



# CONNECTICUT OCCUPATIONAL HEALTH e-NEWS



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*The Connecticut Occupational Health e-News is published quarterly by the Connecticut Department of Public Health to provide occupational health surveillance and educational information to workers, employers, clinicians, and other community partners interested in the protection and promotion of healthy work environments.*

CONNECTICUT DEPARTMENT OF  
PUBLIC HEALTH

Keeping Connecticut Healthy

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Commissioner

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## A CONNECTICUT WORKER TIME CAPSULE



### METAL PLATING

Man dipping metal amid mists and vapors from cleaning bath.  
Connecticut, September 1941

Published in US Public Health Service Bulletin  
Industrial Hygiene Education Materials (before November 1944)

## IMPACT OF LONG WORKING HOURS



A new NIOSH publication entitled *Overtime and Extended Work Shifts: Recent Findings on Illnesses, Injuries, and Health Behaviors* [DHHS (NIOSH) Publication No. 2004-143] presents an integrative review of the methods and findings from 52 studies. The review indicates that the influence of long working hours on health and safety involves a complex interaction of a number of factors. It also recommends issues and priorities to consider in future research. The document was released in conjunction with a national conference entitled *Long Working Hours, Safety, and Health: Toward a National Research Agenda* which was held on April 29-30, 2004 on the University of Maryland campus in Baltimore, Maryland. The conference brought together researchers and representatives from labor and industry to discuss the sociological, economic, and health aspects of long work hours. The conference was conducted under the auspices of the National Occupational Research Agenda (Organization of Work Team) and cosponsored by NIOSH, the University of Maryland School of Nursing, and the U.S. Department of Justice. For more information on the conference, visit <http://nursing.umaryland.edu/longworkhours>. The document can be accessed at <http://www.cdc.gov/niosh/docs/2004-143>.

## WORKERS' MEMORIAL DAY

On April 28, NIOSH joined the international labor community in remembering those workers who have died or been injured on the job. Each day in the U.S. fifteen workers die from their injuries, 134 die from work-related diseases, nearly 11,000 are treated in emergency departments and approximately 200 of these workers are hospitalized, all as a result of work-related injuries and illnesses. To commemorate Workers' Memorial Day 2004, a special issue of the U.S. Centers for Disease Control and Prevention's (CDC) *Morbidity and Mortality Weekly Report* (MMWR) was released on April 23 which included results from NIOSH surveillance and research activities related to trenching and evacuation work, carbon monoxide poisonings while operating motorboats, and fatalities among pilots serving the agricultural community. To view the special issue, visit <http://www.cdc.gov/niosh/docs/mmwr/WkrMemDay04.html>.



## MMWR: SILICOSIS IN DENTAL LABORATORY TECHNICIANS



An article by NIOSH and state colleagues in the March 12, 2004 issue of CDC's *Morbidity and Mortality Weekly Report* (MMWR) warns that dental laboratory technicians are at potential risk of silicosis, and makes recommendations for reducing the risk. While crystalline silica exposure and silicosis is most commonly found in mining and sandblasting, dental laboratory technicians use materials and processes that may increase their exposure. Nine confirmed cases of silicosis among dental laboratory employees between 1994 and 2000 were identified through the Sentinel Event Notification Systems for Occupational Risks (SENSOR) surveillance program and state based surveillance programs using the SENSOR surveillance model. The full report is accessible at <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5309a3.htm>.

# ERGONOMICS FOR LANDSCAPERS AND GARDENERS

Landscaping and gardening is hard work and injuries to the back, arms, shoulders and hands are very common in agricultural work. Sprains and strains account for one-third of the injuries that lead to lost work time. The following are some techniques and ideas that can help reduce injuries in landscapers and gardeners.

## **Guidelines for lifting:**

- Keep loads between hand and shoulder level. Avoid lifting from the ground and from over the shoulder level.
- Use containers that have handles on them.
- Design loads so they can be lifted close to the body.
- Provide pallet trucks, dollies, and utility carts for objects that must be carried more than a few feet. Providing roller conveyers for heavier loads such as fertilizer, sod, and potted trees will reduce the need for lifting.
- Use uniform size plastic containers, as opposed to cardboard boxes and vegetable crates, as they provide an easy to stack object with molded handles. When carried, rectangular containers keep the center of gravity close to your body.

**Poorly-designed load: No handles, and the load is carried too far from the body.**



**Better-designed load: Handles are provided and the load is closer to the body.**

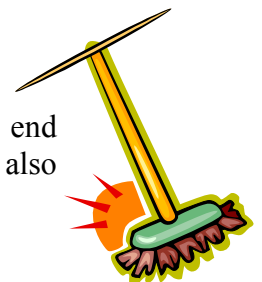


## **Guidelines for cutting and pruning:**

- Hand pruning tools should be well-designed, with long handles, covered with a rubber or plastic grip. A spring return is necessary to keep tool open and avoid user fatigue.
- Use a power cutter for cutting woody stems as opposed to manual pruning shears. Using a hydraulically operated cutter, you can minimize repetitive motion injuries on you hands and wrists, by reducing the force needed to make your cuts.
- Never attempt to cut branches on trees that are near overhead power lines, as you assume the risk of electrocution.

## **Tool Modifications and Gardening Strategies:**

- Modify long handled push brooms and floor scrapers to have a T attachment at the end of the handle. This modification allows the worker to push with their torso and also gives the user a better handle to grip.



## Tool Modifications and Gardening Strategies:



- Use a weeding stand for weeding flats in plant nurseries. Standing while weeding as opposed to bending over can reduce prolonged stress on the back. In addition, the tray is closer to the worker, which reduces strain from reaching.

For more information about reducing injuries in agricultural occupations, please refer to the NIOSH guidelines entitled *Simple Solutions: Ergonomics for Farm Workers*, available online in English (<http://www.cdc.gov/niosh/pdfs/01-111.pdf>) and in Spanish (<http://www.cdc.gov/spanish/niosh/docs/01-111pd-sp.html>).

Information abstracted from the National Institute for Occupational Safety and Health, Publication *Simple Solutions: Ergonomics for Farm Workers*.

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## CONNECTICUT ABLES PROGRAM

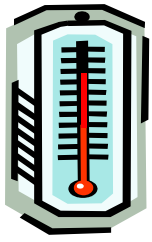
During the first quarter of 2004, the Connecticut Department of Public Health's (DPH) Adult Blood Lead Epidemiology and Surveillance (ABLES) Program received 96 reports of elevated blood lead levels (EBLL)  $\geq 10$   $\mu\text{g}/\text{dL}$ , which is approximately 64% of the number of reports received during the comparable period from one year ago (151 reports). Of those, 32 reports were received regarding individuals with EBLLs  $\geq 17$   $\mu\text{g}/\text{dl}$ , which is approximately 65% of the number of reports received during the comparable period from one year ago (49 reports).

Individuals with EBLLs  $\geq 17$   $\mu\text{g}/\text{dl}$  receive a letter notifying them of their EBLL, accompanied by a Lead Fact Sheet and Take Home Lead Survey. Copies of the notification letters are also sent to the local health department where the individual resides to notify the Director of Health about the EBLL and keep them informed of our activities.

In addition, the ABLES program follows-up with companies having workers with EBLLs  $\geq 40$   $\mu\text{g}/\text{dL}$ . For the first quarter of calendar year 2004, two workers were reported with EBLLs  $\geq 40$   $\mu\text{g}/\text{dL}$ , which is 22% the number received during the comparable period from one year ago (9 reports). In all cases, these individuals received letters notifying them of their EBLL, educational materials, and an adult blood lead surveys. Reports of these lead poisoned workers led to the following investigations by the Connecticut ABLES program:

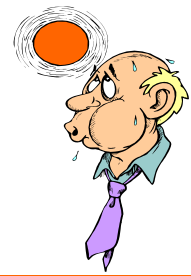
- One individual with an EBLL of 55  $\mu\text{g}/\text{dl}$  from SIC 3356 was reported in the previous quarter as non-occupationally related. The patient was sanding and scraping lead based paint off of an older home. A physician questionnaire was completed and DPH will continue to follow-up with this person until his blood lead level is within normal limits.
- One worker was reported with an EBLL of 43  $\mu\text{g}/\text{dl}$  from SIC 1721. This worker is employed as a bridge painter for a company based in another state. This worker also has a history of elevated blood lead levels since 1994. The physician, safety director and worker were contacted by telephone, however, DPH was unable to determine the primary cause of exposure. Educational materials and an adult blood lead survey were sent to the workers place of residence.

*The Connecticut ABLES program is funded through a cooperative agreement with the National Institute for Occupational Safety and Health (NIOSH). For more information about the Connecticut ABLES program, please contact Deborah Pease at (860) 509-7744.*



# SAFETY TIP

## Heat Stress Warning!



On average, 175 Americans die of heat-related injuries each year. This is a tragic figure considering prevention can be relatively easy. **One of the best ways to reduce heat stress on workers is to minimize heat in the workplace.** However, there are some work environments where heat production is difficult to control, such as when furnaces or sources of steam or hot water are present in the work area or when the workplace itself is outdoors and exposed to varying warm weather conditions.

### Indoor operations that can cause heat stress problems include:

- Iron and steel foundries
- Nonferrous foundries
- Brick-firing and ceramic plants
- Glass products facilities
- Rubber products factories
- Electrical utilities (particularly boiler rooms)



- Bakeries, confectioneries
- Food canneries
- Laundries
- Chemical plants
- Mining sites, smelters
- Steam tunnels



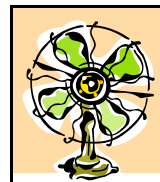
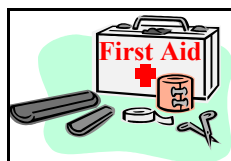
### Outdoor operations conducted in hot weather include:

Construction, refining asbestos and lead removal, hazardous waste site activities especially those that require workers to wear semipermeable or impermeable protective clothing, are also at risk for causing heat stress in workers.

### Educate, Educate, Educate

**The key to preventing excessive heat stress is educating the employer and worker on the hazards of working in heat and the benefits of implementing proper controls and work practices.** The following safety precautions should be used to prevent heat related stress while working on the job:

1. **Engineering controls** - general ventilation, spot cooling by local exhaust, evaporative cooling, mechanical refrigeration, cooling fans, eliminating steam leaks, equipment modifications, using power tools to reduce manual labor, heat shielding, personal cooling devices and protective clothing.
2. **Work practices** - Drinking water can reduce the occurrence of heat stress. Workers in hot environments should drink 5 to 7 ounces of fluids every 15 or 20 minutes to replenish the necessary fluids in the body. Having workers onsite who are trained in first aid to recognize and treat heat stress disorders is essential. Employers should also consider an individual worker's physical condition when determining his or her fitness for working in hot environments. Older workers, obese workers and personnel on some types of medication are at greater risk.



3. **Acclimatization** - It typically takes 5 to 7 days for a worker to become acclimated to their environment. Workers should be given enough time to become acclimated, especially after returning from an extended vacation or illness. This period should begin with 50 percent of the normal workload on the first day, gradually building up to 100 percent by day seven.
4. **Work and rest** - Longer rest periods in cool areas can help workers avoid heat stress. Heavy work should be scheduled during the cooler parts of the day and appropriate protective clothing should be provided. Supervisors need to be trained to detect early signs of heat stress and should permit workers to interrupt their work if necessary.
5. **Employee education** - It is absolutely vital that all workers understand their need to replace fluids and salt lost through sweat and be able to recognize dehydration, exhaustion, fainting, heat cramps, salt deficiency, heat exhaustion, and heat stroke as heat-related disorders. Workers should also be informed of the importance of daily weighing before and after work to avoid dehydration.

When the body is unable to cool itself through sweating, serious heat illnesses may occur. The most severe heat-induced illnesses are heat exhaustion and heat stroke. If left untreated, heat exhaustion could progress to heat stroke and possible death.

**High Temperature + High Humidity + Physical Work = HEAT ILLNESS**

### What are the symptoms of Heat Exhaustion?

Heat exhaustion symptoms include: headaches; dizziness or lightheadedness; weakness; mood changes such as irritability, confusion, or the inability to think straight; upset stomach; vomiting; decreased or dark-colored urine; fainting or passing out; and pale, clammy skin

### What should you do?

- Act immediately. If not treated, heat exhaustion may advance to heat stroke and death.
- Move the victim to a cool, shaded area to rest. Don't leave the person alone. If symptoms include dizziness or lightheadedness, lay the victim on his or her back and raise the legs 6 to 8 inches. If symptoms include nausea or upset stomach, lay the victim on his or her side.
- Loosen and remove any heavy clothing.
- Have the person drink cool water (about a cup every 15 minutes) unless sick to the stomach.
- Cool the person's body by fanning and spraying with a cool mist of water or applying a wet cloth to the person's skin.
- Call 911 for emergency help if the person does not feel better in a few minutes.

**For more information regarding heat stress refer to the following:**

[OSHA Technical Manual: Heat Stress](#)

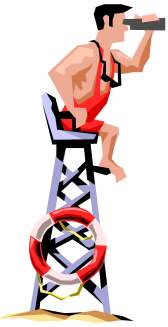
[Protecting Workers in Hot Environments \(OSHA\)](#)

[OSHA Guidance on Heat Exhaustion and Heat Stroke](#)

[Working in Hot Environments](#)

[Safety and Health Topics: Heat Stress](#)

# DANGERS OF SUMMER JOBS



The number of hours worked by teenagers increase substantially during the summer months. Unfortunately, many do not realize the health risks or potential dangers that summer jobs may pose. Each year, approximately 70 adolescents die from injuries at work, hundreds more are hospitalized, and tens of thousands require treatment in hospital emergency rooms (NIOSH, 1997). The leading causes of work-related fatalities among 16-and-17-year-old workers are motor vehicle injuries, job-related homicide, and injuries associated with machinery (NIOSH, 2000). These fatality rates are comparable to or slightly higher than those for adult workers, despite federal and state laws that prohibit young workers from working in hazardous occupations.

This summer millions of teens will seek employment in a variety of places. Some of these places include malls, restaurants, golf courses, construction sites, ponds and beaches, lawncare, farms, and parks and recreational facilities. These types of jobs can offer a rewarding experience to young workers if they understand the health risks and take the necessary actions needed to prevent workplace injuries.



The Occupational Safety and Health Agency (OSHA) has developed a comprehensive website that young workers, parents, educators, employers, and medical providers can use in order to understand the rights and responsibilities of young workers. This website has useful information including a list of potential hazards associated with the most common summer jobs worked by teens and tips on how injuries can be prevented. This information can be found at <http://www.osha.gov/SLTC/youth/summerjobs/index.html>.

***Other sources of information that can be helpful in assessing health and safety for young workers are located at the following websites:***

[NIOSH Alert: Preventing Deaths, Injuries and Illnesses of Young Workers](#)

[Job Death Rates for 16-, 17-Year-Olds Comparable to or Higher than Adult Rates for Leading Causes \(NIOSH\)](#)

[Special Hazard Review: Child Labor Research Needs](#)

[Promoting Safe Work for Young Workers](#)

[Youth Rules!](#)

[Child Labor Coalition for Teen Workers and Students](#)

[Are You a Working Teen? What You Should Know About Safety and Health on the Job](#)

[Young Workers: Labor Occupational Health Program University of California at Berkeley](#)



You can also call **1-800-933-TEEN** (1-800-933-8336) for information about teen employment rights, labor laws, and job hazards.

## OCCUPATIONAL DERMATITIS IN CONNECTICUT

Dermatitis is a disease that is widespread in occupational settings. Symptoms of dermatitis may include skin redness, itching, scaling and/or blistering. Dermatitis can be classified into two distinct classifications, based on the type of exposure. Irritant dermatitis is caused by irritating substances such as chemicals coming into contact with the skin. Examples of these types of chemical irritants are detergents, alkalis and acids, and metal working fluids. In the case of irritant dermatitis, the rash is usually confined to the contact area. Allergic dermatitis occurs as the result of a specific allergen coming into contact with the skin of a person who is sensitive to the specific causative agent. Allergens that may cause dermatitis in some people can be found in several common items such as plants (like poison ivy), glues, adhesive tape, cement, paint, dyes, plastics, cosmetics, creams, soaps, detergents and chemicals. Rashes that occur as a result of contact with an allergen may be more widespread on the body than those generally seen with irritant dermatitis.



The DPH Occupational Disease Surveillance System (ODSS) received 2129 reports of occupational dermatitis during last five complete years of data collection (1999-2003). Based on these five years of aggregate data, the highest numbers of occupational dermatitis cases are reported to the ODSS between August and November. This is most likely due to the increase in allergic dermatitis cases caused by contact with plants as a result of working outdoor during the summer months, as well as a 1-2 month time lag in receipt of reports.

It is generally thought that approximately 80% of all occupational dermatitis cases are caused by contact with irritants vs. about 20% caused by allergens. This is true also for cases of occupational dermatitis submitted to the ODSS over the past five years, with 79% of cases attributable to irritants.

