



# Occupational Safety and Health Issues For Worker with Disabilities



Public Employees Occupational Safety and Health Program

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*It is every employer's responsibility to provide a safe place for all employees to work. Employees with disabilities are entitled to the same level of health and safety as everyone else.*

Workers with disabilities are employed in New Jersey state, county and municipal workplaces including sheltered workshops. The main and most recent study about employees with disabilities was produced by the National Institute for Occupational Safety and Health (NIOSH) and was based on evaluations of 11 community rehabilitation programs. The study results are published in *Applied Occupational and Environmental Hygiene*, Volume 15(2): 171-181, 2000. Although this work centered on issues for workers with developmental disabilities, many of the issues and recommendations discussed can be applied to a broad-spectrum of workers with disabilities. This bulletin is meant to increase awareness of health and safety issues affecting workers with disabilities.

The following issues affecting the safety and health of workers with disabilities are discussed: emergency

medical services and first aid, ergonomics, exposures to chemical and physical agents, hazard communication training, bloodborne pathogens, warning devices and alarms, workplace violence and disability etiquette.

### **Emergency Medical Services and First Aid**

When a workplace does not have a clinic or a hospital in near proximity, the Occupational Safety and Health Administration (OSHA) medical services and first aid standard (29 CFR Part 1910.151), which has been adopted under the NJ PEOSH Act, requires that an employer have a person or persons available who are trained to give first aid to injured employees. Also, first aid supplies must be readily available. In workplaces where a life-threatening or permanently disabling injury or illness can be expected, OSHA interprets in "near proximity" to mean a three to four minute response time from an accident's occurrence to

the administration of first aid.

### **Recommendations**

Staff members should be trained in cardio-pulmonary resuscitation (CPR) and first aid. Specialized training or on-site medical support may also be beneficial and should be based on workers' medical needs.

### **Ergonomics**

The ergonomic aspects of a task may affect a worker's productivity, but more importantly, may also affect whether the task injures a worker. Ensuring that a job is ergonomically safe is especially important to workers with cognitive and/or physical disabilities. Such workers may not associate the onset of an injury with their job and may have difficulty communicating that a problem exists. Consequently, a worker's employer may not be aware of a problem until a more serious injury has occurred.

For example, NIOSH researchers were told

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### **Contents:**

- Emergency Medical Services and First Aid
- Ergonomics
- Exposures to Chemical and Physical Agents
- Hazard Communication Training
- Bloodborne Pathogens Standard
- Warning Devices and Alarms
- Workplace Violence
- Disability Etiquette

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about a community rehabilitation program employee, who after doing a hand intensive task successfully for several days, suddenly stopped working and refused to continue. At first, the worker's supervisor thought a behavioral problem caused the person's work stoppage. However, the real problem was that the worker knew no other way to express that his wrists hurt other than to stop working.

Figures 1 and 2 illustrate some typical ergonomic problems. Because her wheelchair did not fit under the worktable, the worker in Figure 1 had to twist and reach for parts for bagging. She also had to reach to put bagged parts in storage trays. Replacing the worktable with a table having a cutout to accommodate her wheelchair would have reduced body twisting and reach distances.

Before ergonomic improvements were made, the worker in Figure 2 had to use both hands to hold a pneumatic torque wrench. Installing a counter-balancing system to suspend the wrench and securing the bracket assembly reduced the worker's risk of hand and wrist

fatigue. However, improvements to the foot rest and chair position and addition of lumbar support were also needed to reduce the worker's risk of leg and back fatigue.

#### *Recommendations*

In any workplace, ergonomic principles should be applied to fit jobs to workers, and this principle also applies to workers with disabilities. Unless a task can be done only while standing, workers should have the option of sitting or standing. Laboratory studies have shown that standing for long periods causes fatigue, discomfort, and pain in the lower back and legs. One researcher found that the incidence of lower back pain was highest in workers who stood for more than four hours a day. Another researcher found a significant association between osteoarthritis and standing work lasting longer than two hours a day.

Interactions between floor surface conditions and a worker's body and shoes should be considered to reduce the risk of worker injury from prolonged standing. A foot rest or rail placed from four to six inches above the floor is thought to reduce foot fatigue and the risk of back stress for standing workers.

Cushioned, "anti-fatigue" mats should be selected carefully. The results of a study suggested that some mats appeared to reduce muscular fatigue in the back but not in the legs. Authors of another study reported that while extremely stiff mats did not seem to reduce fatigue or discomfort, extremely soft and thick mats may not be desirable either.

#### **Exposures to Chemical and Physical Agents**

Occupational exposure limits are not absolutes; they are levels to which most workers may be exposed without experiencing adverse health effects. Because of variation in individual susceptibility, some workers may experience adverse health effects when exposed to a substance at levels below its occupational exposure limit. Individual hypersusceptibility, pre-existing medical conditions, age, interactions with other workplace agents, medications taken by a worker, and environmental conditions are not typically considered when occupational exposure limits are established.

Some medical conditions and medications interact with occupational exposures and increase a person's susceptibility to adverse health effects.

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**Figure 1**

*Replacing the worktable with a table having a cutout would accommodate the wheelchair and reduce body twisting and reach distances.*



**Figure 2**

*Counterbalance system reduces hand and wrist fatigue.*

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### Recommendations

Issues concerning exposures of workers with disabilities are complex and research is needed to assess whether they are at greater risk of developing occupational illnesses than nondisabled workers. Thus, when evaluating exposures of workers with disabilities, occupational exposure limits should be used carefully and with an understanding that they may not be adequately protective.

An informed decision based on a job placement evaluation should always be made before assigning workers with disabilities to jobs involving exposures to chemical or physical agents.

Job placement evaluations should include objective evidence of work-related factors (e.g., estimated exposure levels, exposure durations and controls, and assistive technology accommodations), and an individual's risk factors. Although no single approach has been identified for clinicians to follow when evaluating workplace risks and work fitness, a pre-assignment assessment of a worker's medical status by a physician or other licensed health care

professional may be helpful in making a medical clearance decision.

The worker should be involved in a job placement decision through discussion of risks and associated uncertainties. For some workers, a person responsible for making a decision on a worker's behalf (e.g., a parent or legal guardian) should also be involved in the decision-making process.

### Hazard Communication Training

All workers potentially exposed to chemicals are required to receive hazard communication training under PEOSH Hazard Communication Standard (HCS), N.J.A.C. 12:100-7. Training programs for workers with developmental disabilities should meet their needs.

Individual assessments of training effectiveness should not be limited to a demonstration of new skills at the end of a training session but should be an ongoing process. For workers who continue to be exposed to hazardous chemicals, hazard communication training is required to be performed every two years. Workers with cognitive disabilities, some retraining may be necessary as frequently as daily.

### Bloodborne Pathogens Standard

All requirements of OSHA's Bloodborne Pathogens Standard, which has been adopted under the NJ PEOSH Act, should be met. A written exposure control plan should be available, and a training program concerning bloodborne pathogens should be given regularly to all employees and staff members.

### Warning Devices and Alarms

Warning devices alert workers when machinery is being used nearby and when a piece of equipment malfunctions. Alarms warn workers when they should evacuate a building in case of a fire. However, for some workers, alarms may cause adverse effects. NIOSH researchers found that the backup alarms of forklifts had been disconnected because the noise caused one or two workers to have seizures.

Fire and forklift backup alarms should be selected that will not cause workers to have seizures. In an emergency, staff members should be prepared to warn workers who are blind, deaf, or both deaf and



*Research is needed to assess whether workers with disabilities are at a greater risk of developing occupational illnesses than those without disabilities.*

(Continued from page 4)

**Disabilities and  
Business  
Technical Assistance  
Center Hotline:**

**1-800-949-4232**

*Observing basic rules of disability etiquette fosters good communications and creates a welcoming atmosphere for all workers.*

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blind for whom visual or audible warnings would be ineffective. An evacuation plan should be developed and instituted for such emergencies.

**Workplace Violence**

According to 2002 BLS data, assaults and violent acts caused 13.6 percent of the nonfatal injuries or illnesses resulting in days away from work in job-training businesses or related services. Aggressive and violent behaviors may be manifested by people with some systemic disorders or with some neurological disorders. In addition, toxic levels of some medications and chemicals are associated with mental confusion and fighting.

**Recommendations**

Violence prevention programs should be developed and staff members should be trained as to how to manage aggressive behaviors appropriately.

They can respond appropriately if they or someone under their supervision is assaulted. These programs should include procedures for reporting assaults and describing the types of incidents to be reported.

Workers with disabilities should receive violence-prevention training in personal safety skills and assertiveness.

**Disability Etiquette**

Observing some basic rules of etiquette will yield more positive interactions between staff and workers with disabilities. Although good communication is not traditionally considered an occupational safety and health issue, it is definitely a way to foster an atmosphere that encourages team building and fosters an atmosphere that welcomes all workers.

Because people are sometimes uncomfortable working with workers with disabilities, they may directly or indirectly convey that discomfort.

Some basic guidelines for better communication are:

- Be considerate of the extra time that it may take for a person with a disability to get things done or said. Let the person set the pace in walking and talking.
- Any aid or equipment a person may use, such as a wheelchair, guide cane, walker, crutch or service animal is part of that person's personal space. Do not touch, pull or otherwise physically interact with an individual's body or equipment unless requested to do so.
- When you offer to assist someone with a visual impairment, allow the person to take your arm. This will help you guide rather than propel or lead them.
- When greeting a person with a severe loss of vision, always identify yourself and others who may be with you. Speak in a normal tone of voice, indicate when you move from one place to another, and let it be known when the conversation is at an end.
- To get the attention of a person who has a hearing disability, tap the person on the shoulder or wave your hand.
- Look directly at the person and speak clearly, slowly and expressively to establish if the person can read your lips. Not all persons with hearing impairments can lip read.
- Give whole, unhurried attention when you're talking to a person who has difficulty speaking. Never pretend to understand if you are having difficulty doing so. Repeat what you understand. The person's reaction will assist you and guide you to understanding.

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## RESOURCES

### ADA Technical Assistance Center

(800) 949-4232

Web: [www.disabilityact.com](http://www.disabilityact.com)

### ATCB

### U.S. Architectural & Transportation Barriers

Compliance Board

1331 F. St., NW

Washington, DC 20004-111

V 1-800-USA-Able/872-2253

TTY 1-800-993-2822

### JAN

### Job Accommodation Network

West Virginia University

PO Box 6080

918 Chestnut Ridge Rd., Suite 1

Morgantown, WV 26506

V/TTY 1-800-526-7234

### EPVA

### Eastern Paralyzed Veterans Association

Buffalo Regional Office

111 West Huron Street

Buffalo, NY 14202

V 716-856-6582

### NAD

### National Association of the Deaf

814 Thayer Avenue

Silver Spring, MD 20910

V 301-587-1788

TTY 301-587-1789

### SHHH

### Self Help for Hard of Hearing People, Inc.

7910 Woodmont Avenue, Suite 1200

Bethesda, MD 20814

V 301-657-2248

TTY 301-657-2249

### NFB

### National Federation of the Blind

1800 John Street

Baltimore, MD 21230-4998

V 410-659-9314

### ACB

### American Council of the Blind

1155 15th Street, NW, Suite 720

Washington, DC 20005

V 202-467-5081 or 800-424-8666

### NJ Office of Disabilities Management

(609) 292-7299

### U.S. Department of Justice—ADA Information Line

(202) 514-0301

Web: [www.usdoj.gov/crt/ada/adahom1.htm](http://www.usdoj.gov/crt/ada/adahom1.htm)

Key

V voice

TTY telephone typewriter

*Under the Americans with Disabilities Act (ADA), an individual with a disability is a person who: has a physical or mental impairment that substantially limits one or more major life activities, has a record of such an impairment, or is regarded as having such an impairment. Whether a person's impairment substantially limits a major life activity depends on its nature and severity, how long it will last or is expected to last, and its permanent or long-term impact or expected impact.*

***For Further Information Please Contact:***

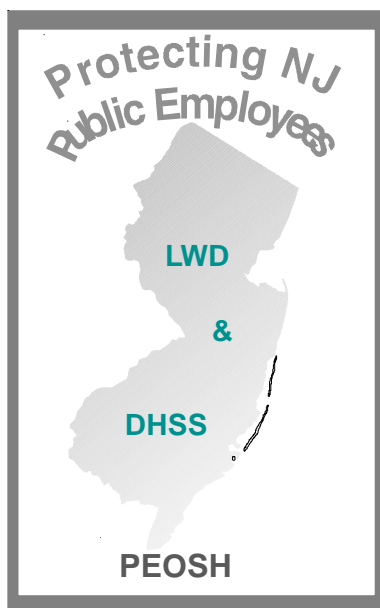
***Health Issues***

***New Jersey Department of Health and Senior  
Services  
PEOSH Program  
P.O. Box 360, 7th Floor  
Trenton, New Jersey  
08625-0360  
(609) 984-1863***

***Safety Issues, Recordkeeping and Discrimination  
Complaints***

***New Jersey Department of Labor  
PEOSH Program  
PO Box 386  
Trenton, New Jersey 08625-0386  
(609) 292-0767  
(800) 624-1644***

**We're on  
the Web!  
[www.nj.gov/  
health/eoh/  
peoshweb](http://www.nj.gov/health/eoh/peoshweb)**



**The ADA prohibits employers from discriminating against qualified people with a disability who would be able to perform their job, even if they need a “reasonable accommodation.”**

***This document was prepared by DHSS  
PEOSH Staff.***

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**Occupational Safety and Health  
Issues for Workers with Disabilities**

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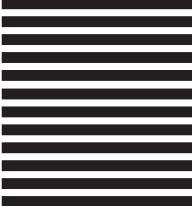
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