



A Best Practices Approach for

Reducing Bloodborne Pathogens Exposure



Department of Industrial Relations
Cal/OSHA Consultation Service
Education Unit

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The background of the slide is a grayscale microscopic image of biological tissue, likely showing various cells and structures. Several cells are highlighted with a semi-transparent orange color, drawing attention to specific features or components within the tissue. The overall appearance is that of a histological or cytological specimen.

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Publishing Information

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This booklet is not meant to be a substitute for or a legal interpretation of the occupational safety and health standards. Please see *California Code of Regulations, Title 8*, or the *Labor Code* for detailed and exact information, specifications, and exceptions.

Photo Credits

Cal/OSHA gratefully acknowledges Richard Munn, M.D., Department of Pathology, University of California Davis Medical School, for the slides used as photographs in this booklet.

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About This Booklet

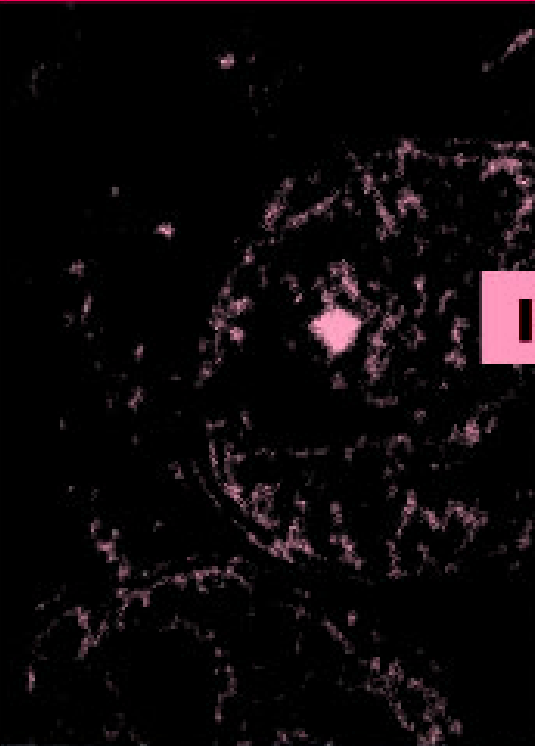


This booklet is a companion to the *Exposure Control Plan for Bloodborne Pathogens*. It was designed to further assist employers and employees with addressing the requirements of the bloodborne pathogens regulation (*California Code of Regulations, Title 8, Section 5193, subsections d through h*). A practical, step-by-step approach is presented that can be modified to fit the particular needs of your organization. This approach promotes the use of safer engineering controls and more effective work practices in hospitals, nursing homes, dental offices, and other workplace settings where occupational exposure to blood or other potentially infectious materials (OPIM) is likely to occur.

Definitions of terms and resources are provided to help readers understand bloodborne pathogens issues. In addition, simplified worksheets help employers document progress in eliminating bloodborne pathogens exposure in the workplace. The topics covered are as follows:

- 🔴 **“Identifying and Selecting Appropriate and Currently Available Engineering Control Devices”** contains simplified steps to guide the selection, evaluation, and follow-up of new products.
- 🔴 **“Methods of Compliance”** provides guidance on topics such as assessing and updating engineering and work practice controls, determining whether the exceptions to the use of new products are applicable, handling regulated waste and contaminated laundry, using personal protective equipment, cleaning and decontaminating equipment and the worksite, and other issues.
- 🔴 **“Hepatitis B Vaccination and Bloodborne Pathogens Post-Exposure Evaluation and Follow-up”** details the policies and procedures to help care for employees after the occurrence of an occupational exposure incident.
- 🔴 **“Communication of Hazards to Employees”** provides details on labeling of containers and describes the elements of an effective training program.
- 🔴 **“Recordkeeping”** describes the types of records to be kept for each employee who may have occupational exposure and the requirements for handling such records.
- 🔴 **“Resources”** provides additional sources of information on new engineering controls and other topics related to preventing exposure to bloodborne pathogens. Definitions of *regulated waste* are included.
- 🔴 **“Cal/OSHA Publications”** features printed materials about health and safety issues in the workplace.
- 🔴 **“We Want to Hear from You”** is a questionnaire that allows readers an opportunity to give feedback about this booklet.

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**Identifying and Selecting
Appropriate and Currently
Available Engineering
Control Devices**





Our organization's policy is to select appropriate and effective engineering controls to reduce or eliminate exposure incidents. Engineering controls means controls (e.g., sharps disposal containers, needleless systems, and sharps with engineered sharps injury protection [ESIP], plastic tubes for blood collection) that isolate or remove the bloodborne pathogens hazard from the workplace.

We first evaluate products that eliminate the use of sharps (e.g., needleless systems). If these devices are not currently available, we continue to monitor the development of new technology in the marketplace and concurrently evaluate devices equipped with

ESIP. ESIP means either (1) a physical attribute built into a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, which effectively reduces the risk of an exposure incident by a mechanism such as barrier creation, blunting, encapsulation, withdrawal, or other effective mechanisms; or (2) a physical attribute built into any other type of needle device or into a non-needle sharp, which effectively reduces the risk of an exposure incident.

We establish and maintain procedures for identifying and selecting appropriate and effective engineering controls, which may include the following steps:

1. Set Up a Process
2. Define Needs
3. Gather Information
4. Test and Select Products
5. Use New Products
6. Conduct Follow-up

We may modify the steps outlined above to fit our requirements as follows:

Examples of Engineering Control



Arterial blood gas syringe with needle and needle encapsulation unit



Sharps disposal container

I. Set Up a Process



We use a systematic process to identify and select appropriate and effective engineering controls. The process may be guided by:

- 🔴 Committees (e.g., guidance, infection control, product evaluation, product selection, employee health and safety, clinical practice, education, other)
- 🔴 Subcommittees (e.g., hazardous materials management)
Working groups (e.g., data collection, device selection, education, safer work practices)
- 🔴 A task force(s) or research group(s)
- 🔴 Lead person(s) (e.g., dentist, infection control specialist, etc.)


Indicate the name(s) of committees, subcommittees, working groups or other groups, or individuals guiding the process:



Participants

Our organization's policy is to actively involve individuals from departments, units, floors, or dental operatories where engineering controls are (or will be) used. We believe that employees are more likely to endorse and actively support the use of engineering controls if they participate in the evaluation and selection process. We seek to involve employees with relevant expertise and experience in the evaluation of new products that will be used in their area(s) of practice (e.g., respiratory therapists evaluate a new arterial blood gas safety syringe). We continually update the lists below to reflect the participants who are currently involved in the process.

Directors/Managers/Supervisors	Employee (Name and Job Classification)

 Make copies as needed

Participants to Involve in the Process

We seek the participation of employees whose job duties involve occupational exposure to bloodborne pathogens and whose contribution of expertise and experience is significant. Examples of participants to include are the following:

Anesthesiologists; autopsy technicians; blood center personnel; clinical laboratory technologists and technicians; coroners; dentists; dental assistants; dental hygienists; dialysis staff; emergency medical technicians; employee health nurse; medical staff; nursing staff from the home health, intensive care, labor and delivery, neonatal units, and the operating room; pathologists, pediatric/nursery staff; phlebotomists; radiologists; research lab personnel; respiratory therapists; and risk management/loss control specialists.



Clinical Laboratory Technologist



Nurses



Surgeon and Operating Room Staff



Dialysis Staff



Dentist/Dental Assistant/Dental Hygienist



Neonate Nursery Staff

2. Define Needs



Priorities are assigned based on our assessment of the risk of exposure from employees performing invasive procedures or using particular devices (e.g., use hollow-bore needles to access veins and arteries or start intravenous lines or give dental anesthetic injections). We assign priorities by having the responsible group(s) or individual(s), as described in step 1, Set Up a Process, collect and analyze occupational exposure and injury information from our:

- 🔴 Workers' compensation claims, infection control, employee and environmental health departments
- 🔴 Sharps Injury Log
- 🔴 Committees, subcommittees, working groups, and others mentioned in step 1
- 🔴 Employees, managers, and supervisors

We also review all available information from other sources, including the following:



Needs Assessment Worksheet

We *prioritize* the screening, testing, and selection of new products based on the analysis of information mentioned above. Potential exposures will be addressed according to the following priorities:

Department/Unit/Floor/ Dental Operator	Date	Exposure(s) to Be Addressed and Procedure(s)/Task(s) Involved	Assigned Priority for Addressing Each Exposure (e.g., 1, 2, 3)

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3. Gather Information

The Needs Assessment Worksheet may be used to help identify and prioritize occupational exposures to blood or OPIM according to the risk of exposure. The next step is to gather information on currently available engineering controls that are designed to reduce or eliminate those exposures.

The illustrations of engineering controls do not represent all products that may currently be in the marketplace. Depictions of devices do *not* necessarily mean that products are effective at reducing occupational exposures. *Only systematic screening, testing, and follow-up can determine whether a particular device is appropriate and effective for a given application.* Even devices deemed effective and appropriate may fail and cause injury to employees or patients because of a lack of adequate training, improper usage, or unforeseen circumstances. New engineering controls are continually being developed in the marketplace. For additional sources of information on medical and dental engineering controls, see the Resources section (under “Booklets” on page 80).



Categories of Engineering Controls

Blood-Collection Devices



Plastic tubes for blood collection



Self-blunting needles



Retracting needles



Neonatal syringe set with filter (for removing small amounts of blood from a unit of blood)



Hinged recapping needles



Shielded steel butterfly needle blood-collection device



Needleless arterial pressure monitoring system

Blood-Collection Devices (Continued)



Umbilical cup
(for the collection of umbilical cord blood)



Single-use sliding sheath blood-collection needle
and tubeholder



Blunted Suture Needles



Catheter-Securing Products



HuberLok™ (for removal of implanted port needles)



Huber Plus (wings fold in and shield
needle upon removal)

Injection Equipment

The following equipment is used to administer subcutaneous and intramuscular injections:



Automatic sliding sheath safety syringe



Needle guard—Sliding sheaths/sleeves



Needle guard



Needle guard—Hinged recap



Retractable needles

Other injection devices include needleless jet injection, and dental anesthetic injections:

- Safety dental syringes
 - disposable
 - stainless steel syringe with engineered sharps injury protection needles

I.V. Insertion Devices

The following devices are used for accessing the bloodstream for I.V. administration:



Shielded I.V. catheters—Midline



Shielded I.V. catheters—Peripheral

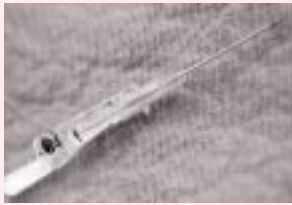


Shielded I.V. catheters—Peripheral

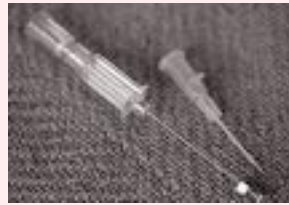
I.V. Insertion Devices (Continued)



Hemodialysis safety fistula needle sets (butterfly)



Self-blunting devices



Safety clip (permanently attaches upon withdrawal of needle introducer)

Other devices include:

- Retracting peripheral I.V. catheter
- Huber Plus (see photos on page 7)

I.V. Medication Delivery Systems

The systems noted below are used to administer medication or fluids through I.V. catheter ports or connector sites. Needleless I.V. systems may be formed by combining multiple components for I.V. access and delivery of medication.



Needleless I.V. access-blunted needles/ plastic cannulas



Needleless valve/access ports and connectors



Prefilled medication cartridge with blunted needles, plastic cannulas, Luer Loc



Recessed/protected needle



Laboratory Equipment



Plastic capillary tubes



Plexiglass safety shield



Transfer domes



Protected needles for accessing blood culture vials

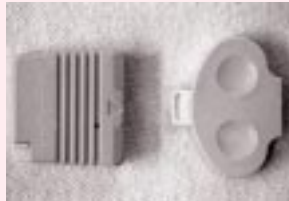
Other devices include:

- Mylar-wrapped glass capillary tubes
- Vacuum tube stoppers

Lancets



Automatically retractable lancet for fingerstick



Automatically retractable lancet for heelstick

Another device not shown is Laser lancet

Medication Access Devices

The following devices provide port access to medication vials:



Ampule openers for glass ampules of medication



Disposable access devices for needleless vial access



Another device includes disposable single-use needle guards for prefilled syringes

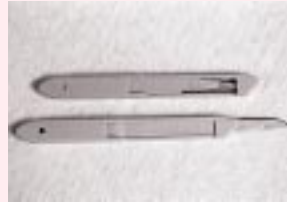
Sharps Disposal Containers



Surgical Products



Quick-release scalpel blade handles



Retracting scalpel



Sliding sheath cover

Other devices include:

- Magnetic sharps counting and disposal systems
- Hands-free transfer disposable magnetic drapes
- Safety scalpels for dentistry
- One-handed needle recapper (e.g., for sterile fields in operating room and cardiac catheterization)



Useful Ideas

The following suggestions may be helpful in identifying, selecting, and using new engineering controls and improving work practices.

Request the pharmacy's purchasing department to survey the marketplace for medications in *new containers that permit access through needleless systems*. Medications in these new containers should be purchased, if available, and *not* in glass ampules or tubexes.

Notify as many vendors as possible, whether currently on contract or not, to give them the opportunity to provide information on currently available products and prototypes.

Vendors for new products should:

- Be directed to contact committees, subcommittees, work groups, or the lead person(s) rather than individual department managers. This practice will save time and help ensure that the entire organization is provided the same information on currently available products and prototypes.
- Be prohibited from providing pricing information (to committees, subcommittees, work groups, lead person[s], managers, supervisors, bench lead persons, and employees) until the selection process is completed. This prohibition helps ensure that the decision is based on the most effective and appropriate products.

When appropriate, new engineering controls (e.g., safety syringes, safety scalpels, and curved needles with suture or needleholders) should be added to preassembled kits for various procedures, such as performing a spinal puncture, inserting central lines, and placing dialysis catheters. Kits that do not include new engineering controls can be tagged to so indicate.

When cleaning and decontaminating reusable stainless steel dental instruments (e.g., burs, probes, scalers, explorers) remember *not to touch or handle them except when bagging for sterilization*. Employees should take the following precautions:

- Place all instruments so that the sharp points do not extend beyond the edges of trays when instruments are carried to sterilization or clean-up rooms.
- Tilt the trays or use tongs to transfer the instruments into and out of the baskets for the ultrasonic unit.
- Spread and reposition the instruments, if necessary before drying, using tongs or other devices. *Make sure that the sharp points are not facing upward before dabbing them with an absorbent material.*
- Carefully place instruments in the sterilizer bags by the handle or a non-sharp area. Do not touch sharp points or handle instruments near the sharp points.

4. Test and Select Products



At this point the groups or individuals responsible for product selection can address *each potential exposure* by applying screening criteria to the engineering controls under consideration. Manufacturers or distributors may be asked to provide products free of charge for screening. For each exposure being addressed, products that eliminate the use of sharps (i.e., needleless systems) are screened first if they are available in the marketplace. If these devices are not chosen for testing, then products equipped with engineered sharps injury protection (ESIP) are screened next. Multiple devices in the same category, if available, should be screened for each potential exposure being addressed. This practice can help ensure that more than one product may be selected for testing for a given task or procedure.



Using Screening Criteria

Screening criteria may be used to eliminate those products with readily identifiable problems (e.g., ineffective devices, safety issues, visual obstructions, etc). *Only devices that meet an acceptable number of screening criteria are then tested in actual patient or product trials.*

The terminology used in screening new products is provided below.

Integrated design. The safety feature is built into the device as an integral part of the device and cannot be removed.

Accessory or “add-on” design. The safety feature is external to the device and must be temporarily or permanently fixed to it. Devices with accessory or “add-on” designs generally do *not* satisfy the requirement that the safety feature be built in. However, if there are no devices with an integrated design currently available in the marketplace for a particular procedure, accessory or “add-on” designs may be considered an appropriate engineering control.

Passive design. The safety feature remains in effect before, during, and after use. Passive safety features are preferable to active ones because they are automatically activated upon use and do not depend on the user for activation to provide protection. Passive designs are therefore more likely than active designs to reduce the risk of exposure incidents.

Active design. The employee must activate the safety feature *after* using the device. If employees do not activate the safety feature, they are left unprotected. Thus it is important to train employees in the proper use of the device.

The worksheets that follow were designed to aid in screening medical and dental products. Use *one screening worksheet for each device* being screened. Make a copy of each worksheet for each device under consideration for addressing a particular exposure.



Screening Worksheet for Medical Products

Department/Unit/Floor _____ Date: _____

Potential Exposure Being Addressed (from Needs Assessment Worksheet, page 5)

Name of the device and catalogue number: _____

This product (check only one):

_____ eliminates the use of sharps (i.e., a needleless system). _____ is a needle device equipped with ESIP.

_____ is a non-needle sharp equipped with ESIP. _____ is an engineering control without ESIP.

General Criteria

These criteria should be applied to each medical product being SCREENED. The criterion identified with a ★ should be applied to each product during TESTING (see “Tools” on page 19.) Applying this criterion can help provide a more thorough evaluation of products under actual conditions of use.

The product is:

- _____ easy to handle (e.g., not too large, heavy, or difficult to manipulate)
- _____ reliable (i.e., consistently works as intended with a minimal failure rate) ★
- _____ simple to operate, requiring minimal changes in technique or additional training ★
- _____ able to be used in less time than or in the same amount of time as the current device ★
- _____ able to be used with both hands behind the needle (if present) at all times ★
- _____ capable of maintaining patient comfort (e.g., does not interfere with the ability to puncture the skin or require additional punctures) ★
- _____ easy to dispose of safely (e.g., fits easily into sharps containers or other containers for disposal)
- _____ available in adequate supply and various typical sizes
- _____ backed-up with appropriate safety alternatives if product shortages or delays in delivery occur
- _____ accompanied by good customer service (product representatives are available to perform in-service training, answer questions, and address problems 24 hours a day) ★
- _____ compatible with other new products ★
- _____ available by using flexible purchasing agreements
- _____ recommended by other users

Additional important criteria for this product for our organization include:

 Make copies as needed

The ESIP (i.e., safety feature), if present, on the product is:

- an integral part of the device (see the definition in step 4, Test and Select Products)
- passive (see the definition in step 4, Test and Select Products)
- active (see the definitions in step 4, Test and Select Products)
- easily activated (e.g., little force is required) by using only a one-handed technique★
- easily recognizable as being permanently activated ★
- permanently locked into place after activation ★
- able to provide effective protection without blocking the view of the tip of the sharp
- capable of providing an effective and permanent barrier between the user's hands and the sharp (i.e., the ESIP has no design or functional defects, such as sharps protruding through the shielding features) ★
- structurally sturdy during use and intact throughout disposal (i.e., will not crack or break or disengage the sharp) ★


Conclusions

This product is:

- accepted for testing
- rejected for testing (specify reasons below)

- on hold pending more information (specify reasons below)

Comments:

 Make copies as needed



Screening Worksheet for Dental Products

Dental Operator _____ Date: _____

Potential Exposure Being Addressed (from Needs Assessment Worksheet, page 5)

Name of the device and catalogue number: _____

This product (check only one):

- eliminates the use of sharps (i.e., a needleless system). is a needle device equipped with ESIP.
 is a non-needle sharp equipped with ESIP. is an engineering control without ESIP.

General Criteria

The following criteria apply to both disposable and traditional dental products (e.g., stainless steel syringes with carpules). These criteria should be applied to each dental product being SCREENED. The criteria identified with a ★ should also be applied to each product during TESTING. Applying these criteria during product testing can help provide a more thorough evaluation of devices under actual conditions of use. For *each dental product* being screened, determine whether:

The product is:

- easy to manipulate (e.g., not awkward, too large, or heavy)
 easy to handle when covered by moisture ★
 reliable (i.e., consistently works as intended with a minimal failure rate) ★
 simple to operate, requiring minimal changes in technique or additional training ★
 able to be used in less time than or in the same amount of time as the current device ★
 capable of maintaining patient comfort (e.g., does not interfere with the ability to puncture the skin or require additional punctures) ★
 available in adequate supply and a variety of typical sizes
 backed-up with appropriate safety alternatives if product shortages or delays in delivery occur
 accompanied by good customer service ★
 compatible with other new products ★

The ESIP (i.e., safety feature) is:

- easily activated (e.g., requires little force) ★
 easily recognizable as being completely activated when not being used during a procedure
 easily recognizable as being permanently activated after use through disposal
 able to provide effective protection without blocking view of the tip of the sharp
 capable of providing an effective barrier between the user's hands and the sharp (i.e., the ESIP has no design or functional defects, such as sharps protruding through the front, back, or sides of the shield) ★
 structurally sturdy during use and intact throughout disposal (i.e., will not crack or break or disengage the sharp) ★

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Additional important criteria for this product for our organization include:

For *each traditional dental product* (e.g., stainless steel syringes with carpules), determine whether:

The product is:

- able to accept standard anesthetic carpules that can be easily changed
- able to accept engineered sharps injury protection needles that can be easily changed

The ESIP (i.e., safety feature) is:

- an integral part of the needle
- easy to detach and dispose of without exposure to the user
- capable of providing an effective barrier between the user's hands and the sharp (e.g., the ESIP must completely encase the front and back ends of the needle) ★

For *each disposable product* being screened, determine whether:

The product is:

- easy to dispose of safely (e.g., fits easily into sharps containers)

The ESIP (i.e., safety feature) is:

- an integral part of the device (see the definition in step 4, Test and Select Products)
- permanently locked into place after activation ★

Conclusions

This product is:

- accepted for testing
 - rejected for testing (specify reasons below)
-
-
-

- on hold pending more information (specify reasons below)
-
-
-

Comments:

 Make copies as needed

Product Testing Worksheet

The worksheet below may be used to document the results of the screening process. For *each exposure* being addressed, list the new products that will be tested.

Department/Unit/ Floor/Dental Operatory	Potential Exposure to Be Addressed	New Products Chosen to Test for This Exposure	Catalog No.
_____	_____	1 _____	_____
		2 _____	_____
		3 _____	_____
		4 _____	_____
		5 _____	_____
_____	_____	1 _____	_____
		2 _____	_____
		3 _____	_____
		4 _____	_____
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		3 _____	_____
		4 _____	_____
		5 _____	_____
_____	_____	1 _____	_____
		2 _____	_____
		3 _____	_____
		4 _____	_____
		5 _____	_____

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The Testing Process

Testing can help determine whether devices are actually effective at reducing or eliminating workplace exposure incidents while maintaining the highest levels of patient care and comfort. The same groups or individuals who screened the devices should oversee the testing and selection.

Testing should be conducted on the new products identified on the Product Testing Worksheet (page 18). Testing should be carried out in those departments, units, floors, or dental operatories where the new devices can be used in a range of typical tasks and procedures. If available, multiple products from a single category of devices should be tested for each potential exposure being addressed. Testing a variety of similar products can facilitate comparisons. In addition, back-up or alternative products can be selected if a particular device turns out to be unacceptable or supplies of a selected device become temporarily unavailable.

Frontline employees who perform the tasks and procedures associated with the exposures addressed *must* be involved in the testing. By using the new products, those employees often become the best judges of the effectiveness of the devices and any associated problems or issues. The testing of any new products must be suspended *immediately* if the devices are suspected of causing exposures or injuries to employees or patients. Testing of a suspect device must not be resumed until the problem(s) can be analyzed and resolved.

Education and Training

To help ensure that products are handled safely and evaluations are objective, training on the safe and proper use of products must be provided *before* testing begins. Training materials clearly state the objectives of the training, including those of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), if applicable. The groups or individuals responsible for product selection, all participants involved in the testing, and their supervi-

sors should receive training. Representatives of manufacturers and distributors must be available to demonstrate the intended use of their products, answer questions, and train employees in the safe operation of each device. *Participants in the testing must be given the opportunity to practice using the new devices. These practice sessions should include simulations that are as close as possible to the tasks and procedures involved under real-life conditions* (e.g., testing using the Scenarios for the Evaluation of Medical Devices developed by TDICT [Training for the Development of Innovative Control Technologies]. See contact information in the Resources section). Training documentation includes the employee's name and job title, date(s) and content of the training, and the names and qualifications of the trainer(s).

“Tools”

Checklists, evaluation forms, or other types of evaluation “tools” should be used in the testing of new products. The groups and individuals overseeing the testing can either develop the tools or modify existing ones, if necessary. Checklists and evaluation forms should cover criteria that are important before, during, and after use of a particular product. The tool should also be used to ascertain whether extensive training is required. The literature from manufacturers and distributors may highlight aspects of their own particular products. Therefore, this literature may not always provide the objectivity required of a standardized tool.



Any tool used must be tailored to the specific category of product under consideration. Use of such tools contributes to a thorough evaluation and results in the selection of more effective products. (For example, with I.V. access products the device should provide a good view of the flashback of blood; safety dental syringes must accept standard anesthetic carpules that can be easily changed). Specific tools are available for the following:

- Arterial blood gases
- Dialysis needles
- I.V. access



Ready to activate lancet



Fingerstick using lancet

- I.V. connectors
- I.V. safety catheters
- Peripherally inserted central catheters
- Safety devices
 - HuberLok™ or similar products
 - Needle encapsulation
- Safety syringes/needles
- Sharps disposal containers
- Vacuum tube phlebotomy
- Venipuncture needles
- Winged I.V. needles
- Vial access devices
- Safety scalpels

For references containing some of the tools mentioned previously and additional sources of information on specific tools, see the Resources section.

The same checklist or evaluation form should be used when several products of a given type or in a single category are tested. For example, many different devices may be available for venipuncture needles, but the same checklist should be used to evaluate all the venipuncture products being tested. This practice provides a standard basis for comparison of several products in a given category. In addition to the tools, the “General Criteria” denoted with a ★ on the “Screening Worksheets for Medical and Dental Products” (see pages 14–17) should be applied. Applying those criteria to each product being tested should lead to the selection of more appropriate and effective products.

Protocols

Protocols can help make the testing process more systematic and objective. They may be modified in accord with the products, tasks, and procedures involved. The Testing Protocol Worksheet may be used to help structure the testing process and document the details of each item involved.

Testing Protocol Worksheet

In our organization, protocols for testing new products may include, but are not limited to, the following:

Preparatory Stage

(✓) _____ Training is provided *before* testing begins (e.g., identify the trainer; document the date, frequency, topics, practice sessions required, and the attendees participating).

(✓) _____ Frontline employees who will participate in the testing are identified (including their departments, units, or floors).

Design Stage

(✓) _____ Name the specific tool (including its source) used for gathering data on *each device* tested.

(✓) _____ State the length of the test period(s) (e.g., one to two weeks).

(✓) _____ For each device tested, describe the type of patient trials (e.g., the departments, units, floors, or dental operatories involved; the tasks or procedures performed) and the estimated number of times each product will be used in the testing.

(✓) _____ Describe the process for collection and submittal of information to decision makers. Explain how completed evaluation forms and employee feedback will be collected; identify the testing coordinator(s); and give the dates of meetings with employees.



Make copies as needed



The Selection Process

The groups or individuals responsible for product selection should review the checklists, evaluation forms, and other information submitted by the testing coordinators or other employees.

Also, feedback from frontline employees involved in the testing should be documented and considered when it is time to decide which products to select. Decisions on whether to purchase products can then be made based on the analysis of all the available information. The Product Selection Worksheet that follows may be used to summarize important information for each product tested. If two or more products are found to

be satisfactory in a given category for a particular task or procedure, consideration should be given to purchasing them. This approach provides choices to employees, helping to increase their acceptance of new products, and ensures that back-up devices are available.

Reinforcing employee involvement in the process is important because it may heighten staff interest and increase acceptance of the new products. Sustaining this interest may be accomplished by providing feedback to all participants about how devices ranked and which products were selected. A summary of comments from the participants about the devices and the testing process should also be included in the feedback.

Product Selection Worksheet

Use one copy of this worksheet for *each exposure* being addressed. List all the devices tested (from the Product Testing Worksheet, page 18) for that particular exposure. For each product listed, summarize the most important information collected (e.g., results from checklist or evaluations forms, employee feedback). These summaries can then be used to draw conclusions about which devices to purchase and how they ranked (e.g., 1st, 2nd, 3rd choice).

Department/Unit/Floor, or Dental Operatories: _____

Potential Exposure Being Addressed: _____

▶ **Product tested:** _____ Date: _____

Strengths of the product: _____

Problems with the product: _____

Employee feedback: _____

▶ **Product tested:** _____ Date: _____

Strengths of the product: _____

Problems with the product: _____

Employee feedback: _____

▶ **Product tested:** _____ Date: _____

Strengths of the product: _____

Problems with the product: _____

Employee feedback: _____

▶ **Product tested:** _____ Date: _____

Strengths of the product: _____

Problems with the product: _____

Employee feedback: _____

▶ **Product tested:** _____ Date: _____

Strengths of the product: _____

Problems with the product: _____

Employee feedback: _____

Conclusions

Products Tested	Catalogue No.	Purchase This Device?	Ranking	Comments
_____	_____	YES <input type="checkbox"/> NO <input type="checkbox"/>	_____	_____
_____	_____	YES <input type="checkbox"/> NO <input type="checkbox"/>	_____	_____
_____	_____	YES <input type="checkbox"/> NO <input type="checkbox"/>	_____	_____
_____	_____	YES <input type="checkbox"/> NO <input type="checkbox"/>	_____	_____
_____	_____	YES <input type="checkbox"/> NO <input type="checkbox"/>	_____	_____

 Make copies as needed



5. Use New Products

The committee(s), subcommittee(s), working group(s), or lead person(s) responsible for product selection should be the one(s) to oversee the implementation process, including ordering and distributing new products and staff training. New products can be introduced on a limited basis in a pilot implementation or trial phase. During this trial period, issues associated with the day-to-day use of the new product(s) may arise. Employees may need time to develop new skills, establish new work practices, and break old habits. Employees should *be strongly encouraged* to report any problems to supervisors. If problems appear to be serious or widespread, they should be reported to the decision makers. Representatives of manufacturers and distributors must be available 24 hours a day to address concerns. Problems with new products are addressed as they arise and resolved before the new product is used throughout the organization.



Product Implementation Policy

We designate a group or individual(s) to be responsible for making sure that the new products selected are ordered and distributed throughout the appropriate areas in a timely manner. Adequate supplies of back-up devices are also ordered and made available. To provide uniformity, individual managers of departments, units, floors, or work areas are not held responsible for ordering new products. Our policy for uniform and timely implementation of new products follows below. (Include the group[s] or individual[s] responsible for implementation; the dates new products were ordered and distributed; the departments, units, floors, or work areas where new products were distributed.)



Description of Policy

 Make copies as needed



Education and Training

All staff using the new devices (and their supervisors) must be thoroughly trained. All new employees have mandatory training on the safe and appropriate use of new products as part of their orientation. Sign-in sheets are used to document attendance and track which employees have been trained. Training includes practice sessions to simulate the tasks and procedures that individuals will perform with the new devices.

If several devices are selected for a given task or procedure, employees (and their supervisors) receive training in the use of those devices. This training allows staff members (and supervisors) to be able to use more than one product, including effective backup devices.



Methods

The training should provide employees a mix of the knowledge and skills needed to work safely. How individuals are trained is important. The most effective approaches for adult learners are interactive and involve combining any of the following:

- Simulations of hands-on procedures in which the new devices are used
- Many types of visual aids (e.g., pictures, charts, graphs, and videos of actual tasks or procedures in which the devices are used)
- Small-group discussions, brainstorming, and problem-solving sessions
- Reports or studies about use of the same new products

Videos may be used as a training aid, but they are not sufficient if used alone.



Content

Training content can vary depending on the devices selected and the tasks and procedures involved. Training should include product-specific information and suggestions on safe use.

Product-Specific Information. For each new device, representatives from manufacturers and distributors should be available to:

- Demonstrate its proper use and application.
- Answer questions.
- Provide training on its safe operation.
- Provide follow-up.

Suggestions on Safe Use. A variety of knowledgeable in-house staff should present the following suggestions to employees:

- Remember that new products with ESIP are still considered sharps. These products must be used and disposed of in accord with the bloodborne pathogens regulation (8 CCR 5193) and the Medical Waste Management Act (Division 104, Part 14 of the California *Health and Safety Code*, sections 117600–118360).
- Report any problems with new devices to supervisors.
- Always work cautiously. Avoid taking shortcuts even when confronted with a high patient load and multiple tasks.
- Use proper patient-handling techniques.

If problems with work practices or currently used devices are discovered, employees may need additional training. The training should provide employees a mix of the knowledge and skills needed to work safely.





6. Conduct Follow-up

Following up should be an ongoing systematic process in which devices and the associated work practices are periodically reevaluated. The groups or individuals responsible for product selection and implementation should be the ones to oversee the follow-up process. *The feedback of frontline employees who have been using the various devices is vital.* Follow-up can help to ensure that products are:

- Effective at reducing or eliminating occupational exposures and injuries
- Being used properly
- Accepted by employees
- Not causing any employee or patient care problems
- Replaced by newer, more effective products as they become available in the marketplace

Judgments on the appropriateness or effectiveness of new products should not be made until employees have had enough time to adjust to using the products. Allowing this trial period may help avoid the rejection of an otherwise good product. Follow-up evaluations of products and work practices may be conducted six months after the implementation and quarterly, semiannually, or annually thereafter. The findings should be used to improve the product selection and the training provided. Evaluation may be conducted by the following means:

- Reevaluate devices and work practices currently in use (with the same checklists, evaluation forms, or other type of standardized “tool” originally used to test the product).

- Ask employees for feedback on devices they have been using (e.g., during the initial six months and periodically throughout the follow-up process).
- Track the exposure and injury rates related to bloodborne pathogens (e.g., reviewing the Sharps Injury Log, workers’ compensation data, incident reports, Employer’s Report of Occupational Injury or Illness [form 5020]).
- Identify newly developed products available in the marketplace by:
 - Communicating with peers
 - Reading scientific and professional publications and journals
 - Contacting manufacturers and distributors
 - Attending new technology exhibits and product fairs
 - Contacting professional associations
 - Asking employees for suggestions about newer, more effective devices(For additional ideas, see the Resources section, page 78.)

As with the implementation period, it is important to have an ongoing system in place that encourages employees to report immediately to supervisors any problems with new products. In addition to giving feedback, staff should receive periodic feedback about how new products are working and what newer products have become available. As new technology enters the marketplace, products should be systematically screened, tested, and selected through the process described previously.

Methods of Compliance





Our organization's policy is to actively involve employees in all aspects of the methods of compliance used to eliminate or reduce bloodborne pathogens exposure in our workplace. We believe that employees are more likely to endorse and actively support changes if they are involved in the process of making improvements. Therefore, we welcome employee suggestions and support the implementation of effective and appropriate improvements whenever possible.

Our methods of compliance include the observance of universal precautions as an approach to infection control. All human blood and some human body fluids are treated as if they were known to be infectious for human immunodeficiency virus (HIV), hepatitis B virus (HBV), hepatitis C virus (HCV), and other bloodborne pathogens. All employees must observe universal precautions to prevent contact with blood or other potentially infectious materials (OPIM). When a body fluid is difficult or impossible to identify, all body fluids must be considered OPIM.

We have procedures for other methods of compliance including (but are not limited to):

- 🔴 Assessing and updating engineering controls and work practice controls
- 🔴 Handling regulated waste (for definitions of regulated waste, see the Resources section on page 82), contaminated sharps, specimens of blood or OPIM, and laundry
- 🔴 Cleaning and decontaminating the worksite and equipment
- 🔴 Encouraging good hygiene
- 🔴 Using personal protective equipment

Work Practice and Engineering Controls



Use the proper technique for restraining a patient and drawing blood.



Clean and decontaminate the worksite.



Use personal protective equipment.

Engineering and Work Practice Controls—General Requirements



Engineering and work practice controls are used to eliminate or minimize employees' occupational exposure. *Engineering controls* means controls (e.g., sharps disposal containers, needleless systems, and sharps with engineered sharps injury protection) that isolate or remove the bloodborne pathogen hazard from the workplace. *Work practice controls* means controls that reduce the likelihood of exposure by defining the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique and using patient-handling techniques). Both types of controls are updated concurrently because engineering controls alone cannot provide protection to an employee unless they are used with appropriate work practice controls. This organization's policy is to perform all procedures involving blood or OPIM in a manner so that splashing, spraying, spattering, and generation of droplets are kept at a minimum.

To ensure the effectiveness of engineering and work practice controls, we assess them on a *regular schedule*. We examine, maintain, or replace engineering controls. We evaluate and update work practice controls. To assess engineering and work practice controls, we use information from the Sharps Injury Log, Cal/ OSHA's Log 200, employee interviews, health and safety committees, and other sources, including:

Information used in assessment: _____

We use a process to assess our engineering and work practice controls. In our organization the groups or individuals involved in the process may include:

- 🔴 Committees (e.g., guidance, infection control, product evaluation, product selection, employee health and safety, clinical practice, education, other)
- 🔴 Subcommittees (e.g., Hazardous Materials Management)
- 🔴 Working groups (e.g., data collection, device selection, education, safer work practices)
- 🔴 A task force(s) or research group(s)
- 🔴 A lead person (e.g., dentist, infection control specialist, etc.)
- 🔴 Other(s) (specify) _____

We assess engineering and work practice controls (check one):

- (✓) _____ quarterly (✓) _____ annually
(✓) _____ semiannually (✓) _____ other (specify) _____

During each scheduled assessment, we consider (check one):

- (✓) _____ all engineering and work practice controls at one time
(✓) _____ selected engineering and work practice controls on a staggered schedule

Our staggered schedule is: _____

Engineering Controls– Specific Requirements



The use of a needleless system and/or engineered sharps injury protection for needle devices and non-needle sharps is deemed necessary to prevent sharps injuries. **Needle or needle device** means a needle of any type, including but not limited to solid and hollow-bore needles.

Needleless system means a device that does not use needles for the (1) withdrawal of body fluids after initial venous or arterial access is established; (2) administration of medication or fluids; and (3) performance of any other procedure involving the potential for an exposure incident.

Engineered sharps injury protection (ESIP) means either (1) a physical attribute built into a needle device used for withdrawing body fluids, accessing a vein or artery, or administering medications or other fluids, which effectively reduces the risk of an exposure incident by a mechanism such as barrier creation, blunting, encapsulation, withdrawal, or other effective mechanisms; or (2) a physical attribute built into any other type of needle device or into a non-

needle sharp, which effectively reduces the risk of an exposure incident.

For a device to qualify as an ESIP, the anti-stick safety feature must *effectively reduce* the risk of an exposure incident. This depends on factors that include, but are not limited to, the design of the device, its ability to perform as intended by the design, the appropriateness of the device for a particular application and employee training on the proper use of the device.

Engineering controls considered for use by our organization include (1) needleless systems; (2) engineered sharps injury protection for needle devices; and (3) non-needle sharps. For the safety and protection of our employees, we first consider using needleless systems. If needleless systems are not used, needles with ESIP are considered next. If non-needle sharps are used, they have ESIP. We evaluate, select, and maintain devices that protect workers from exposure incidents, including back-up devices from those three categories for use in our facility.



Needleless system



Engineered sharps injury protection



Non-needle sharps

Needleless systems (if available) are used as an alternative to needle devices for:

- The withdrawal of body fluids after initial venous or arterial access is established
- The administration of medications or fluids
- Any other procedure involving the potential for an exposure incident

Needle devices with ESIP (if available) are used for:

- Procedures in which needleless systems are not used
- The withdrawal of body fluids
- Accessing a vein or artery

- The administration of medications or fluids
- Any other procedure involving the potential for an exposure incident

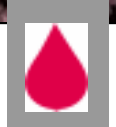
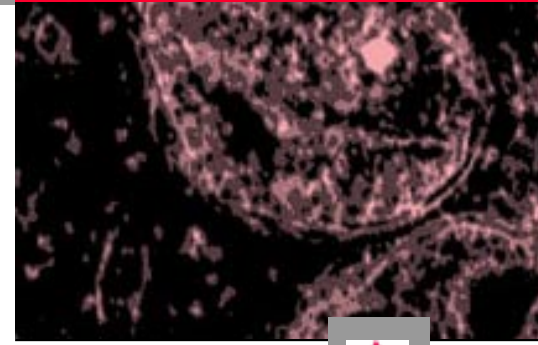
Non-needle sharps (if used) have ESIP.



New Technology

New engineering control technologies that may provide superior alternatives to those currently used may be developed. As they become available, we will continue to evaluate and select appropriate engineering controls to further reduce exposure incidents in the workplace.

Exceptions to the Use of Engineering Controls



Engineering controls (i.e., needleless systems or engineered sharps injury protection for needle devices or non-needle sharps) must be used to prevent sharps injuries *except in circumstances where the engineering control:*

1. Is not available in the marketplace;
2. Jeopardizes the patient’s safety or the success of a medical, dental, or nursing procedure as determined by the health care professional caring for the patient (see page 35)
3. Is not more effective than the control currently in use; or
4. Lacks the necessary safety performance information.

Exception 1: Market Availability

Our organization’s policy is to contact vendors of effective and appropriate engineering controls (and acceptable back-up devices) for each task or procedure under consideration. We acknowledge that the Market Availability exception *does not apply* if an engineering control has become temporarily unavailable but other vendors can supply *acceptable back-up device(s)*. To help determine whether Exception 1 applies, we document the following information for the appropriate option listed below:

Option a: No Controls Available

Task/ Procedure	Device Currently Used	Vendors of New Controls	Date Contacted
		_____	_____
		_____	_____
		_____	_____
		_____	_____
		_____	_____




(✓)_____ After contacting the vendors listed above, we have concluded that for the task or procedure under consideration, no effective and appropriate engineering controls are currently available in the marketplace. Exception 1 applies.

Name of supervisor making decision: _____ Date: _____

Make copies as needed

Exception 2: Patient Safety

Employees are *not* required to use engineering controls (i.e., needleless systems, needle devices, or non-needle sharps) if a licensed health care professional:


-  Determines that the new control will jeopardize the patient’s safety or the success of a medical, dental, or nursing procedure
-  Is directly involved in the patient’s care
-  Exercises reasonable clinical judgment

If this exception applies, the form below (or equivalent information) should be submitted to the exposure control plan administrator.

Patient Safety Determinations for Exceptions to the Use of Engineering Controls

Control Under Consideration	Name of Licensed Health Care Professional Making the Determination	Date of the Determination	Reason(s) for the Applicability of This Exception with This Patient

Comments:

 Make copies as needed for each engineering control under consideration

Exception 4: Availability of Safety Performance Information

The specific engineering control under consideration is not required if it can be demonstrated that:

- a. Reasonably specific and reliable information on the safety performance of this particular engineering control (for the procedure[s] we perform) is not available; *and*
- b. Our organization is using objective criteria to determine whether the use of this particular engineering control will reduce the risk of exposure incidents occurring in the workplace.

Use one copy of this form for each specific device in which Exception 4 applies.

a. Availability of Safety Performance Information

Is safety performance information available on the specific engineering control under consideration?

If yes (✓) _____ see chart below

If no (✓) _____ (see item b, "Detailed Description of Objective Criteria")

Task(s)/ Procedure(s) Involved	Name of Control Evaluated	Sources Consulted for Safety Performance Information*	Date of Evaluation of Information


*Sources Consulted for Safety Performance Information (e.g., professional journals, academic studies, independent product evaluation centers, professional organizations, peer organizations, research entities, whether public or private, that have no economic interest or relationship with manufacturers, such as the U.S. Public Health Service [Centers for Disease Control and Prevention] or Exposure Prevention Information Network [EPINET])

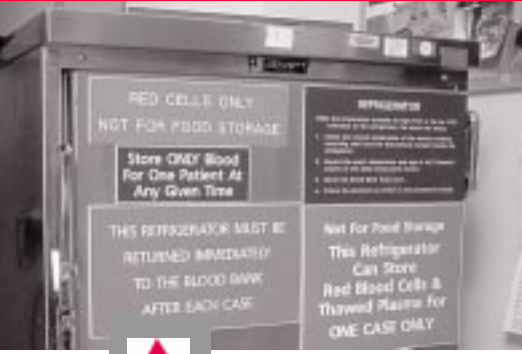
Summarize the information on the safety performance of this device.

Was the information for this device judged to be specific and reliable?

If yes (✓) _____ **Exception 4 does not apply** If no (✓) _____ (see item b)


Name of supervisor making determination: _____ Date: _____





 Make copies as needed for each engineering control under consideration









Work Practice Controls— Prohibited Practices



 ur organization prohibits the following actions and practices:

-  Storing food and drinks in refrigerators, freezers, cabinets, on shelves, countertops, or benchtops where blood or OPIM is present
-  Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses in an area where there is a reasonable likelihood of occupational exposure
-  Shearing or breaking of contaminated needles and other sharps
-  Bending, recapping, or removal of contaminated sharps from devices *except when:*
 - The procedure is performed using a mechanical device or a one-handed technique;¹ *and*
 - It can be demonstrated that there is no feasible alternative or that a specific medical or dental procedure requires such actions.
 - For each device, describe the reason(s) for the bending, recapping, or removal of contaminated sharps:

Name of supervisor responsible for performing this procedure (including the date of the procedure):

-  Storing or processing of sharps contaminated with blood and OPIM in a way that requires employees' hands to reach into contaminated containers
-  Reusing disposable sharps
-  Picking up contaminated broken glassware by hand. Instead, mechanical means (dustpan and brush, tongs, or forceps) are required for cleanup activities.
-  Reaching inside sharps containers before proper decontamination or reprocessing
-  Opening, emptying, or cleaning of sharps containers in a manner that would expose employees to the risk of a sharps injury
-  Mouth pipetting or suctioning of blood or OPIM

¹ *Note:* One-handed technique means a procedure in which the needle of a reusable syringe is capped in a sterile manner during use. The technique employed shall require the use of only the hand holding the syringe so that the free hand is not exposed to the uncapped needle.

 Make copies as needed

Requirements for Handling Contaminated Sharps



The potential for sharps injuries and blood-borne pathogens exposure is assessed and addressed before hazardous tasks/procedures are conducted. Our employees are required to use universal precautions when handling all contaminated sharps. In addition, effective patient-handling techniques and other methods are used to minimize the risk of sharps injury in all procedures involving the use of sharps in connection with patient care (e.g., withdrawing body fluids; accessing a vein or artery; administering vaccines, medications, or fluids to struggling patients). Using effective patient-handling techniques means controlling or restraining struggling patients (e.g., assessing the physical or mental state of the patient, getting help from co-workers, using restraints) as an additional opportunity for minimizing the risk of sharps injury.



Containers for Contaminated Sharps

Contaminated sharps are placed immediately (or as soon as possible after use) in containers that are:

- Rigid
- Puncture-resistant
- Leakproof on the sides and bottom
- Easily accessible to employees and located as close as feasible to the immediate area where the sharps are used or can be reasonably anticipated to be found (e.g., laundries). Where security of the sharps container and its contents may be a concern (e.g., psychiatric units), we may place the sharps container on a mobile cart and lock the container inside.
- Portable (if necessary to ensure employees' easy access to sharps containers)
- Labeled as follows: BIOHAZARD with the international biohazard symbol or SHARPS WASTE
- Closeable and sealable (if handling discarded sharps that are *not* to be reused). When sealed, the container is leak-resistant and cannot be reopened without great difficulty.
- Kept in an upright position throughout use where feasible
- Replaced as needed to prevent overfilling



Place sharps disposal containers in the immediate area where sharps are used or likely to be found.

Regulated Waste— Containers for Disposal



All regulated waste from the facility is handled, stored, treated, and disposed of in accord with the Medical Waste Management Act, Division 104, Part 14 of the California *Health and Safety Code*, sections 117600 through 118360, and all other applicable regulations.

Containers for Disposal of Sharps

Containers for contaminated sharps, moved from their area of use for the purpose of disposal, are (1) closed immediately prior to their removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping; and (2) placed in a secondary container if leakage is possible.

Containers for Disposal of Other Regulated Wastes and Secondary Containers

Containers for disposal of other regulated wastes (i.e., non-sharps) and secondary containers (for contaminated sharps and other regulated wastes) are closeable and constructed to contain all contents and prevent leakage and protrusion. If outside contamination of a container of regulated waste occurs, that container is placed in a secondary container.

Containers for the disposal of other regulated wastes (i.e., non-sharps) are labeled as follows:

- As a BIOHAZARD with the international biohazard symbol or as BIOHAZARDOUS WASTE



Examples of containers for disposal of other regulated wastes

- With the label as an integral part of the container or affixed as close as feasible to the container (e.g., by string, wire, adhesive, or other method) to prevent their loss or unintentional removal
- With predominantly fluorescent orange or orange-red labels and symbols in contrasting colors

Secondary containers for contaminated sharps and other regulated waste are labeled as follows:

- As a BIOHAZARD with the international biohazard symbol or as SHARPS WASTE

Exceptions to Labeling Requirements for Containers of Regulated Waste

Regulated waste that has been decontaminated is not labeled or color-coded. Individual containers of blood or OPIM placed in labeled containers for storage, transport, shipment, or disposal are not labeled.

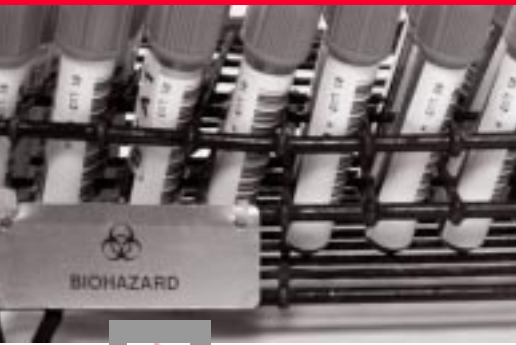
Bags of Regulated Waste

Bags containing regulated waste are color-coded red and labeled as a BIOHAZARD with the international biohazard symbol or as BIOHAZARDOUS WASTE. The labels *do not* need to be orange or orange-red.



International Biohazard Symbol

Handling Specimens of Blood or Other Potentially Infectious Materials



Specimens of blood or OPIM are placed in containers that prevent leakage during collection, handling, processing, storage, transport, or shipping. These individual specimen containers and secondary containers (including those that are puncture-resistant), if required, are closed prior to storage, transport, or shipping. The specimen containers are (1) exempt from red color-coding or labeling under certain conditions; or (2) color-coded red; or (3) labeled in a prescribed manner. An explanation of those three categories follows:

- (1) Exempt from red color-coding or labeling—Yes (✓) ___ No (✓) ___ [if no, see item 2 or 3 below]

This exemption applies only if all specimens remain in our facility and are (a) handled using universal precautions; *and* (b) placed in containers that are recognizable as containing specimens of blood or OPIM. When containers with specimens of blood or OPIM leave our facility, they are color-coded or labeled as described below.

OR

- (2) Color-coded red—Yes (✓) ___ No (✓) ___ (if no is checked, see item 3 below)

OR

- (3) Labeled in the following manner:

- The label is an integral part of the container or affixed as close as feasible to the container (e.g., by string, wire, adhesive, or other method) to prevent loss or unintentional removal.
- The label is predominantly fluorescent orange or orange-red, and the symbols are in contrasting colors.
- BIOHAZARD and the international biohazard symbol appear on the label.

If outside contamination of the primary container occurs, the primary container is placed in a secondary container that prevents leakage during collection, handling, processing, storage, transport, or shipping. If the specimen could puncture the primary container, it is placed in a puncture-resistant secondary container that prevents leakage.



Make copies as needed

Cleaning and Decontaminating Equipment and Surfaces



Our organization's policy requires all equipment and environmental and work surfaces to be cleaned and decontaminated as soon as possible after contact with blood or OPIM. To perform the cleaning and decontamination, we use appropriate disinfectants including:

- Diluted bleach solutions
- U.S. Environmental Protection Agency (EPA)-registered products (e.g., tuberculocides, sterilants and products effective against HIV or HBV)
- Other EPA-registered products as listed in the National Antimicrobial Information Network (1-800-447-6349 at <http://ace.orst.edu/info/nain/lists.htm>).

Employees are required to use all disinfectant products according to manufacturer's instructions, including applying appropriate concentrations and volumes to a given surface area and providing adequate contact time. Cleaning and decontamination of equipment and surfaces are required more often as specified in the next topic, Servicing or Shipping Contaminated Equipment.





Servicing or Shipping Contaminated Equipment



Equipment that may become contaminated with blood or OPIM is examined before servicing or shipping and is decontaminated as necessary. Decontaminating equipment (or portions thereof) is *not* required if it is infeasible or if it will interfere with a manufacturer's ability to evaluate failure of the device. If equipment (or a portion thereof) is not decontaminated, the following actions shall be taken:

- Affected employees, servicing representatives, and/or manufacturers are informed about any remaining contamination so that appropriate precautions can be taken prior to handling, servicing, or shipping the equipment.
- A readily observable warning label (as described below) is attached to the equipment, stating which portions remain contaminated.

The label on the contaminated equipment:

- Reads BIOHAZARD with the international biohazard symbol or BIOHAZARDOUS WASTE.
- Is predominantly fluorescent orange or orange-red and has symbols in contrasting colors.

Area/Location	Type of Contaminated Equipment	Examined by	Action Taken	Date

Why equipment (or portions thereof) was *not* decontaminated:



 Make copies as needed

Cleaning and Decontamination of the Worksite



General Requirements

Schedule

The worksite, which includes all environmental surfaces, work surfaces, and equipment, is maintained in a clean and sanitary condition. The written schedule for cleaning and decontamination of the worksite is as follows:

Area Cleaned/ Decontaminated	Frequency of Cleaning/ Decontamination	Employee Responsible for Determining and Implementing the Written Schedule

Comments:



 Make copies as needed

Environmental and work surfaces and equipment are cleaned and decontaminated as soon as possible (and by no later than the end of the work shift) after contact with blood or OPIM has occurred. Cleaning and decontamination of equipment and work surfaces are performed more often in accord with the “Specific Requirements” described below.

Methods

The cleaning and decontamination methods used are effective and appropriate for the (1) location within the facility; (2) type of surface or equipment to be treated; (3) type of soil or contamination present; and (4) tasks or procedures being performed in the area.



Specific Requirements

Contaminated Work Surfaces

Contaminated work surfaces are cleaned and decontaminated immediately or as soon as feasible when (1) they become overtly contaminated; (2) there is a spill of blood or OPIM; (3) procedures are completed; or (4) at the end of the work shift if the surface may have become contaminated since the last cleaning.

Receptacles

All reusable bins, pails, cans, and similar receptacles that can reasonably be expected to become contaminated with blood or OPIM are inspected and decontaminated regularly according to the schedule that follows. Additionally, if receptacles are visibly contaminated, they are cleaned and decontaminated immediately or as soon as possible.



Reusable receptacles contaminated with blood or OPIM are decontaminated and cleaned as soon as possible.

Location or Area	Type of Receptacle	Inspected by	Frequency of Inspection/ Decontamination	Action Taken	Date of Action

Comments:

Protective Coverings

Protective coverings (e.g., plastic wrap, aluminum foil, or imperviously backed absorbent paper used to cover equipment and environmental surfaces) are removed and replaced as soon as feasible when overtly contaminated or at the end of the work shift (if they became contaminated during the shift).

 Make copies as needed



Hygiene



Employees' exposure to blood or OPIM is minimized by ensuring that:

- Handwashing facilities are readily accessible to employees.
- Appropriate antiseptic towelettes or antiseptic hand cleanser along with clean cloths or paper towels are available (when handwashing facilities are not accessible).
- Employees wash their hands and any other skin (as soon as feasible) with soap and running water after (1) using antiseptic towelettes or hand cleansers; (2) removing gloves or other personal protective equipment; or (3) contacting blood or OPIM.
- Employees flush their mucous membranes with water (as soon as feasible) after those body areas have been in contact with blood or OPIM.



Laundry



Contaminated laundry means laundry that has been soiled with blood or other OPIM or may contain sharps. To minimize exposure to blood or OPIM, employees handle contaminated laundry as little as possible and with a minimum of agitation. Employees who come into contact with or handle contaminated laundry are required to wear protective gloves and other appropriate personal protective equipment. In addition, contaminated laundry is:

1. Bagged or containerized without sorting or rinsing at the point where it was used
2. Placed and transported in leakproof bags or containers when wet (i.e., a reasonable likelihood exists that fluids may soak through or leak to the exterior)
3. Placed in bags or containers labeled and color-coded as described below when it is shipped to off-site facilities that do not use universal precautions in the handling of all laundry
4. Placed and transported in color-coded bags (i.e., red bags) or containers that are labeled in the following manner:
 - The label is an integral part of the container or affixed as close as feasible to the container (e.g., by string, wire, adhesive, or other method) to prevent loss or unintentional removal.
 - The label is predominantly fluorescent orange or orange-red, and the symbols are in contrasting colors.
 - Contaminated laundry (without sharps) is labeled as a BIOHAZARD with the international biohazard symbol.



Alternative Labeling or Color-Coding of Laundry

Our organization uses universal precautions in the handling of all soiled laundry.

Yes (✓) _____ (if yes, see below) No (✓) _____ (if no, label or color-code as described previously)

Therefore, we use an alternative labeling or color-coding scheme to that described previously. The alternative labeling or color-coding scheme indicates that universal precautions must be observed when bags or containers of contaminated laundry are handled.

Description of alternative scheme:

 Make copies as needed



Personal Protective Equipment



Appropriate personal protective equipment (PPE) is provided at no cost to our employees when exposures to blood or OPIM remain after engineering and work practice controls have been established. PPE, in appropriate sizes, is readily accessible at the worksite or is issued to employees. PPE is considered appropriate only if it does *not* permit blood or OPIM to pass through to or reach the employee's work or street clothes, undergarments, skin, eyes, mouth, or other mucous membranes. PPE provided to employees effectively performs this function under normal conditions of use and for the duration of time it is used.

Appropriate PPE includes (but is not limited to):

- Gloves
- Hypoallergenic gloves
- Glove liners, powderless gloves, or similar alternatives (for those allergic to gloves normally provided)
- Mouthpieces
- Resuscitation bags
- Gowns
- Laboratory coats
- Face shields
- Masks
- Eye protection
- Pocket masks/other ventilation devices




Policy on Use

Our organization ensures that employees use appropriate PPE unless the employee declines its use temporarily for a brief time. Under rare and extraordinary circumstances, employees exercising their own professional judgment may decline to use PPE in a specific instance because its use would:

- Prevent the delivery of health care or public safety services; or
- Pose an increased hazard to the employee's safety or that of coworker(s).

When employees make the judgment to decline the use of PPE, our organization investigates and documents the incident to determine whether changes can be made to prevent such occurrences in the future. Employees are encouraged to report all such instances without fear of reprisal.

Location/Task/ Procedure	Type of PPE	Reason for Declining PPE Use	Name of Employee Declining PPE Use	Date of Declination

 Make copies as needed

Summary of investigation: _____

Investigator: _____

Date(s) of improvement or action: _____

Description of improvement or action taken: _____



Cleaning, Laundering, Repair, Replacement, and Disposal of Personal Protective Equipment

Our organization cleans, launders, repairs, replaces (as needed to maintain effectiveness), and disposes of PPE at no cost to employees.



Removal of Personal Protective Equipment

All PPE is removed prior to leaving the work area. Any garment that has been penetrated by blood or OPIM is removed immediately or as soon as feasible. PPE that has been removed is placed in a designated area or container for storage, washing, decontamination, or disposal.

Gloves

Employees are required to wear gloves whenever (1) it can be reasonably anticipated that their hands may contact blood, OPIM, mucous membrane, or non-intact skin; or (2) vascular access procedures are performed (see exception on page 54).

Disposable or single-use gloves (e.g., surgical or examination gloves) are *not* washed or decontaminated for reuse. These gloves are replaced (1) as soon as practical when contaminated; or (2) as soon as feasible if torn, punctured, or whenever their ability to function as a barrier is compromised.

Utility gloves are discarded if (1) they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration; or (2) their ability to function as a barrier is compromised. Utility gloves may be decontaminated for reuse if their integrity is not compromised.



Discarding soiled gloves



Double-gloving



Make copies as needed

Employees are required to wash their hands after the removal of gloves used during any procedure which may have contaminated them with blood or OPIM, whether or not the gloves are visibly contaminated.

Volunteer Blood Donation Centers

Our organization has (✓)____, does not have (✓)____, a volunteer blood donation center. Routine gloving of all phlebotomists in our volunteer blood donation center is judged to be:

Necessary (✓)____. All phlebotomists *are* routinely gloved.

OR

Not Necessary (✓)____. All phlebotomists *are not* routinely gloved; however, we reevaluate this policy periodically. We encourage the use of gloves for phlebotomy and make gloves available to all employees who wish to use them for that purpose. We require gloves to be used for phlebotomy when employees:

- Have cuts, scratches, or other breaks in the skin.
- Judge that hand contamination with blood may occur (e.g., when performing phlebotomy on an uncooperative source individual).
- Are receiving training in phlebotomy.

Note: The above-mentioned requirements for gloves are in addition to the provisions of 8 CCR 3384, “Hand Protection.”



Masks, Eye Protection, Face Shields, and Respirators

Employees are required to use eye protection when it is reasonably anticipated that blood or OPIM may make contact with the mucous membranes of the eye. Masks and eye protection devices (e.g., goggles, glasses with solid side shields or chin-length face shield) are required whenever:

- Splashes, spray, spatter, or droplets of blood or OPIM may be generated; and
- Eye, nose, or mouth contamination may reasonably be anticipated.

We recommend that employees use goggles designed to protect the eyes from splashes of liquids, when appropriate, because they generally provide more protection than safety glasses or face shields.

Note:

1. These requirements are in addition to the provisions of 8 CCR 3382, “Eye and Face Protection.”
2. Where respirator protection is used, the provisions of 8 CCR 5144, “Respiratory Protection,” and 5147, “Respiratory Protection for M. Tuberculosis,” apply.
3. Surgical masks are not respirators.



Make copies as needed

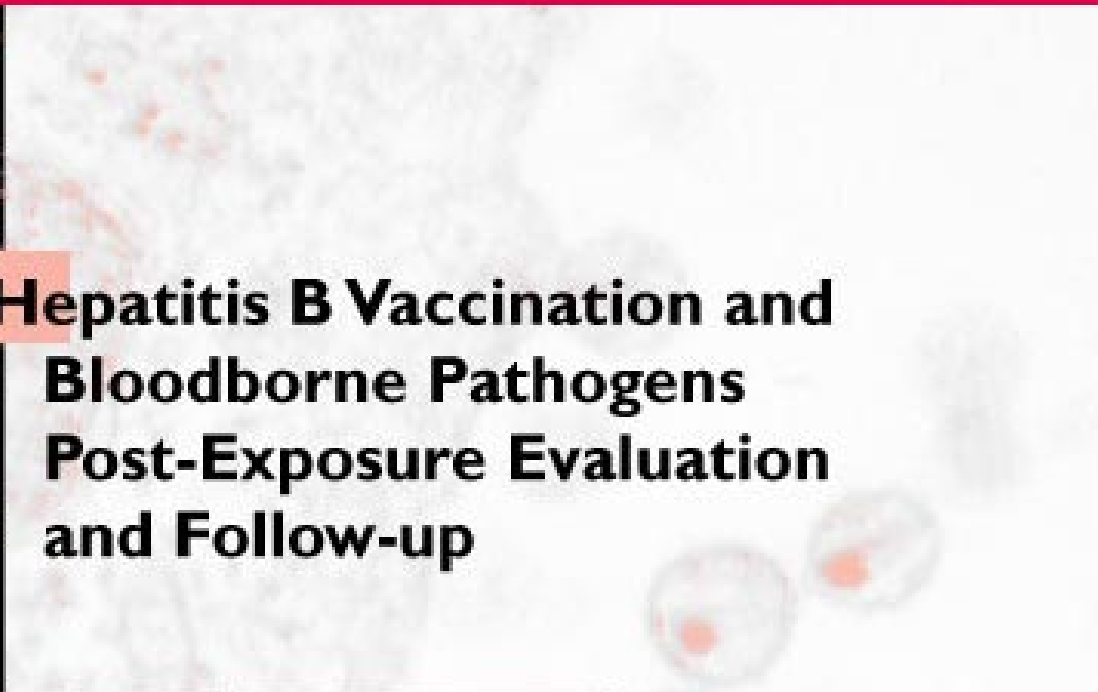



Gowns, Aprons, and Other Protective Body Clothing

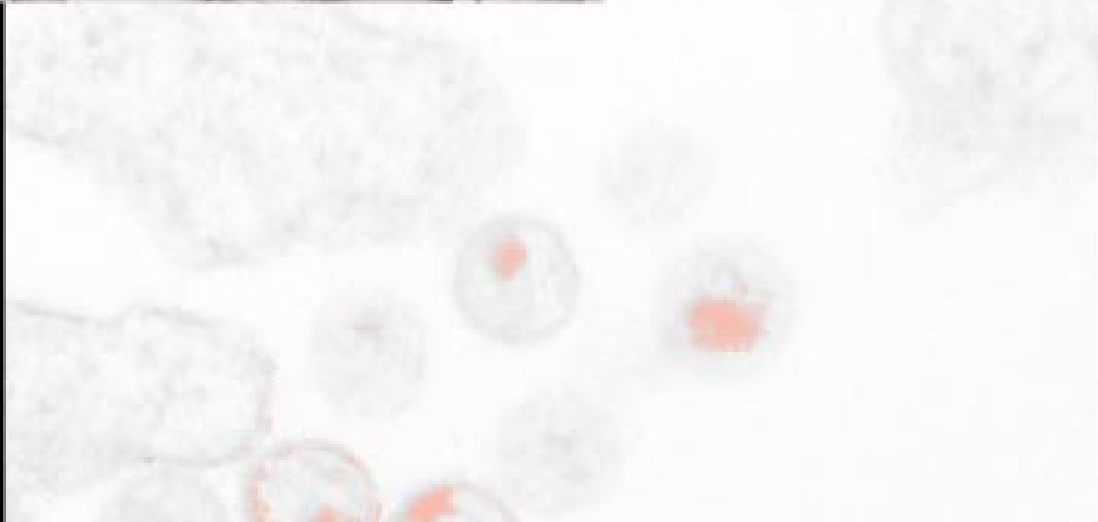
Employees are required to wear appropriate protective clothing (e.g., gowns, aprons, lab coats, clinic jackets, or similar outer garments, etc.) in situations where there is occupational exposure. The type of protective clothing selected and used and the characteristics are based upon the task and the degree of occupational exposure anticipated. In addition, employees are required to wear surgical caps or hoods and shoe covers or boots when gross contamination can be reasonably anticipated (e.g., autopsies or orthopedic surgery). These requirements are in addition to the provisions of δ CCR 3383, “Body Protection.”



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Hepatitis B Vaccination and Bloodborne Pathogens Post-Exposure Evaluation and Follow-up





Hepatitis B Vaccination Series

The hepatitis B vaccine and vaccination series are made available to all employees who have occupational exposure to bloodborne pathogens. We strongly encourage our employees to be vaccinated. We recognize that all employees with occupational exposure to blood or OPIM are at risk of contracting hepatitis B (HBV). HBV is a serious, life-threatening disease that can cause jaundice, nausea, fever, and abdominal pain. Approximately 5–10% of patients with the disease develop chronic infections that increase the risk of death from active hepatitis, cirrhosis of the liver, and liver cancer.

Hepatitis B can be prevented by using a vaccine. Therefore maintenance of immunity in employees is an essential part of our prevention and infection control program. Optimal use of immunizing agents (i.e., the hepatitis B vaccination series and hepatitis B immune globulin [HBIG]) protects the health of our employees and their families and patients from the disease.

The hepatitis B vaccination is made available to employees after they receive training about the vaccination and within ten working days of their initial work assignment. Our organization follows the most current recommendations of the Centers for Disease Control and Prevention's (CDC's) *Morbidity and Mortality Report* (MMWR) for the immunization of employees. (Subscriptions are available free of charge at www.cdc.gov/subscribe.html.) Employee participation in a prescreening program is *not* a prerequisite for receiving the hepatitis B vaccination series. The series is made available unless:

- The employee previously received the complete hepatitis B vaccination series; or
- Anti-body testing has revealed the employee is immune; or

- The vaccination series is contraindicated for medical reasons.



Serological Testing

An important component of our hepatitis vaccination program is post-vaccination serological testing. This testing is provided at no cost to our employees one or two months following completion of the three-dose hepatitis vaccination series. This is done to ensure that protective antibodies to hepatitis B surface antigen (HBsAg) have developed. In the absence of an adequate antibody response, employees are strongly encouraged to complete a second three-dose vaccine series followed by serological retesting or an evaluation for positive HBsAg. Employees who still do not have adequate antibody responses following the second three-dose vaccine series and are HBsAg-negative, are informed that they may be considered susceptible to HBV infection. They are counseled on the precautions needed to prevent HBV infection and the need for prophylactic administration of HBIG (hepatitis B immune globulin) within 24 hours of an occupational exposure.



Declining the Hepatitis B Vaccination Series

Our organization *does not* make accepting the hepatitis B vaccination series a condition of employment. If an employee with occupational exposure initially declines the hepatitis B vaccination series and at a later time decides to accept it, we will make it available. Each employee who declines the hepatitis B vaccination series is required to sign the following waiver.

Employee Declination of Hepatitis B Vaccination

I understand that due to my occupational exposure to blood or other potentially infectious material (OPIM), I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine at no charge. However, I decline the hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If I continue to have occupational exposure to blood or OPIM and wish to be vaccinated with hepatitis B vaccine in the future, I can receive the vaccination series at no charge.

Employee signature: _____ Date: _____

 Make copies as needed



Post-Exposure Evaluation and Follow-up

Occupational exposure to blood or OPIM requires *timely and appropriate* post-exposure intervention. Prior to the initiation of treatment with post-exposure prophylactic (PEP) drugs, our organization *verifies* that the treatment is in accordance with the most current recommendations of the Centers for Disease Control and Prevention's (CDC) weekly publication, the *Morbidity and Mortality Report (MMWR)*. We make prearrangements to ensure that within three to four hours of an exposure incident, the exposed employee(s) receives the following:

- Confidential medical evaluations with qualified physicians*
- Lab tests conducted by accredited laboratories
- Treatment and post-exposure PEP drugs when appropriate (e.g., antiretroviral agents, HBIG [hepatitis B immune globulin], the hepatitis B vaccination series, and other drugs)

We also make immediately available to the exposed employee(s):

- Counseling
- Follow-up
- Other appropriate services

These prearrangements include keeping a seven-day supply of PEP regimens on-site or linking to off-site providers (e.g., pharmacies) to supply those drugs on a 24-hour basis. Our prearrangements are verified periodically to ensure that the necessary medications, qualified professionals, and other services can be provided in a timely manner.

* To provide post-exposure interventions our organization chooses licensed health care professionals familiar with evaluations and treatment protocols as recommended by the Centers for Disease Control and Prevention.

Our organization ensures that post-exposure evaluation and follow-up are:

- Made available at no cost to our employees at a reasonable time and place
- Performed by or under the supervision of a licensed physician or another licensed health care professional
- Kept current according to the recommendations of the *MMWR* (A subscription is available at www.cdc.gov/subscribe.html.)

Physicians or other health care providers from our organization may provide post-exposure evaluation and follow-up to the exposed employee(s). If our organization acts as the evaluating health care professional for the exposed employee(s), all medical information about the employee is restricted to our medical department or office. To comply with § CCR 5193, this medical information is not discussed or revealed to supervisors, personnel representatives, or other health care professionals who do not need the information. In addition, if our organization acts as the evaluating health care professional, we advise the employee(s) after an exposure incident of *the right to refuse consent to post-exposure evaluation and follow-up from our organization*. If the employee does not consent to these services from our organization, we make immediately available to the employee(s) a confidential medical evaluation and follow-up from a health care professional outside our organization.

For skin or mucous membrane exposure (✓)

- Estimated volume of material (in milliliters) _____
- Duration of contact _____
- Condition of skin (chapped, abraded, or intact) _____

Exposure from: (✓)

- Splash/splatter/spray/touching/etc. _____
- Contaminated sharp/item/device _____
- Other _____

Other relevant information:

4. Description of sharps or other devices involved (including type, brand, and safety feature[s]):

Safety feature(s) on sharps/devices (✓):

- Activated _____ Deactivated _____
- Ineffective _____ Defective _____

Comments on safety feature: _____

5. Identification and documentation of the source individual

Our organization identifies and documents the source individual unless it is *not* feasible or is prohibited by state or local law.

Source Individual Not Identified

Why source individual was not identified:

If pre-exposure samples of blood or OPIM are available from an unidentified source individual, our organization tests those available samples for HBV, HCV, and HIV infectivity.

<i>Sample Type</i>	<i>Test Date</i>	<i>Test Results</i>

Source Individual Identified

The source individual is the person who is the source of the blood or OPIM involved in an exposure incident. Procedures for source individuals who consent to testing and those who do not give consent are described below.

Consent Obtained from the Source Individual

Testing of the source individual’s blood for HBV, HCV, and HIV infectivity is performed as soon as feasible and after his or her consent is obtained. For HIV infectivity testing, our organization obtains consent from the source individual (or his or her authorized legal representative) in the form of a “Voluntary Informed Written Consent.” If the source individual is known to be already infected with HBV, HCV, or HIV, testing to determine his or her infectivity status is *not* repeated.

Results of the source individual’s testing are made available to the exposed employee. The exposed employee is informed of applicable laws and regulations concerning disclosure of the identity and the infectious status of the source individual. Where applicable, source individuals (or their authorized legal representative) are informed that their sample(s) will be tested and the results documented. The testing of samples is subject to the provisions of the California *Health and Safety Code* sections 121130 through 121140 and other laws.

Consent Not Obtained (or Required) from the Source Individual

A source individual may refuse to give consent, and *no pre-exposure* sample(s) (i.e., samples collected from the source individual *before* the exposure incident occurred) may be available. In such situations, our organization documents that legally required consent could not be obtained and no samples are tested.

If consent cannot be obtained (and is not required by law) and *pre-exposure samples of blood or OPIM are available*, our organization tests those samples for HBV, HCV, and HIV infectivity.

6. Collection and testing of the exposed employee’s blood

Our organization collects and tests the exposed employee’s blood for HBV, HCV, and HIV serological status as soon as is feasible and after his or her consent is obtained. If the exposed employee consents to baseline blood collection but does not give consent *at that time* for HIV serologic testing, the sample is preserved for at least 90 days. If the employee decides, within 90 days of the exposure incident, to have the baseline sample tested for HIV serological status, the testing is conducted as soon as is feasible. Additional samples of blood will be collected and tested, and the provisions for post-exposure prophylaxis when medically indicated are made available as recommended by the U.S. Public Health Service (in the CDC *MMWR* Recommendations and Reports: “Public Health Service Guidelines for the Management of Health-Care Worker Exposures to HIV and Recommendations for Postexposure Prophylaxis,” May 15, 1998, Vol. 47, No. RR-07). We consult CDC at www.cdc.gov/epo/mmwr for current recommendations.



Information Provided to the Health Care Professional

The health care professional responsible for the exposed employee's hepatitis B vaccination series is provided a copy of 8 CCR 5193, "Bloodborne Pathogens." In addition, we ensure that the health care professional who evaluates the employee after the occurrence of the occupational exposure incident has the following information:

- A description of the exposed employee's duties as they relate to the exposure incident
- Documentation of the route(s) of exposure and circumstances under which the exposure occurred (Please refer to the booklet *Exposure Control Plan for Bloodborne Pathogens*.)
- Results of the source individual's blood testing, if available
- A copy of 8 CCR 5193, "Bloodborne Pathogens"
- All medical records relevant to the appropriate treatment of the exposed employee, including:
 - Hepatitis B series vaccination status and all vaccination dates
 - Medical records regarding the employee's ability to receive the vaccination (e.g., information on whether the complete hepatitis B vaccination series was already administered, anti-body testing revealed immunity, or the vaccination was contraindicated for medical reasons).

Health Care Professional's Written Opinion



Our organization obtains a copy of the evaluating health care professional's written opinion within 15 days of the completion of the medical evaluation. A copy of this written opinion is provided to the employee involved in the exposure incident. The health care professional's written opinion is limited to:

- Whether the hepatitis B vaccination series is indicated and the exposed employee has already received such vaccinations
- Post-exposure evaluation and follow-up (i.e., informing the employee about the results of the evaluation and any medical conditions resulting from the exposure to blood or OPIM requiring further evaluation or treatment)

All other findings or diagnoses remain confidential and are not included in the written opinion.

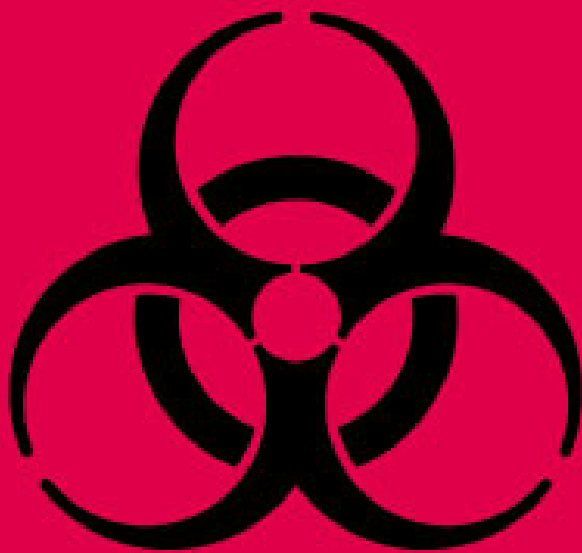


Counseling



Post-exposure counseling is provided to the employee after an exposure incident, if appropriate. Counseling by a qualified counselor is made available to the employee regardless of his or her decision to accept serological testing. A qualified counselor may include the employee's supervisor, a physician administering treatment to the exposed employee, or any other individual with appropriate training. A component of the counseling includes the *MMWR* recommendations from the Centers for Disease Control and Prevention (CDC). (A subscription to *MMWR* is available at www.cdc.gov/subscribe.html.) Those recommendations cover the prevention and transmission of bloodborne infections (including HIV, HBV, and HCV) and other relevant topics.

Communication of Hazards to Employees



Warning Labels



Warning labels are affixed to containers of regulated waste, refrigerators and freezers containing blood or OPIM, and other containers used to store, transport, or ship blood or OPIM. The warning labels are either an integral part of the containers or are affixed as close as is feasible to the containers by string, wire, or adhesive (or other methods) to prevent their loss or unintentional removal. The warning labels (1) are predominantly fluorescent orange or orange-red; (2) have lettering and symbols in contrasting colors; and (3) have the following words:



BIOHAZARD (with the international biohazard symbol)

or in the case of regulated waste

BIOHAZARDOUS WASTE or **SHARPS WASTE**

Labeling requirements are discussed on the following pages:

Containers	<i>Page</i>
Contaminated sharps	41
Disposal of regulated wastes	42
Specimens	44
Contaminated equipment	46
Laundry	51





Alternatives to Warning Labels

Warning labels (as described in pages 41–51) are not required for the following types of containers:

1. Bags or containers that *do not* contain sharps or other types of regulated waste
2. Containers of blood, blood components, or blood products that are labeled as to their contents and that have been released for transfusion or other clinical uses
3. Individual containers of blood or OPIM that are placed in labeled containers during storage, transport, shipment, or disposal

Information and Training



All employees (including part-time and temporary employees) with occupational exposure in our organization participate in a training program that is provided at no cost during working hours. The training materials used are appropriate in content and vocabulary to the educational and literacy levels and are conveyed in the language of our employees. The training materials clearly state the objectives of the training, including those of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), if applicable. Trainers are knowledgeable in the subject matter covered by the training program as it relates to our workplace. All employees have an opportunity for interactive questions and answers with the person(s) conducting the training. If we use computerized training, it is our policy to arrange for a person knowledgeable about the training material to be available to answer questions.



Training Program Elements

Our training program includes information and explanations of at least the following:

- Epidemiology, symptoms, and modes of transmission of bloodborne diseases
- Exposure control plan we have implemented and how to obtain a copy of the written plan
- Appropriate methods for recognizing tasks and activities that may involve exposure to blood or OPIM
- Use and limitations of methods that will prevent or reduce exposures, including appropriate engineering, administrative or work practice controls, and personal protective equipment (PPE)

- The basis for selection of PPE
- Types, proper use, location, removal, handling, decontamination, and disposal of PPE
- Hepatitis B vaccination series, including its efficacy, safety, method of administration, benefits, and the fact that the vaccination will be offered to employees free of charge
- Appropriate actions to take and persons to contact in an emergency involving blood or OPIM
- Procedure to follow if an exposure incident occurs, including the:
 - Method of reporting the incident
 - Medical follow-up that will be made available
 - Procedure for recording the incident in the sharps injury log
- Post-exposure evaluation and follow-up that will be made available to employees
- Signs, labels, and/or color codings that are used

In addition to the above-mentioned information, we provide to all employees a copy of 8 CCR 5193, “Bloodborne Pathogens,” and an explanation of its content.



Frequency of Training

Training is provided at the time of employees’ initial assignment (to tasks in which occupational exposure may occur) and at least annually thereafter (i.e., within one year of their previous training). Additional training, limited to addressing the new exposures created, is provided to the employee whose occupational exposure is affected by:

- Introduction of new engineering, administrative, or work practice controls
- Changes or modifications in existing tasks or procedures
- Institution of new tasks or procedures

For employees who received training about bloodborne pathogens *in the year preceding* July 1, 1999 (i.e., the effective date of 8 CCR 5193, “Bloodborne Pathogens”), additional training is provided *only on those provisions of the new standard that were not covered by the employees’ previous training.*

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Recordkeeping





Recordkeeping

Our organization establishes and maintains an accurate record of each employee with occupational exposure, including medical records, training records, and a sharps injury log, if applicable.



Medical Records

Employee medical records are kept confidential and are not disclosed or reported to any person within or outside our workplace unless the subject employee has given his or her express written consent (except as required by 8 CCR 5193, “Bloodborne Pathogens,” or other applicable laws).

Medical records include the employee’s name, Social Security number, and a copy of the employee’s:

- Hepatitis B series vaccination status and all vaccination dates
- Reports of serological testing
- Documentation regarding the ability to receive the hepatitis B vaccination series, including whether:
 - The complete hepatitis B vaccination series was already given; or
 - Anti-body testing revealed immunity; or
 - The vaccination was contraindicated for medical reasons.
- Results from examinations, medical testing, and follow-up procedures
- Information provided to the health care professional following an exposure incident (see page 64)
- The health care professional’s written post-exposure evaluation (see page 65)

Medical records are maintained for at least the duration of the individual’s employment plus 30 years.



Training Records

Training records include the employee’s name and job title and:

- Dates of the training sessions
- A summary of the training sessions
- Names and qualifications of persons conducting the training

Training records are maintained for three years from the date on which the training began.



Sharps Injury Log Records

The Sharps Injury Log contains the information specified in the booklet *Exposure Control Plan for Bloodborne Pathogens*. The log is maintained for five years from the date that the exposure incident occurred.



Availability of Records

The records noted below are provided upon request to the following individuals and agencies for examination and copying.

Type of Record	Provided to
Medical	Subject employee and person(s) having the written consent of the subject employee
Training	Our employees and their representative(s)
Sharps Injury Log	Department of Health and Human Services, our employees, and their representative(s)
All records	Chief of Cal/OSHA and NIOSH



Transfer of Records

If our organization ceases to do business and there is no successor employer to receive and retain records for the prescribed periods, we will:

- Notify NIOSH at least three months prior to their disposal; and
- Transmit the records to NIOSH, if required by NIOSH to do so, within the three-month period.



Access to Employee Exposure and Medical Records

All records are established, maintained on-site, made available to our employees, and transferred in accord with 8 CCR 3204, "Access to Employee Exposure and Medical Records."

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The background of the slide is a composite of two microscopic images. The left side is a dark-field image showing several cells with bright, glowing orange-red spots, likely representing fluorescently labeled organelles or proteins. The right side is a bright-field image of a similar cell population, with the same orange-red spots appearing as distinct, bright red or orange inclusions within the cells. The overall composition is split vertically, with the dark-field image on the left and the bright-field image on the right.

Resources

Resources

This section supplies sources of information on preventing bloodborne pathogens exposure and definitions of regulated waste. Information on topics related to reducing or preventing bloodborne pathogens exposures may be obtained from a wide variety of sources. The list of sources below is *not* exhaustive and does not include all sources that may provide useful information. Inclusion on the list is not an endorsement of any particular source. Examples of useful informational sources are as follows:



Web Sites

EPINet <www.hsc.virginia.edu/epinet>

California Department of Industrial Relations, Division of Occupational Safety and Health (DOSH), Bloodborne Pathogens Regulation, 8 CCR 5193 <www.dir.ca.gov/title8/5193.html>

Frequently Asked Questions About the Bloodborne Pathogens Standard, 8 CCR <www.dir.ca.gov/DOSH/BloodborneFAQ.html>

National Antimicrobial Information Network, Oregon State University and the U.S. Environmental Protection Agency <<http://ace.orst.edu/info/nain/index.htm>>

National Center for Biotechnology Information (NCBI) <www.ncbi.nlm.nih.gov/entrez/query.fcgi>

National Institute of Occupational Safety and Health (NIOSH), U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC) publications <www.cdc.gov/niosh/publist.html>

National Library of Medicine, MEDLINEplus <www.nlm.nih.gov/medlineplus/>

U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), Blood-borne Pathogens <www.osha-slc.gov/SLTC/bloodbornepathogens/index.html>



Scientific and Professional Publications

Journals

Advances in Exposure Prevention, the International Health Care Worker Research and Resource Center at the University of Virginia <www.med.virginia.edu/>, (804) 924-5159

American Association of Occupational Health Nurses Journal, the American Association of Occupational Health Nurses (AAOHN) <www.slackinc.com/allied/aaohn/aaohhome.html>, (856) 848-1000

American Journal of Infection Control, the Association for Professionals in Infection Control and Epidemiology, Inc. (APIC) <www.apic.org/ajic/>, (800) 453-4351

American Journal of Nursing, the American Nurses Association <www.nursingcenter.com>

AWHP's Worksite Health Journal, the Association for Worksite Health Promotion (AWHP) <www.awhp.org/pages/rscsresources.html>, (847) 480-9574

Canadian Journal of Infection Control, the Community and Hospital Infection Control <www.chica.org/journal.html>

Health Devices, ECRI <www.healthcare.ecri.org>, (610) 825-6000

Hospital Employee Health, American Health Consultants <www.ahcpub.com>, (800) 688-2421

Infection Control and Hospital Epidemiology, the Society for Healthcare Epidemiology of America <www.slackinc.com>, (856) 848-1000

International Orthopaedics, the Société Internationale de Chirurgie Orthopedique et de Traumatologie (SICOT) <www.springer.de>, (800) 777-4643

Journal of the American Medical Association (JAMA), the American Medical Association <<http://pubs.ama-assn.org>>, (800) 262-3450

Journal of the California Dental Association, the California Dental Association <www.cda.org>, (916) 443-0505

Journal of Health Care Safety, Compliance and Infection Control, Prime National Publishing Corporation <www.alzheimersjournal.com/pno5000.html>, (781) 899-2702

Journal of Occupational Health, the Japan Society for Occupational Health <<http://joh.med.uoeh-u.ac.jp>>

The Journal of Emergency Medicine, the National Medical Society <www.elsevier.com>, (888) 437-4636

Journal of Hospital Infection, the Hospital Infection Society <www.harcourt-international.com/journals/jhin>, (877) 839-7126

Journal of Infectious Diseases, the Infectious Diseases Society of America <www.journals.uchicago.edu>, (773) 753-3347

Journal of Occupational and Environmental Medicine (JOEM), the American College of Occupational and Environmental Medicine (ACOEM) <www.acoem.org/pubs/pub2.htm>, (800) 638-3030

Morbidity and Mortality Weekly Report (MMWR), Centers for Disease Control and Prevention (CDC), U.S. Department of Health and Human Services, Public Health Practice Program Office <www.cdc.gov/subscribe.html>, (800) 843-6356

New England Journal of Medicine, the Massachusetts Medical Society <www.nejm.org>, (617) 734-9800

Nurseweek <www.nurseweek.com>

Nursing Economics <www.ncbi.nlm.nih.gov/entrez/query.fcgi>, (609) 256-2300

Nursing Management <www.springnet.com>, (800) 950-0879

Nursing 2000 <www.springnet.com>, (800) 879-0498

Reflections <www.ncbi.nlm.nih.gov/entrez/query.fcgi>, (317) 634-8171

RN <www.ncbi.nlm.nih.gov/entrez/query.fcgi>, (201) 358-7200

Surgical Clinics of North America <www.wbsaunders.com>, (215) 238-7800

Booklets

The booklets identified with the * contain checklists, evaluation forms, or other types of “tools” that can be used in the testing of new engineering controls.

Cal/OSHA Compliance Guide to Bloodborne/Sharps Injury Prevention Regulations Preventing Exposure to Blood and Other Potentially Infectious Materials, Heaton Publications Inc., Albertville, Alabama. E-mail: sales@heaton.org, (800)221-2469

Cal/OSHA Frequently Asked Questions About the Bloodborne Pathogens Standard, 8 CCR, Department of Industrial Relations, Cal/OSHA Consultation Service <[www.dir.ca.gov/DOSH/Bloodborne FAQ.html](http://www.dir.ca.gov/DOSH/Bloodborne_FAQ.html)>, (800) 963-9424

California List of Needleless Systems and Needles With Engineered Sharps Injury Protection, Department of Health Services (DHS), Occupational Health Branch (OHB), Sharps Injury Prevention Program (SHARPS) <www.dhs.ca.gov/ohb/SHARPS/Default/htm>, (510) 622-4300

**California Guide to Preventing Sharps Injuries: How to Comply with Cal/OSHA Standards*, the California Healthcare Association, <www.calhealth.org>, (800) 494-2001 or (916) 443-7401

**Scenarios for the Evaluation of Medical Devices*, developed by the Training for the Development of Innovative Control Technologies (TDICT), San Francisco, California <www.tdict.org>, (415) 206-8000

**SEIU's Guide to Preventing Needlestick Injuries*, Service Employees International Union (SEIU), AFL-CIO, CLC, Washington, D.C. <www.seiu.org>, (202) 898-3481

Fact Sheets

Blood-borne Facts, U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) <www.osha-slc.gov/OshDoc/toc_fact.html>

Safety Needles & Needleless Systems, Safety and Health Fact Sheet, Department of Industrial Relations, Cal/OSHA Consultation Service <[www.dir.ca.gov/DOSH/Bloodborne FAQ.html](http://www.dir.ca.gov/DOSH/Bloodborne_FAQ.html)>, (800) 963-9424



Organizations

Association of Occupational Health Professionals (AOHP)
E-mail: aohp1@aol.com, (800) 362-4347

Association for periOperative Registered Nurses (AORN) <www.aorn.org>, (800) 755-2676

Association for Professionals in Infection Control <www.apic.org>, (202) 789-1899

California Healthcare Association <www.calhealth.org>, (916) 443-7401

Emergency Care Research Institute (ECRI) <www.ecri.org>, (610) 825-6000

International Healthcare Worker Safety Center <www.hsc.virginia.edu/epinet>, (804) 924-5159

Service Employees International Union (SEIU), AFL-CIO, CLC <www.seiu.org>, (202) 898-3200

Training for the Development of Innovative Control Technologies (TDICT) Project
<www.tdict.org>, E-mail: TDICTPROJ@aol.com, (415) 206-8000



Governmental Agencies

Department of Health Services (DHS), Occupational Health Branch (OHB), Sharps Injury Prevention Program (SHARPS) <www.ohb.org/sharps/htm>, (510) 622-4300

Department of Health Services (DHS), Medical Waste Management Program, Sharps Injury Prevention Program (SHARPS). E-mail: jmcgurk@dhs.ca.gov, (916) 323-3023

Department of Industrial Relations, Division of Occupational Safety and Health (DOSH) (415) 703-5100 and Cal/OSHA Consultation Service (800) 963-9424 <www.dir.ca.gov>

National Institute of Occupational Safety and Health (NIOSH), U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC) <www.cdc.gov/niosh/homepage.html>, (800) 356-4674, (513) 533-8328 (for calls from outside the U.S.)

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC) <www.cdc.gov>. (800) 311-3435

U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), Directorate of Technical Support, Office of Occupational Health Nursing <www.osha.gov>

U.S. Food and Drug Administration <www.fda.gov>, (888) 463-6332



Other Sources

Manufacturers and distributors (e.g., contact the customer service departments, request brochures and product samples)

New technology exhibits

Colleagues who have been involved in product selection for similar tasks and procedures

Product fairs—Frontline employees should be invited to product fairs. Products may be screened at those events using the general criteria worksheet on pages 14–17. This approach can help screen out those devices with readily identifiable problems (e.g., awkward to handle, visual obstructions, safety issues).

Professional associations or centers where products are evaluated



Definitions of Regulated Waste

Regulated waste means waste that includes the following:

- Liquid or semi-liquid blood
- Other potentially infectious materials (OPIM), including:
 - Human body fluids
 - i. Semen, vaginal secretions, and other types of fluids (e.g., cerebrospinal, synovial, pleural, pericardial, peritoneal, or amniotic)
 - ii. Human body fluids visibly contaminated with blood, such as saliva or vomitus
 - iii. Human body fluids in situations in which it is difficult or impossible to differentiate between body fluids during an emergency
 - Any unfixed tissue or organ (other than intact skin) from a human (living or dead)
 - Any of the following, if known or reasonably likely to contain or be infected with HIV, hepatitis B virus, or hepatitis C virus:
 - i. Cell, tissue, or organ cultures from humans or experimental animals
 - ii. Blood, organs, or other tissues from experimental animals
 - iii. Culture medium or other solutions
- Contaminated items that contain liquid or semi-liquid blood or are caked with dried blood or OPIM or are capable of releasing these materials when handled or compressed
- Contaminated sharps
- Pathological and microbiological wastes containing blood or OPIM

Medical waste (as regulated by the Medical Waste Management Act, Division 104, Part 14 of the California *Health and Safety Code*, sections 117600 through 118360) means waste (including trauma scene waste) that meets requirements 1 and 2 noted below:

1. The waste is generated or produced as a result of any of the following:
 - The diagnosis, treatment, or immunization of human beings or animals or research pertaining to any of these activities
 - The production or testing of biologicals (i.e., medicinal preparations made from living organisms and their products, including but not limited to serums, vaccines, antigens, and anti-toxins)
 - The accumulation of properly contained home-generated sharps waste that is brought by a patient, member of the patient's family, or a person authorized by the enforcement agency, to a point of consolidation approved by the enforcement agency

2. The waste is either a sharps waste or a biohazardous waste. *Sharps waste* is defined as any device having acute rigid corners, edges, or protuberances capable of cutting or piercing, including but not limited to all the following:
- Hypodermic needles, hypodermic needles with syringes, blades, needles with attached tubing, syringes contaminated with biohazardous waste, acupuncture needles, and root canal files
 - Broken glass items, such as Pasteur pipettes and blood vials contaminated with biohazardous waste
 - Any item capable of cutting or piercing that is contaminated with trauma scene waste

Biohazardous waste is defined as:

- Laboratory waste, including but not limited to all the following:
 - i. Human or animal specimen cultures from medical and pathology laboratories
 - ii. Cultures and stocks of infectious agents from research and industrial laboratories
 - iii. Wastes from the production of bacteria, viruses, spores, discarded live and attenuated vaccines used in human health care or research, discarded animal vaccines, including brucellosis and contagious ecthyma as identified by the Department of Health Services, and culture dishes and devices used to transfer, inoculate, and mix cultures.
- Human surgery specimens or tissues removed at surgery or autopsy that are suspected by the attending physician and surgeon or dentist of being contaminated with infectious agents known to be contagious to humans.
- Animal parts, tissues, fluids, or carcasses suspected by the attending veterinarian of being contaminated with infectious agents known to be contagious to humans.
- Waste, which at the point of transport from the generator’s site, at the point of disposal, or thereafter, contains recognizable fluid blood, fluid blood products, containers or equipment containing blood that is fluid, or blood from animals known to be infected with diseases that are highly communicable to humans.
- Waste containing discarded materials contaminated with excretion, exudate, or secretions from humans or animals that are required to be isolated by the infection control staff, the attending physician and surgeon, the attending veterinarian, or the local health officer, to protect others from highly communicable diseases or diseases of animals that are highly communicable to humans.
- Waste that is hazardous only because it comprises human surgery specimens or tissues fixed in formaldehyde or other fixatives or only because the waste is contaminated through contact with, or having previously contained, chemotherapeutic agents, including but not limited to gloves, disposable gowns, towels, and intravenous solution bags and attached tubing that is empty.

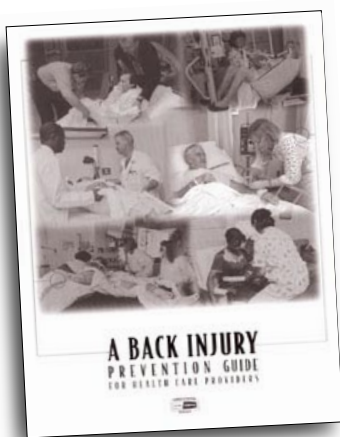
A container or inner liner removed from a container that previously contained a chemotherapeutic agent is considered empty if it has been emptied by the generator as much as possible using methods commonly employed to remove waste or material so that (1) no material can be poured or drained out when the container or inner liner is held in any orientation, including but not limited to tilted or inverted; or (2) no material or waste remains can be feasibly removed by scraping.
- Waste that is hazardous only because it comprises pharmaceuticals (i.e., over-the-counter human or veterinary drugs, including but not limited to a drug as defined in Section 109925 of the United States Food, Drug, and Cosmetic Act, as amended in 21 USC Section 321[g][1]).



Cal/OSHA Publications



Cal/OSHA Consultation Service has a series of recent publications designed to assist employers and employees in California. To obtain one or more of these publications, just call 1-800-963-9424.

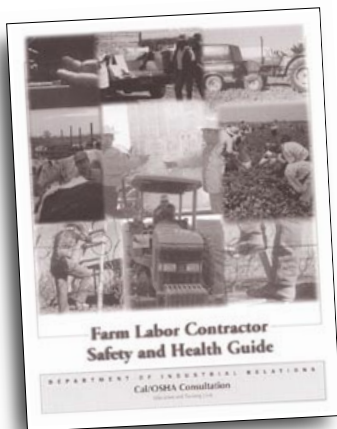


A Back Injury Prevention Guide for Health Care Providers

This booklet is designed to provide general guidance for employers and employees about how to prevent back injury as a result of lifting and moving patients and residents. It may be useful in settings such as hospitals, nursing homes, assisted-living facilities, board and care homes, and during the provision of home health care. Some of the benefits of back injury prevention include decreased injuries and costs, as well as increased efficiency and employee morale. The practical suggestions in this guide are focused on orderlies, attendants, nurses, nursing assistants, and others who actually lift and move patients and residents. The information was developed with the help of individuals and institutions in the health care field that have found effective ways to prevent back injuries.

This guide discusses how to:

- Understand the scope of the back injury problem.
- Analyze the workplace to find work activities, equipment, and related factors that may contribute to the development of back injuries.
- Identify and implement improvement options.
- Evaluate the results.



Farm Labor Contractor Safety and Health Guide

This document was developed with the help of farm labor contractors (FLCs) and agricultural safety and health professionals to provide general guidance for employers and employees about preventing work-related injuries and illnesses. *The biggest challenge is to give this vital information to all your supervisors and workers and to ensure that they clearly understand the job hazards before starting a new crop or task.* Information described in this guide also applies to growers who directly hire their own crews. Each section, including the checklists and fact sheets, can be used individually. Fact sheets and checklists may be reproduced as handouts and distributed during employee training.

This guide has six sections that address farm labor contractors' main concerns:

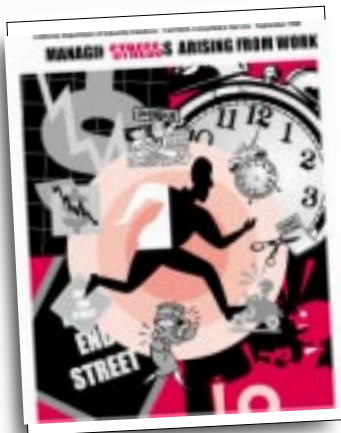
- Section 1. Background Information
- Section 2. The Required Injury and Illness Prevention Program (IIPP)
- Section 3. Worker Training
- Section 4. Employers' Obligations Under the Law—The Cal/OSHA Program
- Section 5. Fact Sheets and Checklists
- Section 6. Other Available Assistance



Confined Space Guide

This *Confined Space Guide* has been developed to explain the hazards of confined space work and to assist employers in establishing and maintaining an effective confined space program. By implementing such a program, both employers and employees will be able to:

- Recognize, evaluate, and control confined space hazards.
- Save lives and protect employees from job-related injuries and illnesses.
- Promote safe and effective work practices.
- Reduce preventable workers' compensation losses.
- Comply with the law.



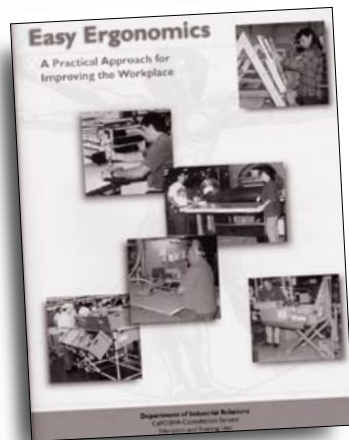
Managing Stress Arising from Work

The focus of this brochure is *harmful* stress that arises from work situations, as opposed to stress that is generated by an employee's personal life.

Harmful workplace stress has been associated with:

- Jobs that demand a lot from the employees while allowing them little control over how the job is performed
- Work environments that are unsafe and/or uncomfortable
- Organizational practices that exclude employee participation or input.

This brochure offers suggestions for reducing the potentially harmful effects of work-related stress on employers and employees.



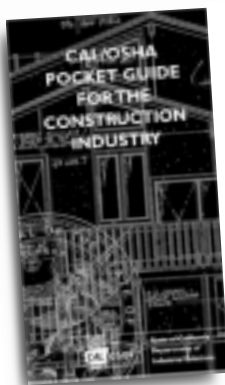
Easy Ergonomics

A Practical Approach for Improving the Workplace

This booklet offers a simple, hands-on approach to workplace ergonomics that can work regardless of the size of your organization. It is designed for owners, supervisors, and employees as they work toward improving their workplace.

The booklet is divided into four sections:

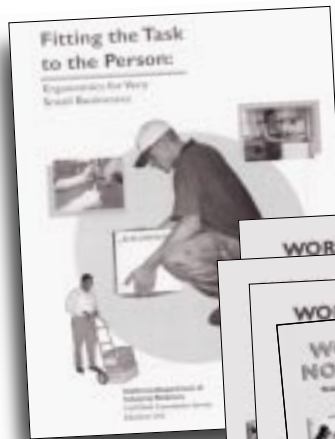
- I. How Ergonomics Can Help
- II. Ergonomics and Your Workplace
- III. Improving Your Workplace
- IV. Resources



Cal/OSHA Pocket Guide for the Construction Industry

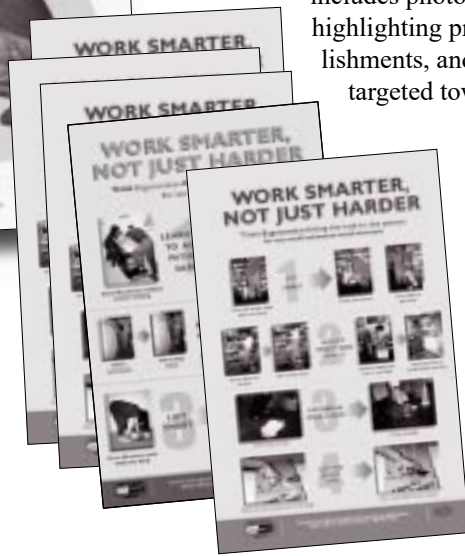
This publication was prepared by Cal/OSHA for use by workers, employers, supervisors, job stewards, and safety personnel. It is meant to serve as a quick field reference. It summarizes selected safety standards from the *California Code of Regulations, Title 8*, that pertain to the construction industry.

Title 8 of the *California Code of Regulations* was developed to ensure a safe and healthful work environment for the California workforce by setting minimum standards for workplace safety and health.



Fitting the Task to the Person: Ergonomics for Very Small Businesses

This booklet is designed to be useful to all employees and is particularly targeted to owners and employees of very small businesses of less than ten employees. It includes photographs of people in actual working situations, a poster highlighting problem tasks common to small wholesale/retail establishments, and improvement suggestions. Five additional posters targeted toward small businesses in auto repair, restaurants, cosmetology, and dental and medical offices can be ordered. The booklet and posters provide general guidelines about ergonomics and safety awareness, recognizing early warning signs of musculoskeletal disorders, and a simple outline on the process of ergonomic improvements.



Guide to the California Hazard Communication Regulation

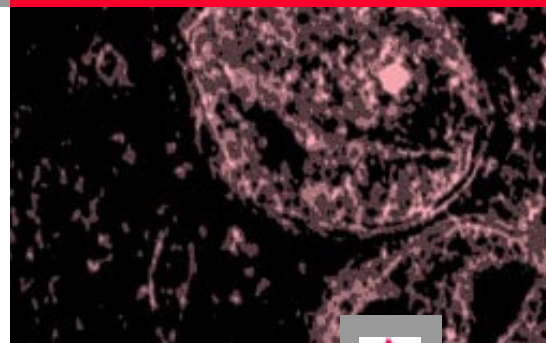
This guide is designed to help employers and employees understand the requirements of the hazard communication regulation by providing a simplified and clear overview of the major program elements.

For easy reference, this guide is separated into seven main sections:

- I. Scope
- II. Hazard Determination
- III. Material Safety Data Sheets (MSDSs)
- IV. Labels and Other Forms of Warning
- V. Written Hazard Communication Program
- VI. Employee Information and Training
- VII. Trade Secret Protection



We Want to Hear From You



Cal/OSHA values and welcomes your comments about our booklet. We want to provide the best service possible to employers and employees in California. To give Cal/OSHA feedback about this booklet, please fax this form to the Education Unit at (916) 574-2532, e-mail us at Dosheducation@hq.dir.ca.gov, or mail your comments to:

Education Unit
Cal/OSHA Consultation Service
2211 Park Towne Circle, Suite 4
Sacramento, CA 95825

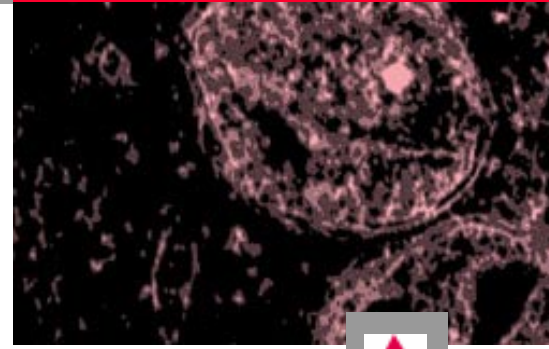
	Yes	No	Comments
1. Is the section "Identifying and Selecting Appropriate and Currently Available Engineering Controls" helpful?			
– Are there any additional steps in this process that should be included?			
– Does the information on the categories of engineering controls provide a good overview of the various devices?			
– Do you have any useful ideas that you would like to share with us?			
– Are the Screening Worksheets for Medical and Dental Products useful? (How could they be improved?)			
2. Do you have any other specific suggestions on how the section "Identifying and Selecting Appropriate and Currently Available Engineering Controls" can be improved? (If so, please give the page numbers to apply your suggestions.)			



	Yes	No	Comments
3. Is the content of the worksheets in the “Methods of Compliance” section useful in addressing bloodborne pathogens issues in your workplace?			
– Which worksheets are the most helpful? (For each worksheet, please indicate why it was helpful, the title, and page number[s].)			
– Which worksheets need to be improved? (For each worksheet, please indicate specific suggestions, the title of the worksheet, and page number[s].)			
4. Is the section “Hepatitis B Vaccination and Bloodborne Pathogens Post-Exposure Evaluation and Follow-up” clear?			
– Are there any issues that should be expanded or clarified?			
– Is the “Confidential Medical Evaluation and Follow-up” form (pages 61–63) helpful? What specific modifications would you make to this form to make it more useful?			
5. Are the elements included in the section “Information and Training” helpful to your organization’s bloodborne pathogens training program?			
6. Are any parts of the booklet unclear or confusing? What changes would make this content better? (Please list the page numbers and the specific topics.)			
7. Are there important issues not addressed or that should be presented more fully?			
8. Has the information contained in this booklet encouraged you to evaluate and improve your Bloodborne Pathogens Exposure Control Plan?			
9. Has the information contained in this booklet effected any other changes in your workplace regarding bloodborne pathogens issues?			
10. Do you have any other comments? (When referring to specific text or sections, please indicate page numbers.)			
11. Do you have a bloodborne pathogens success story to share with us? (If so, please provide your name and telephone number.)			

WE THANK YOU FOR YOUR IMPORTANT PARTICIPATION!

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Note: The titles and locations of the persons included in this list were current at the time this booklet was developed.

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Cal/OSHA Consultation Programs

Toll-free number 1-800-963-9424 • Internet: www.dir.ca.gov

On-site Assistance Program Area Offices



**Your call will in no way trigger an inspection by
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