaged training courses. Information about their Advanced Safety Certificate (ASC) can be obtained from NSC.

Many NSC chapters have catalogs of videos which can be rented or purchased. Some titles are available in Spanish. The NSC Web site has up-to-date listings of videos.

## TRADE ASSOCIATIONS, UNIONS, AND EDUCATIONAL INSTITUTIONS

Trade associations or professional associations and unions often have technical information and data specific to an industry. Also, equipment or product manufacturers may have information about how to operate their products safely or about precautions to take. Check with your local colleges or universities to see whether they have departments in industrial hygiene, safety, or public health. Faculty or libraries may also have useful information. Trade associations sometimes offer training programs about common hazards. Employers whose workers are represented by unions have access to many hazard assessment resources as well as to safety and health training.

## VERMONT SAFETY INFORMATION RESOURCES-SAFETY GRAPHICS

The Vermont Safety Information Resources on the Internet (SIRI) has information about images, logos, and warnings. Also included is information about making signs, labels, and pamphlets. Access and download numerous graphics from the following list of folders:

Back safety	Noise
Electrical	Office
Emergencies	Personal protection
Fire	Safety management
Industrial hygiene	Tools
Industrial operations	Ventilation
Labs	Waste
Medical	

Web site: <http://siri.uvm.edu/graphics/>

## **WORKERS' COMPENSATION CARRIERS (SEE ALSO ALLIANCE OF AMERICAN INSURERS)**

Your workers' compensation carrier may be able to assist you in addressing your safety and health concerns. Many workers' compensation insurers provide services that assist their policyholders in identifying, evaluating, and controlling occupational health problems. Workers' compensation insurers deliver these services in person, by mail, or by telephone, commensurate with the employer's need. Many workers' compensation insurers also offer consultations on safety, loss prevention, and risk management. Contact your workers' compensation insurer or agent for more information.

Also, if you need to hire a private consultant, select one by matching the consultant's specialty to your business and your safety and health concerns. It might be helpful to contact organizations listed in this booklet. In addition, your workers' compensation insurer may be able to assist you in selecting a private consultant. To obtain the telephone number of the workers' compensation bureau in your State, call 1-800-622-4123.

## **COMMERCIAL ESTABLISHMENTS OFFERING OCCUPATIONAL SAFETY AND HEALTH SERVICES TO SMALL BUSINESSES**

*The following commercial establishments have been included only because they represent the types of commercial establishments available to small businesses.*

### **A.M. BEST SAFETY AND SECURITY DIRECTORY**

This Directory provides details on OSHA standards and regulations, checklists, training articles, and new product developments.

Web site: [www.ambest.com/safety](http://www.ambest.com/safety)

### **AMERICAN CHEMISTRY COUNCIL (ACC)**

This Council (formerly the Chemical Manufacturers Association [CMA]) represents the chemical industry on public policy issues, coordinates the industry's research and testing programs, and administers the industry's environmental, health, and safety performance improvement initiative, known as Responsible Care. ACC operates CHEMTREC®, which offers guidance to emergency services on handling emergencies involving chemicals. ACC also maintains a list of online databases of material safety data sheets (MSDSs). Chemical manufacturers and suppliers are required under the OSHA hazard communication standard to provide a MSDS with their products. MSDSs contain important information on safety and health hazards of chemicals and precautions to take when handling them.

By mail: American Chemistry Council  
1300 Wilson Boulevard  
Arlington, VA 22209

Telephone: 1-703-741-5000  
Web site: [www.cmahq.com](http://www.cmahq.com)

## NATIONAL FEDERATION OF INDEPENDENT BUSINESS

The National Federation of Independent Business is the Nation's largest advocacy organization for small and independent businesses. It presents opinions of small and independent business to State and national legislative bodies and conducts surveys at the State level with area directors and government affairs representatives working with State legislatures.

By mail:           The National Federation of Independent Business  
53 Century Boulevard, Suite 300  
Nashville, TN 37214

Telephone:       1-615-872-5300  
Web site:         www.nfibonline.com

## UNDERWRITERS LABORATORIES (MANUFACTURING STANDARDS)

Underwriters Laboratories Inc. (UL) is an independent, not-for-profit product safety testing and certification organization. UL offers services to consumers, manufacturers, and regulators.

Annual lists of manufacturers whose products proved acceptable under appropriate standards are available.

By mail:           Underwriters Laboratories, Inc.  
333 Pfingsten Rd.  
Northbrook, IL 60062

Telephone:       1-847-272-8800  
Fax:               1-847-272-8129  
Web site:         www.ul.com

# APPENDIX

## NIOSH PUBLICATIONS

To order publications from NIOSH, call 1-800-35-NIOSH (1-800-356-4674).

## ALERTS

**Alerts** briefly present new information about occupational illnesses, injuries, and deaths. Alerts urgently request assistance in preventing, solving, and controlling newly identified occupational hazards. Workers, employers, and safety and health professionals are asked to take immediate action to reduce risks and implement controls.

## UPDATES

**Updates** are brief nontechnical publications that are intended to provide information about NIOSH findings and recommend preventive measures. The information is presented in a format that can be easily used by the media and other organizations.

## HAZARD CONTROLS (HCs) AND HAZARD IDs (HIDs)

**Hazard Controls** are short, user-friendly documents that describe control techniques for reducing hazardous exposures to workers in a particular application or industrial process. These documents outline and illustrate successful engineering controls and work practices.

**Hazard IDs (Identifications)** are short, user-friendly documents that summarize the results of NIOSH studies at a worksite. These documents identify new or current safety and health hazards and offer recommendations for control or prevention. HIDs are directed primarily to workers at other U.S. worksites who are similarly exposed but may be unaware of the hazards and measures for prevention.

## CURRENT INTELLIGENCE BULLETINS (CIBs)

**Current Intelligence Bulletins** review and evaluate new and emerging information about occupational hazards. They may draw attention to a previously unrecognized hazard, report new data about a known hazard, or disseminate information about hazard control.

TABLE A-1. SELECTED NIOSH PUBLICATIONS

Subject industry or hazard

Publication No.	Title
<i>Acetaldehyde and malonaldehyde/aldehydes</i>	
91-112	CIB-55: Carcinogenicity of Acetaldehyde and Malonaldehyde, and Mutagenicity of Related Low-Molecular-Weight Aldehydes (September 1991)
<i>Aircraft refueling</i>	
84-106	Alert: Request for Assistance in Controlling Carbon Monoxide Hazard in Aircraft Refueling Operations (February 1984)
<i>Animal handling (see also Farming)</i>	
97-116	Alert: Preventing Asthma in Animal Handlers (January 1998)
99-100	HID 5: Cercopithecine Herpesvirus 1 (B Virus) Infection Resulting from Ocular Exposure (May 1999)
<i>Arsine</i>	
79-142	CIB-32: Arsine (Arsenic Hydride) Poisoning in the Workplace (August 1979)
<i>Auto repair</i>	
96-105	HC 1: Control of Dusts from Sanding in Autobody Repair Shops (January 1996)
96-106	HC 2: Control of Paint Overspray in Autobody Repair Shops (January 1996)
<i>Beauty salons</i>	
99-112	HC 28: Controlling Chemical Hazards during the Application of Artificial Fingernails (January 1999)
<i>1,3-Butadiene</i>	
84-105	CIB-41: 1,3-Butadiene (February 1984)
<i>Cadmium</i>	
84-116	CIB-42: Cadmium (September 1984)

## Carpet layers

---

90-104 Alert: Request for Assistance in Preventing Knee Injuries and Disorders in Carpet Layers (May 1990)

## Child labor

---

95-125 Alert: Request for Assistance in Preventing Deaths and Injuries of Adolescent Workers (May 1995)

94-117 Update: NIOSH Warns Employment Can be Dangerous and Deadly for Adolescents (June 1994)

95-115 Update: NIOSH Warns: Employment May Be Hazardous for Adolescent Workers (July 1995)

96-119 Update: NIOSH Study Finds Work Injuries, Illnesses among Young Employees Pervasive, Preventable (June 1996)

## Chloroethanes

---

78-181 CIB-27: Chloroethanes: Review of Toxicity (August 1978)

## Chlorofluorocarbon 113 (CFC-113)

---

89-109 Alert: Request for Assistance in Preventing Death from Excessive Exposure to Chlorofluorocarbon 113 (CFC-113) (May 1989)

## Confined spaces

---

86-110 Alert: Request for Assistance in Preventing Occupational Fatalities in Confined Spaces (January 1986)

## Construction

---

85-110 Alert: Request for Assistance in Preventing Deaths and Injuries from Excavation Cave-Ins (July 1985)

93-110 Update: NIOSH Warns of Danger of Trench Cave-Ins (May 1993)

93-120 Update: NIOSH Issues Nationwide Alert on Dangers of Working from Scaffolds (January 1993)

96-120 Update: NIOSH Warns of Silicosis Risk in Construction, Suggests Measures to Reduce Exposure (June 1996)

91-116 Alert: Request for Assistance in Preventing Lead Poisoning in Construction Workers: Revised Edition (April 1992)

92-102 Alert: Request for Assistance in Preventing Silicosis and Deaths from Sandblasting (August 1992)

92-108 Alert: Request for Assistance in Preventing Worker Injuries and Deaths Caused by Falls from Suspension Scaffolds (August 1992)

## Construction (continued)

---

- |        |  |
|--------|--|
| 96-112 | Alert: Request for Assistance in Preventing Silicosis and Deaths in Construction Workers (May 1996)                  |
| 98-117 | Alert: Preventing Injuries and Deaths from Skid-Steer Loaders (February 1998)  |
| 98-122 | HID 3: Carbon Monoxide Poisoning and Death after the Use of Explosives in a Sewer Construction Project (August 1998) |
| 99-113 | HC 30: Control of Drywall Sanding Dust Exposure (June 199)   |

## Diesel exhaust

---

- |        |  |
|--------|--|
| 88-116 | CIB-50: Carcinogenic Effects of Exposure to Diesel Exhaust (August 1988) |
|--------|--|

## Diisocyanates

---

- |        |  |
|--------|--|
| 96-111 | Alert: Request for Assistance in Preventing Asthma and Death from Diisocyanate Exposure (March 1996) |
|--------|--|

## Dimethylethylamine (DMEA)

---

- |        |   |
|--------|---|
| 88-103 | Alert: Request for Assistance in Preventing Vision Disturbances and Acute Physical Distress Due to Dimethylethylamine (DMEA) Exposure (December 1987) |
|--------|---|

## Dimethylformamide (DMF)

---

- |        |  |
|--------|--|
| 90-105 | Alert: Request for Assistance in Preventing Adverse Health Effects from Exposure to Dimethylformamide (DMF) (September 1990) |
|--------|--|

## Dinitrotoluenes

---

- |        |   |
|--------|---|
| 85-109 | CIB-44: Dinitrotoluenes (DNT) (July 1985) |
|--------|---|

## Dioxin (2,3,7,8-Tetrachlorodibenzo-p-Dioxin)

---

- |        |   |
|--------|---|
| 84-104 | CIB-40: 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD, "dioxin") (January 1984) |
|--------|---|

## Direct Blue 6, Direct Black 38, Direct Brown 95, Benzidine-derived dyes

---

- |        |  |
|--------|--|
| 78-148 | CIB-24: Direct Blue 6, Direct Black 38, Direct Brown 95, Benzidine Derived Dyes (April 1978) |
|--------|--|

## Drycleaning

---

- |        |  |
|--------|--|
| 97-154 | HC 16: Control of Exposure to Perchloroethylene in Commercial Drycleaning (October 1997) |
|--------|--|

97-155	HC 17: Control of Exposure to Perchloroethylene in Commercial Drycleaning (Substitution) (October 1997)
97-156	HC 18: Control of Exposure to Perchloroethylene in Commercial Drycleaning (Machine Design) (October 1997)
97-157	HC 19: Control of Exposure to Perchloroethylene in Commercial Drycleaning (Ventilation) (October 1997)
97-158	HC 20: Control of Spotting Chemical Hazards in Commercial Drycleaning (October 1997)
97-159	HC 21: Control of Fire Hazards in Commercial Drycleaning Shops Using Petroleum-Based Solvents (October 1997)
97-160	HC 22: Control of Ergonomic Hazards in Commercial Drycleaning (October 1997)

### Electrical energy

---

87-100	Alert: Request for Assistance in Preventing Electrocutions Due to Damaged Receptacles and Connectors (October 1986)
87-103	Alert: Request for Assistance in Preventing Fatalities of Workers Who Contact Electrical Energy (December 1986)
98-108	HC 25: Controlling the Ergonomic Hazards of Wiring Tasks for Household Appliances (December 1997)
86-111	CIB-45: Polychlorinated Biphenyls (PCBs): Potential Health Hazards from Electrical Equipment Fires or Failures (February 1986)
99-110	Alert: Preventing Worker Deaths from Uncontrolled Release of Electrical, Mechanical, and Other Types of Hazardous Energy (August 1999)

### Electrical utilities

---

85-111	Alert: Request for Assistance in Preventing Electrocutions from Contact between Cranes and Power Lines (July 1985)
88-104	Alert: Request for Assistance in Preventing Electrocutions by Undetected Feedback Electrical Energy Present in Power Lines (December 1987)
89-110	Alert: Request for Assistance in Preventing Electrocutions of Workers Using Portable Metal Ladders near Overhead Power Lines (July 1989)
91-110	Alert: Request for Assistance in Preventing Electrocutions During Work with Scaffolds near Overhead Power Lines (August 1991)
95-108	Alert: Request for Assistance in Preventing Electrocutions of Crane Operators and Crew Members Working near Overhead Power Lines (May 1995)

## Embalming

---

98-149 HC 26: Controlling Formaldehyde Exposures during Embalming (October 1998)

## Epichlorohydrin

---

79-105 CIB-30: Epichlorohydrin (October 1978)

## Ethylene dibromide

---

82-105 CIB-37: Ethylene Dibromide (EDB) (Revised) (October 1981)

## Ethylene dibromide and disulfiram

---

78-145 CIB-23: Ethylene Dibromide and Disulfiram Toxic Interaction (April 1978)

## Ethylene dichloride (1,2-dichloroethane)

---

78-149 CIB-25: Ethylene Dichloride (1,2-Dichloroethane) (April 1978)

## Ethylene oxide (see also Health care)

---

81-130 CIB-35: Ethylene Oxide (EtO) (May 1981)

2000-119 Alert: Preventing Worker Injuries and Deaths from Explosions in Industrial Ethylene Oxide Sterilization Facilities (April 2000)

## Ethylene thiourea

---

78-144 CIB-22: Ethylene Thiourea (April 1978)

## Farming (see also Animal handling and Grain augers)

---

86-118 Alert: Request for Assistance in Preventing Fatalities Due to Fires and Explosions in Oxygen-Limiting Silos (July 1986)

88-102 Alert: Request for Assistance in Preventing Entrapment and Suffocation Caused by the Unstable Surfaces of Stored Grain and Other Materials (December 1987)

90-103 Alert: Request for Assistance in Preventing Deaths of Farm Workers in Manure Pits (May 1990)

93-114 Update: NIOSH Warns: Manure Pits Continue to Claim Lives (July 6, 1993)

93-115 Update: NIOSH Issues Warning to Tobacco Harvesters (July 8, 1993)

93-116	Update: NIOSH Warns Farmers of Deadly Risk of Grain Suffocation (April 28, 1993)
93-119	Update: NIOSH Reports on the Preventability of Tractor Rollovers (January 29, 1993)
93-126	Update: Farm Safety: Danger of Hair Entanglement in Hay Bailer Drive Shafts (July 1992)
94-102	Alert: Request for Assistance in Preventing Organic Dust Toxic Syndrome (April 1994)
94-105	Alert: Request for Assistance in Preventing Scalping and Other Severe Injuries from Farm Machinery (June 1994)
94-121	Update: NIOSH Warns of Agricultural Hazards: Organic Dust Syndrome (July 19, 1994)
95-118	Update: NIOSH Warns Farmers of Forage Wagon Hazards (September 14, 1995)
97-108	Update: NIOSH Warns: Improper Hitching to Tractors Can Be Fatal (January 14, 1997)
98-146	HID 4: Ignition Hazard from Drilling into Sealed Frames of Agriculture Equipment (August 1998)

### **Fire fighting**

---

94-125	Alert: Request for Assistance in Preventing Injuries and Deaths of Fire Fighters (September 1994)
--------	---

### **Fishing**

---

93-111	Update: College Students May Be Risking Their Lives on Fishing Vessels (May 14, 1993)
94-107	Alert: Request for Assistance in Preventing Drownings of Commercial Fishermen (April 1994)
94-111	Update: College Students may be Risking Their Lives on Fishing Vessels, Working in the Alaska Fishing Industry is one of the Most Hazardous Jobs (April 1994)
97-163	CIH-58: Commercial Fishing Fatalities in Alaska: Risk Factors and Prevention Strategies (September 1997)

### **Flood cleanup**

---

93-128	Update: NIOSH Warns Midwest of Hazards of Flood Cleanup Work (August 12, 1993), (Revised to 94-123)
94-123	Update: NIOSH Warns of the Hazards of Flood Cleanup Work (July 1994)

## Forklifts

---

2000-112 Alert: Preventing Injuries and Deaths of Workers Who Operate or Work Near Forklifts (December 1999)

## Formaldehyde

---

81-111 CIB-34: Formaldehyde: Evidence of Carcinogenicity (April 1981)

## Foundry

---

98-106 HC 23: Controlling Silica Dust from Foundry Casting-Cleaning Operations (December 1997)

## Gas cans

---

98-111 IID 2: Fire Hazards from Filling Portable Gas Cans in Pickup Trucks and Cars (August 1998)

## Glycidyl ethers

---

79-104 CIB-29: Glycidyl Ethers (October 1978)

## Glycol ethers

---

83-112 CIB-39: Glycol Ethers 2-Methoxyethanol and 2-Ethoxyethanol (May 1983)

## Grain augers (see also Farming)

---

86-119 Alert: Request for Assistance in Preventing Grain Auger Electrocutions (July 1986)

## Hair and fur dyes (see also Beauty salons)

---

78-111 CIB-19: 2,4-Diaminoanisole (4-Methoxy m-Phenylenediamine) in Hair and Fur Dye (January 1978)

## Health care (see also Needlesticks)

---

89-115 CIB-52: Ethylene Oxide Sterilizers in Health Care Facilities: Engineering Controls and Work Practices (July 1989)

94-100 Alert: Request for Assistance in Controlling Exposures to Nitrous Oxide during Anesthetic Administration (April 1994)

94-118 Update: NIOSH Warns Nitrous Oxide Continues to Threaten Health Care Workers (June 14, 1994)

96-128 HC 11: Control of Smoke from Laser/Electric Surgical Procedures (September 1996)

97-135 Alert: Preventing Allergic Reactions to Natural Rubber Latex in the Workplace (August 1997)

- 99-105 HC 29: Control of Nitrous Oxide During Cryosurgery (January 1999)
- 2000-119 Alert: Preventing Worker Injuries and Deaths from Explosions in Industrial Ethylene Oxide Sterilization Facilities (April 2000)

### Hydraulic hoses

---

- 93-105 Alert: Request for Assistance in Preventing Injuries and Deaths from Metal-Reinforced Hydraulic Hoses (May 1993)

### Logging

---

- 95-101 Alert: Request for Assistance in Preventing Injuries and Deaths of Loggers (December 1994)

### Meatpacking

---

- 95-102 Update: NIOSH Finds Effective Interventions to Reduce Ergonomic Injuries in Meatpacking and Other Industries (January 6, 1995)

### Mercury

---

- 99-111 HID 6: Exposure to Mercury Vapor During the Use of Mercury Carburetor Synchronizers (June 1999)

### Methylene chloride

---

- 86-114 CIB-46: Methylene Chloride (April 1986)

### 4,4'-Methylene-dianiline

---

- 86-115 CIB-47: 4,4-Methylenedianiline (MDA) (Revised) (July 1986)

### Mining

---

- 98-150 HC 27: New Shroud Design Controls for Silica Dust from Mine and Construction Blast Hole Drills (November 1998)

### Monohalomethanes

---

- 84-117 CIB-43: Monohalomethanes, Methyl Chloride, Methyl Bromide, Methyl Iodide (September 1984)

### Motor vehicles

---

- 98-142 Alert: Preventing Worker Injuries and Deaths from Traffic-Related Motor Vehicle Crashes (July 1998)

## Needlesticks (see also Health care)

---

2000-108

Alert: Preventing Needlestick Injuries in Health Care Settings (November 1999)

## NIAX® catalyst ESN

---

78-157

CIB-26: NIAX® Catalyst ESN . . . a Mixture of Dimethylaminopropionitrile and Bis[2-(dimethylamino)ethyl] Ether (May 1978)

## Noise

---

With National Safety  
Council

Pamphlets: Sound Advice—Protect Your Ears in Noisy Work

With National Safety  
Council

Environments Pamphlet: Listen Up! Learn How to Protect Your Hearing

## Phosphine

---

99-126

Alert: Preventing Phosphine Poisoning and Explosions During Fumigation (September 1999)

## Powder dye

---

97-107

HC 13: Control of Dust from Powder Dye Handling Operations (April 1997)

## Powered engines and tools (small gasoline)

---

96-118  
96-118a

Alert: Preventing Carbon Monoxide Poisoning from Small Gasoline-Powered Engines and Tools, (November 1996)

## Power presses

---

87-107

CIB-49: Injuries and Amputations Resulting from Work with Mechanical Power Presses (May 1987)

## Pressure washers

---

93-117

Update: NIOSH Warns of Deadly Carbon Monoxide Hazard from Using Pressure Washers Indoors (May 10, 1993)

## Printing

---

97-137

HC 15: Control of Ergonomic Hazards from Squeegee Handles in the Screen-Printing Industry (June 1997)

98-107

HC 24: Controlling Cleaning-Solvent Vapors at Small Printers (December 1997)

## Propane

---

99-129                      HID 7: Fire Fighting Hazards During Propane Tank Fires  
(June 1999)

## Propylene oxide

---

89-111                      CIB-51: Carcinogenic Effects of Exposure to Propylene  
Oxide (July 1989)

## Respirators

---

93-127                      Update: NIOSH Warns Workers about Explosive Respirator  
Cylinders (August 2, 1993)

## Restaurants (fast foods)

---

85-104                      Alert: Request for Assistance in Preventing Electrocutions of  
Workers in Fast Food Restaurants (December 1984)

## Robots

---

85-103                      Alert: Request for Assistance in Preventing the Injury of  
Workers by Robots (December 1984)

## Sealers and heaters

---

80-107                      CIB-33: Radiofrequency (RF) Sealers and Heaters: Potential  
Health Hazards and Their Prevention (December 1979)

## Silica

---

81-137                      CIB-36: Silica Flour: Silicosis (Crystalline Silica) (June 1981)

93-123                      Update: NIOSH Issues Nationwide Alert on Silicosis  
(November 18, 1992)

93-124                      Update: Prevention of Silicosis Deaths (1993)

2000-113                    HID-9: Respirable Crystalline Silica Exposures During Tack  
Pointing (November 1999)

## Skid-steer loaders

---

98-117                      Alert: Preventing Injuries and Deaths from Skid-Steer Loaders  
(February 1998)

## Smoking

---

79-122                      CIB-31: Adverse Health Effects of Smoking and the  
Occupational Environment (February 1979)

91-108                      CIB-54: Environmental Tobacco Smoke in the Workplace:  
Lung Cancer and Other Health Effects (June 1991)

## Solvents

---

87-104 CIB-48: Organic Solvent Neurotoxicity (March 1987)

## Stress

---

99-101 Pamphlet: Stress At Work . . . (January, 1999)

## Tetrachloroethylene (perchloroethylene)

---

78-112 CIB-20: Tetrachloroethylene (Perchloroethylene) (January 1978)

## Toluene diisocyanate (TDI) and toluenediamine

---

90-101 CIB-53: Toluene Diisocyanate (TDI) and Toluenediamine (TDA) : Evidence of Carcinogenicity (December 1989)

## o-Toluidine and aniline

---

90-116 Alert: Request for Assistance in Preventing Bladder Cancer from Exposure to o-Toluidine and Aniline (December 1990)

## Trash collecting

---

97-110 Alert: Preventing Worker Injuries and Deaths from Moving Refuse Collection Vehicles (May 1997)

## Tree trimming

---

92-106 Alert: Request for Assistance in Preventing Falls and Electrocutions During Tree Trimming (August 1992)

93-122 Update: NIOSH Issues Nationwide Alert on Dangers of Tree Trimming (December 7, 1992)

## Trimellitic anhydride

---

78-121 CIB-21: Trimellitic Anhydride (TMA) (February 1978)

## Vibration

---

83-110 CIB-38: Vibration Syndrome (March 1983)

## Vinyl halides

---

79-102 CIB-28: Vinyl Halides Carcinogenicity: Vinyl Bromide, Vinyl Chloride, Vinylidene Chloride (September 1978)

## Violence

---

- |        |  |
|--------|--|
| 93-109 | Alert: Request for Assistance in Preventing Homicide in the Workplace (September 1993) |
| 94-101 | Update: NIOSH Urges Immediate Action to Prevent Workplace Homicides (October 25, 1993) |
| 96-100 | CIB-57: Violence in the Workplace: Risk Factors and Prevention Strategies (June 1996)  |

## Washed cotton

---

- |        |  |
|--------|--|
| 95-113 | CIB-56: Washed Cotton: A Review and Recommendations Regarding Batch Kier Washed Cotton (August 1995) |
|--------|--|

## Water spray (fog)

---

- |        |   |
|--------|---|
| 85-112 | Alert: Request for Assistance in Preventing Hazards in the Use of Water Spray (Fog) Streams to Prevent or Control Ignition of Flammable Atmospheres (July 1985) |
|--------|---|

## Wood dust

---

- |        |  |
|--------|--|
| 96-121 | HC 4: Control of Wood Dust from Horizontal Belt Sanders (September 1996)     |
| 96-122 | HC 5: Control of Wood Dust from Shapers (September 1996)                     |
| 96-123 | HC 6: Control of Wood Dust from Automated Routers (September 1996)           |
| 96-124 | HC 7: Control of Wood Dust from Large Diameter Disc Sanders (September 1996) |
| 96-125 | HC 8: Control of Wood Dust from Random Orbital Hand Sanders (September 1996) |
| 96-126 | HC 9: Control of Wood Dust from Orbital Hand Sanders (September 1996)        |
| 96-127 | HC 10: Control of Wood Dust from Table Saws (September 1996)                 |

For more information about the occupational safety and health issues facing small businesses, contact NIOSH. Additionally, you may be interested in the NIOSH publication, *Identifying High-Risk Small-Business Industries: The Basis for Preventing Occupational Injury, Illness and Fatality*. For more information about this and other NIOSH small business documents call: **1-800-35-NIOSH (1-800-356-4674)**

# INDEX

1,3-Butadiene	34	Dioxin	36
4,4'-methylene-dianiline	41	Drycleaning	36
A.M. Best Safety and Security Directory	31	Dyes	36,40,42
Acetaldehyde and malonaldehyde/aldehydes	34	Drywall sanding	36
Aircraft refueling	34	Education and Research Centers (ERCs)	8
Alliance of American Insurers	24	Electrical energy	37
American Association of Occupational Health Nurses (AAOHN)	24	Electrical utilities	37
American Chemistry Council (ACC)	31	Embalming	38
American College of Occupational and Environmental Medicine (ACOEM)	24	Environmental and Occupational Health Sciences Institute (EOHSI)	29
American Conference of Governmental Industrial Hygienists (ACGIH)	25	Environmental Protection Agency (U.S.EPA)	14
American Industrial Hygiene Association (AIHA)	25	Epichlorohydrin	38
American National Standards Institute (ANSI)	25	Ethylene dibromide	38
American Society of Safety Engineers (ASSE)	26	Ethylene dichloride (1,2-dichloroethane)	38
American Society for Testing & Materials (ASTM)	26	Ethylene oxide	38
Animal handling	34	Ethylene thiourea	38
Arsine	34	Excavation (cave-ins)	35
Asbestos	11,17	Farming	6,38
Association of Occupational and Environmental Clinics (AOEC)	27	Federal Emergency Management Agency (FEMA)	15
Auto body shops	11,34	Fire fighting	29,39
Back belts	6	Fishing	39
Beauty salons	34	Flood cleanup	6,39
Bloodborne pathogens	11	Forklifts	40
Cadmium	34	Formaldehyde	40
Carpet layers	35	Foundries	11,40
Center for Safety in the Arts	27	Gas cans	40
Chemical handling/hazards (see also individual chemicals)	7,11,31	Glycidyl ethers	40
Child labor	6,35	Glycol ethers	40
Chloroethanes	35	Grain augers/storage	38,39,40
Chlorofluorocarbon 113 (CFC-113)	35	Health Information Resources Database	29
Cold stress	17	Health care/health care workers	11,40
Committees for Occupational Safety and Health (COSHs)	27	Healthfinder®	15
Confined spaces	35	Heat stress	6,17
Construction	6,35	Hydraulic hoses	41
Consultation	11,16,17,18,20,25,26	Indoor air quality	6
Cotton (see Washed Cotton)		Insurance	24,29
Cranes	37	Ladders	37
Cumulative trauma	6,11	Laser surgery	40
Dental	11	Latex	6,40
Department of Energy (U.S. DOE)	14	Lead	35
Department of Transportation (U.S. DOT)	14	Logging	41
Diesel Exhaust	36	Meatpacking	41
Diisocyanates	36	Mercury	41
Dimethylethylamine (DMEA)	36	Methylene chloride	41
Dimethylformamide (DMF)	36	Mine Safety and Health Administration (MSHA)	16
Dinitrotoluenes	36	Mining	6,16,41
		Monohalomethanes	41
		Motor vehicles	41
		MSHA (see Mine Safety and Health Administration)	
		National Federation of Independent Business	32
		National Fire Protection Association (NFPA)	29

National Institute of Environmental Health Sciences (NIEHS) . . . . .	15
National Institute for Occupational Safety and Health (NIOSH) . . . . .	6,33
National Safety Council (NSC) . . . . .	30,42
Needlesticks . . . . .	42
Niax® catalyst ESN . . . . .	42
NIOSH (see National Institute for Occupational Safety and Health)	
Noise/hearing . . . . .	17,42
Nitrous oxide . . . . .	40, 41
Occupational Safety and Health Administration (OSHA) . . . . .	16
Phosphine . . . . .	42
Polychlorinated biphenyls (PCBs) . . . . .	37
Power lines (see Electrical utilities)	
Power presses . . . . .	42
Powered engines and tools . . . . .	42
Pressure washers . . . . .	42
Printing . . . . .	42
Propane . . . . .	43
Propylene oxide . . . . .	43
Respirators (cylinders) . . . . .	43
Restaurants (fast foods) . . . . .	43
Robots . . . . .	43
Roofing . . . . .	11
Sandblasting . . . . .	35
Sanders . . . . .	11
SBA (see Small Business Administration)	
Scaffolds . . . . .	35,37
Sealers and heaters . . . . .	43
Sewers . . . . .	36
Silica/silicosis . . . . .	6,11,35,36,41,43
Skid-steer loaders . . . . .	43
Small Business Administration (SBA) . . . . .	19
Smoking . . . . .	43
Solvents . . . . .	42,44
Spanish . . . . .	17,30
Spray painting . . . . .	11
State agencies . . . . .	20
Stress . . . . .	44
Tetrachloroethylene (perchloroethylene) . . . . .	37,44
Toluene diisocyanate (TDI) and toluenediamine . . . . .	44
o-Toluidine and aniline . . . . .	44
Tractor rollovers . . . . .	39
Trade associations . . . . .	30
Training . . . . .	8,17,26,30
Trash collecting . . . . .	44
Tree trimming . . . . .	44
Trimellitic anhydride . . . . .	44
Underwriters Laboratories . . . . .	32
Unions . . . . .	30

Vermont Safety Information Resources (on the Internet) . . . . .	30
Vibration . . . . .	11,44
Video tapes . . . . .	11,30
Vinyl halides . . . . .	44
Violence . . . . .	6,45
Washed cotton . . . . .	45
Water spray (fog) . . . . .	45
Welding . . . . .	11
Wood dust . . . . .	11,45
Workers' Compensation Carriers . . . . .	31

THIS DOCUMENT IS IN THE PUBLIC DOMAIN AND  
MAY BE FREELY COPIED OR REPRINTED

### DISCLAIMER

Mention of any company or product does not constitute endorsement by NIOSH.

### NOTICE TO READERS

All telephone numbers, Web sites, and addresses have been carefully checked for accuracy. Because such information is highly subject to change, we will make every effort to keep it updated on the NIOSH Web site ([www.cdc.gov/niosh](http://www.cdc.gov/niosh)).

### ORDERING INFORMATION

To receive documents or other information about occupational safety and health topics, contact the National Institute for Occupational Safety and Health (NIOSH) at  
NIOSH – Publications Dissemination  
4676 Columbia Parkway  
Cincinnati, OH 45226-1998

Telephone: 1-800-35-NIOSH (1-800-356-4674)

Fax: 1-513-533-8573

E-mail: [pubstaff@cdc.gov](mailto:pubstaff@cdc.gov)

or visit the NIOSH Web site at [www.cdc.gov/niosh](http://www.cdc.gov/niosh)

### ACKNOWLEDGMENTS

This document was developed by Gwen Finegan, Communications (under Purchase Order No. 99-36391), and by Vivian Morgan and Thomas J. Lentz of NIOSH. Susan Feldmann, Anne Hamilton, and Jane Weber edited the document. Kristina Wasmund, Erica Davis, Patrick Haskins, and Jennifer Jones provided production support and word processing. Willman Design produced the design and layout. We also wish to thank the many reviewers outside of NIOSH for their contributions to this document.

DEHS (NIOSH) Publication No. 2000-148







Delivering On The Nation's Promise:  
Safety and health at work for all  
people through research and  
prevention

**FOR MORE INFORMATION ABOUT NIOSH**

Phone: 1-800-35-NIOSH (1-800-356-4674)

Fax: 513-633-8573

E-Mail: [pubstaff@cdc.gov](mailto:pubstaff@cdc.gov)

Web Site: [www.cdc.gov/niosh](http://www.cdc.gov/niosh)

DHHS (NIOSH) PUBLICATION NO. 2000-148

---

OFFICIAL BUSINESS

Penalty for Private Use: \$300