OSHA Updates Bloodborne Pathogens Standard Requirements

Effective November 5, 1999, OSHA updated its requirements for the Bloodborne Pathogens standard. As a result of the significant health risk associated with occupational exposure to blood and other potentially infectious materials that may contain bloodborne pathogens that cause bloodborne diseases, OSHA issued the bloodborne pathogens standard (29 CFR 1910.1030). It became effective in 1992. Since then, significant medical advances have occurred that help control bloodborne pathogens. This emerging technology, coupled with new information on the control of bloodborne pathogens, necessitated a revision in the compliance directive, which is an enforcement assistance guideline. A summary of some of the key revisions is as follows:

- During the annual review of the exposure control plan, employers must ensure that their plans reflect consideration and use of commercially available safer medical devices.

- The compliance directive emphasizes the use of effective engineering controls to include safer medical devices, work practices, administrative controls, and personal protective equipment.

- It also emphasizes that employers should rely on relevant evidence in addition to Food and Drug Administration (FDA) approval to ensure effectiveness of devices designed to prevent exposure to bloodborne pathogens.

- The term "Multi-Employer Worksites" now also focuses on employment agencies, personnel services, home health services, independent contractors, and physicians in independent practice.

- The most recent guidelines from the Centers for Disease Control and Prevention (CDC) on vaccinations against the hepatitis B virus have been added including post antibody titer testing. CDC’s guidelines on post exposure evaluation and follow-up for the human immunodeficiency virus (HIV) and the hepatitis C virus have been incorporated.

- The directive requires effective training and education for employees whenever safer devices are implemented. It stresses “interactive” training sessions rather than just the use of films or videos that do not provide the opportunity for discussion with a qualified trainer.

- Appendices have been updated and replaced. These include the following: examples of committees in health care facilities; sample engineering control evaluation forms; an Internet resource list; a “fill-in-the-blanks” sample exposure control plan; and CDC guidelines pertaining to HIV exposure, control and prevention of hepatitis C, and hepatitis B vaccinations.

Details of some important paragraphs of the new directive are:

Scope

Paragraph (b) of 29 CFR 1910.1030 defines “bloodborne pathogens” as any pathogenic microorganism that is present in human blood and can cause disease in humans. The definition specifically mentions hepatitis B and HIV. The new directive includes pathogenic microorganisms that can cause diseases such as hepatitis C, malaria, syphilis, babesiosis, brucellosis, leptospirosis, arboviral infections, relapsing fever, Creutzfeldt-Jakob disease, adult T-cell leukemia/
**Exposure Control**

Paragraph 1910.1030 (c)(1)(iv) requires the exposure control plan to be reviewed and updated at least annually (every 12 months) and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure. The requirement to review and update the plan means that the plan must reflect changes in technology that eliminate or reduce exposures to bloodborne pathogens. A periodic review ensures that the exposure control plan remains current with the latest information and scientific knowledge pertaining to bloodborne pathogens. The plan must document consideration and implementation of appropriate, commercially available, and effective engineering controls designed to eliminate or minimize exposure.

The compliance instruction clarifies the position regarding the implementation of effective engineering controls to reduce needlestick and other sharps injuries. Effective engineering controls would include safer medical devices that are used to prevent percutaneous injuries before, during, or after use through safer design. When the final bloodborne rule was published in 1991, the variety of engineering controls was limited. Since then, there has been a marked increase in the number and types of effective controls available. Also, data is available to support the effectiveness of many controls. Engineering controls have been proven to be effective and feasible methods of hazard control in many instances.

**Hepatitis B Vaccination and post-exposure evaluation**

Paragraph 1910.1030 (f)(1)(ii)(D) considers the changing nature of medical treatment related to hepatitis B. The CDC is the U.S. Public Health Service agency responsible for issuing guidelines and making recommendations regarding infectious agents. OSHA requires the use of CDC guidelines current at the time of the evaluation or procedure.

The most current CDC guideline regarding hepatitis B is “Immunization of Health-Care Workers: Recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Hospital Infection Control Practices Advisory Committee (HICPAC),” published in Volume 46, Number RR-18 of the December 26, 1997 issue of the Morbidity and Mortality Weekly Report (MMWR). This document recommends that employees who have on-going contact with patients or blood and are at on-going risk for injuries with sharp instruments or needlesticks be tested for antibodies to hepatitis B surface antigen 1-2 months after the completion of the three-dose vaccination series. Employees who do not respond to the series must be revaccinated with a second three-dose vaccination series and retested. Non-responders must be medically evaluated.

**Training**

Paragraph (g)(2)(vii)(F) requires that training include an explanation of the use and limitations of methods that will prevent or reduce exposure, including appropriate engineering controls, work practices, and personal protective equipment. With the introduction of new, more advanced engineering control techniques and practices into the work environment, employers must train and educate employees on their proper use. Training must include instruction in any new techniques and practices. “Hands-on” training is particularly useful.

More information about the Bloodborne Pathogens standard can be obtained by calling CONN-OSHA at (860) 566-4550 or by visiting the following web sites:

- CONN-OSHA – [www.ctdol.state.ct.us/osha/osha.htm](http://www.ctdol.state.ct.us/osha/osha.htm)
- CDC – [www.cdc.gov](http://www.cdc.gov)

You can obtain the following CDC recommendations and guidelines on HIV, hepatitis B, and hepatitis C at the following web addresses:

- **Immunization of Health-Care Workers: Recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Hospital Infection Control Practices Advisory Committee (HICPAC).** Publication date 12/26/1997. [www.cdc.gov/epo/mmwr/preview/mmwrhtml/00050577.htm](http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/00050577.htm)

- **Recommendations for Prevention and Control of Hepatitis C Virus (HCV) and Infection and HCV-Related Chronic Disease.** Publication date 10/16/1998. [www.cdc.gov/epo/mmwr/preview/mmwrhtml/00055154.htm](http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/00055154.htm)

- **Public Health Service Guidelines for the Management of Health-Care Worker Exposures to HIV and Recommendations for Postexposure Prophylaxis.** Publication date 5/15/1998. [www.cdc.gov/epo/mmwr/preview/mmwrhtml/00052722.htm](http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/00052722.htm)

- **Appendix-First-Line Drugs for HIV Postexposure Prophylaxis (PEP).** Publication date 5/15/1998. [www.cdc.gov/epo/mmwr/preview/mmwrhtml/00052801.htm](http://www.cdc.gov/epo/mmwr/preview/mmwrhtml/00052801.htm)

Contributors to this article include: Rich Palo, Occupational Health Supervisor, Scott Horr and Ken Tucker, Health Compliance Officers, and Lisa Costanzo.
Respiratory Protection for Riot Control and Civil Disturbances
by Ken Tucker, Health Compliance Officer

Preparing for riot control and civil disturbances involves a great deal of planning. In recent months, there have been a number of questions regarding this topic. Public safety professionals must be concerned with airborne contaminants that may be involved during mitigation of these operations. Tear gas agents chloracetophenone (CN), chlorobenzylidene (CS), and pepper spray are the most common respiratory hazards encountered, although biological and chemical warfare agents may also be of concern.

Many public safety entities have the M-17 and M-17A1 military style gas masks available for use as respiratory protection against these contaminants. The principal manufacturer of these gas masks was the Mine Safety Appliance Company (MSA) under contract for the Department of Defense. Production of these gas masks was terminated in the early 1970’s. Since the Department of Defense owns the mold for these masks, MSA no longer stocks fresh canisters or spare parts for the masks. In addition, the facepiece may have deteriorated and the sorbent probably has lost effectiveness over such a long storage time. These gas masks were made in accordance with specifications for military use and may not pass certification tests currently administered by the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 42 CFR 84. MSA does not recommend the use of this mask by civilians.

Current OSHA policy states that since the M-17 gas mask is not approved by NIOSH, this respirator may not be used by workers other than enlisted military personnel. The policy also states that there is no reason to accept a variance situation on a basis of unavailability since there are many approved gas masks available with modern design, improved construction materials, and with different types of canisters for protection against a wide variety of air contaminants.

Presently, there are several manufacturers of respiratory protection that produce gas masks that are NIOSH approved and can afford protection against tear gas and pepper spray for employees involved in a civil disturbance or riot situation. However, there are other manufacturers that advertise gas masks for these situations that have not received NIOSH certification. Employers must insure that any type of respiratory protection intended for use against riot control agents is NIOSH approved.

MSA offers the “Advantage 1000 CBA-RCA (Chemical/Biological Agent-Riot Control Agent) Gas Mask.” This mask carries NIOSH certification TC-14G-0235 for protection against CN, CS, and as a P100 particulate filter. They also offer the “Millennium Chemical-Biological Gas Mask.” It carries NIOSH certification TC-14G-0254 for protection against CN and CS, and with a P100 particulate efficiency level. The 3M company offers the “SGE-400 Full Facepiece and CP3N Canister” with NIOSH certification TC-14G-0251 for protection against CN, CS, and as a P100 particulate filter.

Employers must also insure that the requirements of the U.S. Department of Labor-OSHA Respiratory Protection standard, 29 CFR 1910.134, are complied with. These requirements include: implementation of a written respiratory protection program with a designated program administrator; proper selection of respiratory protection; medical evaluations; fit testing; procedures for proper use of respirators; procedures for cleaning, disinfection and storage; training of employees; and evaluating the effectiveness of the program.

Questions regarding the requirements of respiratory protection for riot control and civil disturbances or the requirements of the Respiratory Protection standard can be directed to the CONN-OSHA office at (860) 566-4550.

The 1999 Survey of Occupational Injuries and Illnesses was mailed to a sample of public and private sector employers last month. Your timely response to this important data collection effort is appreciated. Call our Statistics Unit at (860) 566-4380 if you have any questions. Remember, only a sample of units were selected to participate in the survey, so not all municipal operations were solicited for data. Respond only for the department or operation specified on the report.
Springtime Safety Reminder
by Paul Hartman, Safety Consultant

As the weather gets warmer, many of us will begin our outdoor chores. There are inherent dangers that can be found in many of the tasks we will be performing. As a result, some of the tools we use require special precautions. The following is a general list of some commonly encountered tools and tips for using them safely.

Lawn mowers:
- Always read and follow the manufacturer’s safe use and operation manual.
- Perform the standard safety inspection of the overall condition of the mower.
- Make sure that all of the guards are in place and functional.
- Wear safety glasses, long pants, hearing protection, and leather shoes.
- Watch out for small objects, and twigs and rocks large enough to be hit by the blade and expelled with great force.
- Continuously monitor the area around you to ensure others do not inadvertently get too close to where you are working.

Chain saws:
- Wear appropriate personal protective equipment (PPE) such as face protection, cut resistant leggings, and safety shoes made for logging operations. Consult the manufacturer's operation manual to determine what other PPE is appropriate.
- Perform the standard safety inspection of the overall condition of the saw, including the chain brake, chain catcher, throttle interlock, and muffler.
- Inspect the area where you will be cutting - look for trees that might interfere with the one you plan to fell (snag trees).
- Consider the lean and weight of the tree. Have a retreat path in mind, and determine the hinge size for controlling the tree’s descent. In other words, develop a complete felling plan and get professional help if you have doubts.

String trimmers:
- Be aware of whom and what is in your operating area, as trimmers often injure people who are nearby.
- Remember to use safety glasses, hearing protection, sturdy leather shoes with a fully enclosed upper (no open toed shoes), and long pants - they will save your legs from those nasty scratches.
- Avoid using the trimmer as an edging tool. The cord should always be close to horizontal.
- Because the guard is most often set for cutting to be done from one side, determine if yours is set for left or right and use that direction.