

# California Institute of Technology

## Bloodborne Pathogens Exposure Control Plan



Caltech Environmental Health and Safety Office  
1200 E. California Blvd., M/C 25-6  
Pasadena, CA 91125  
Phone: 626-395-6727  
Fax: 626-577-6028  
Email: [safety@caltech.edu](mailto:safety@caltech.edu)  
Website: [www.safety.caltech.edu](http://www.safety.caltech.edu)

2024

**THIS PAGE INTENTIONALLY LEFT BLANK**

# TABLE OF CONTENTS

<b>CHAPTER I: INTRODUCTION</b> .....	<b>4</b>
<b>CHAPTER II: PROGRAM ADMINISTRATION</b> .....	<b>4</b>
<b>CHAPTER III: EXPOSURE DETERMINATION</b> .....	<b>5</b>
<b>A. EXPOSURE DETERMINATION FOR RESEARCH GROUPS</b> .....	<b>5</b>
<b>B. EXPOSURE DETERMINATION FOR SUPPORT GROUPS</b> .....	<b>5</b>
<b>C. HIV Research Facility</b> .....	<b>6</b>
<b>CHAPTER IV: METHODS OF IMPLEMENTATION AND CONTROL</b> .....	<b>6</b>
<b>A. UNIVERSAL PRECAUTIONS</b> .....	<b>6</b>
<b>B. EXPOSURE CONTROL PLAN</b> .....	<b>6</b>
<b>C. ENGINEERING CONTROLS AND WORK PRACTICES</b> .....	<b>6</b>
1. Work Practices .....	7
2. Engineering Controls.....	7
3. Personal Protective Equipment (PPE) .....	8
4. Waste Management and Housekeeping .....	9
5. Labels and Communication .....	9
<b>CHAPTER V: HEPATITIS B VACCINATION</b> .....	<b>10</b>
<b>CHAPTER VI: POST-EXPOSURE MANAGEMENT</b> .....	<b>10</b>
<b>A. POST-EXPOSURE RESPONSE</b> .....	<b>10</b>
1. For a Needle Stick or a Cut from a Contaminated Sharp .....	10
2. For a Splash in the Eye.....	11
3. For Contamination on the Body.....	11
<b>B. OBTAINING MEDICAL ATTENTION AND REPORTING INSTRUCTIONS</b> .....	<b>11</b>
<b>C. PROCEDURES FOR EVALUATING THE CIRCUMSTANCES SURROUNDING AN EXPOSURE INCIDENT</b> .....	<b>11</b>
<b>CHAPTER VII: EMPLOYEE TRAINING</b> .....	<b>12</b>
<b>CHAPTER VIII: RECORDKEEPING</b> .....	<b>12</b>
<b>A. BBP TRAINING RECORDS</b> .....	<b>12</b>
<b>B. MEDICAL RECORDS</b> .....	<b>13</b>
<b>C. OSHA RECORDKEEPING</b> .....	<b>13</b>
<b>References</b> .....	<b>13</b>

## CHAPTER I: INTRODUCTION

The **California Institute of Technology (Caltech)** is committed to conducting work activities in a manner that promotes the safety and health of faculty, staff, postdoctoral scholars, students, and visitors and complies with all applicable occupational health and safety regulations. The following Exposure Control Plan (ECP) is provided to eliminate or minimize occupational exposure to Bloodborne Pathogens (BBP) in accordance with OSHA Standard 29 CFR 1910.1030 (1). *The California Code of Regulations, Title 8, Section 5139, Bloodborne Pathogen Standard* (2) applies to all Caltech employees who may have occupational exposure to blood or other potentially infectious materials (OPIM). Because research activities in Caltech laboratories, as well as activities supporting the research effort and student life, may expose Caltech employees to microorganisms that cause disease in humans, this plan is designed to mitigate the risk of occupational exposure to BBP and OPIM. This plan sets forth procedures, control measures, and equipment designed to eliminate or minimize risk from exposure to the Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), Human Immunodeficiency Virus (HIV), and other Bloodborne Pathogens.

The ECP is a key document to assist Caltech members in implementing and ensuring compliance with the Standard. This ECP includes:

- Program administration
- Determination of exposure risk
- HIV Research Facility operation
- Implementation of various methods of exposure control, including
  - Universal precautions
  - Engineering and workplace controls
  - Personal Protective Equipment
  - Housekeeping
- Hepatitis B vaccination program
- Post-exposure management
- Communication of hazards and training
- Recordkeeping

## CHAPTER II: PROGRAM ADMINISTRATION

The Caltech Environmental Health and Safety (EH&S) Office and the Institute Biosafety Officer (BSO) are responsible for implementation of the ECP.

The Caltech EH&S Office and BSO will maintain, review, and update the ECP at least annually and whenever necessary to include new or modified tasks and procedures. Contact Info: [safety@caltech.edu](mailto:safety@caltech.edu); 626-395-6727 (x6727).

Caltech Student Wellness Services (SWS) offers a variety of health care and health promotion services to the Caltech student population. The Caltech Bloodborne pathogens ECP will provide a general description of the exposure control practices in place to protect SWS employees against exposure to BBPs. Additionally, the Medical Director, or designee for SWS, maintains a detailed Infection Prevention Plan (3) that describes SWS operations and practices to prevent the spread of infectious agents. For more information contact [StudentWellness@caltech.edu](mailto:StudentWellness@caltech.edu), 626-395-6393 (x6393)

All Caltech employees who have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in the Caltech ECP.

Each Caltech Division, Department, Laboratory, and Business Unit will provide and maintain all necessary personal protective equipment (PPE), engineering controls (e.g., sharps containers, annually certified Biosafety Cabinet), labels, and biohazardous waste containers as required by the Standard. Caltech Divisions, Departments, Laboratories and Business Units will ensure adequate supplies of equipment are readily available in the appropriate size(s). Employees can contact their direct supervisors for more

information.

The EH&S Office, BSO and/or Directors of Business Units are responsible for training and documentation of training. The EH&S Office and the BSO are responsible for making the ECP available to Caltech personnel as well as OSHA and NIOSH representatives. Contact info: [safety@caltech.edu](mailto:safety@caltech.edu); 626-395-6727 (x6727).

## CHAPTER III: EXPOSURE DETERMINATION

Caltech is a world-renowned science and engineering Institute whose academic divisions' research and education focus on Biology and Biological Engineering; Chemistry and Chemical Engineering; Engineering and Applied Science; Geological and Planetary Sciences; Humanities and Social Sciences; and Physics, Mathematics, and Astronomy. For exposure determination, employees are sorted in two main categories: employees engaged in research activities in research laboratory settings (e.g., professors, research technicians or post-doctoral fellows) and employees involved in the support of research activities and student life who will have sporadic access to laboratory settings (e.g., custodial staff) or who might provide first aid and/or medical care to Caltech personnel (e.g., Campus Security staff or Student Wellness Services staff).

For all groups, exposure determination is made through distinct risk assessments performed by EH&S Safety Engineers, the BSO and/or OLAR Director, and the SWS Medical Director.

### A. EXPOSURE DETERMINATION FOR RESEARCH GROUPS

Risk assessment and exposure determination for employees within research groups is performed in part by the Institutional Biosafety Committee (IBC). The IBC, with the support of the BSO, reviews and approves research activities involving sample collection from human subjects and the use of human blood and OPIM as defined by OSHA. All employees registered on an IBC protocol for the use of these materials are considered at risk for potential exposure to Bloodborne Pathogens.

The following are examples of job classifications and activities and/or procedures with the potential of occupational exposure.

*Please note that—as research activities and procedures are always evolving—this list is not exhaustive, and the IBC provides ongoing assessments to keep abreast of the exposure risks for employees in the laboratories (<http://ibc.caltech.edu/>).*

Job Title (Examples)	Tasks/Procedures (Examples)
OLAR employees	Animal husbandry
Professor	Work with infectious HIV
Research Technician	Extract immune cells from human blood Handling of NHP tissues
Postdoctoral Fellow	Culture human cells
Lab Manager	Extract DNA from human tissues

### B. EXPOSURE DETERMINATION FOR SUPPORT GROUPS

Risk assessment and exposure determination for employees within business units supporting research is performed by their supervisor or by the department head with the assistance of EH&S Safety Engineers and/or the BSO.

The following is a list of job classifications wherein some or all employees have a potential for occupational exposure, as well as tasks and procedures where occupational exposure may occur.

<b>Job Title</b>	<b>Business Unit/Department</b>	<b>Task/Procedures</b>
Athletic Trainers Lifeguards	Athletic Center	Provide first aid and routine treatment of athletic wounds
Special Response Officers (SRO)	Facilities – Campus Security	Provide first aid and coordinate emergency response on campus
Blood clean-up technicians	Facilities – Campus Custodians	Clean emergency scene when blood is present on campus
	Facilities – Student Housing Custodians	Clean emergency scene when blood is present in Student Housing
Spill response team member	Facilities – EH&S	Clean spills of blood or OPIM
Physician, Nurse Practitioner, Physician Assistant, Medical Assistant*	Caltech Student Wellness Services	Primary medical care for Caltech Students

\*The Caltech Student Wellness Services operates under a dedicated and specific Infection Control Program that includes details about Bloodborne Pathogens Exposure risk for their clinical operation. For more information on this program, SWS Medical Director at [StudentWellness@caltech.edu](mailto:StudentWellness@caltech.edu).

### **C. HIV Research Facility**

Caltech Biology and Bioengineering Division operates a laboratory dedicated to research involving small scale culture of live HIV. The facility is located in the Beckman Institute room 225. A dedicated facility user manual documents all work, and emergency procedures related to working with live HIV in this facility. A specific HIV facility training program is required to ensure employees operating in this laboratory have demonstrated proficiency in standard microbiological practices and the safe handling of human pathogens.

## **CHAPTER IV: METHODS OF IMPLEMENTATION AND CONTROL**

### **A. UNIVERSAL PRECAUTIONS**

All Employees must use Universal Precautions. Universal Precautions is an approach to infection control to treat all human blood, human body fluids, and other potentially infectious materials (OPIM) as if they were known to be infectious for HIV, HBV, and other Bloodborne Pathogens.

### **B. EXPOSURE CONTROL PLAN**

Employees covered by the Bloodborne Pathogens Standard receive an explanation of this ECP during their initial training session and annual refresher training. Employees can review this plan any time during their work shifts by contacting the EH&S Office. Employee requests for a hard copy of the ECP will be completed within 15 business days upon receipt of such request.

SWS employees are trained on this ECP and their specific Infection Prevention Plan and can access both documents within 15 business days of request.

### **C. ENGINEERING CONTROLS AND WORK PRACTICES**

Work practice controls and engineering controls are used to prevent or minimize exposure to Bloodborne Pathogens. These practices and controls may be adapted for specific laboratory settings, clinical operations, or patients triage areas. Specific practices are described in the specific plans and SOPs maintained by the various operations.

General work practices and engineering controls used are listed below.

## 1. Work Practices

- Hand washing
  - Personnel must wash their hands immediately or as soon as possible after working with or potential exposure to blood or OPIM.
  - This should include the use of soap and water and/or waterless hand sanitation. Note: hand washing using soap and water is the most efficient method to prevent the spread of infectious diseases.
- Eating, drinking, applying cosmetics or lip balm, smoking, or handling contact lenses is strictly prohibited in clinical, patient care or biological research areas for all personnel; this includes all wet laboratory spaces operating at Biosafety Level 1 and above.
- Storage of food for human consumption in clinics or laboratory refrigerators, including cold rooms, is prohibited. This applies to all wet laboratory spaces operating at Biosafety Level 1 and above.
- Personal item storage is prohibited in areas where potentially infectious materials are present. All personal items should be kept in offices or desk areas and not on laboratory benchtops nor patient care areas.
- Procedures involving blood and OPIM should only be conducted by properly trained personnel and in a manner that minimizes splashing, spraying, aerosolizing, and/or generating droplets of potentially infectious materials.
- Mouth pipetting or suctioning is strictly prohibited.
- Specimens of blood or OPIM are to be placed in leak-proof primary containers during collection, handling, processing, and storage. For transport, proper labelling, absorbent material, and a secondary leak-proof container should be added.
- Equipment must be routinely maintained according to a maintenance schedule and routinely decontaminated.
- Equipment must be decontaminated before servicing or shipping.
- Broken glassware should never be picked up by hand.
  - Tongs or a brush with dustpan are to be used when handling broken glassware.
- The use of sharps such as needles, syringes, razor blades, etc. should be eliminated or minimized whenever possible. After use, syringe-needle units must be disposed of, at the point of use, in a dedicated sharps container that is closable, puncture-resistant, and leak-proof without removing, bending, or recapping the needles. Each department is responsible for supplying appropriate sharps containers which are available for purchase in Caltech stockrooms or online.

## 2. Engineering Controls

### *Biosafety Cabinets*

Research activities and processing of clinical samples are to be performed in Biosafety Cabinets whenever there is a high potential of splashing or aerosol release of human material.

Biosafety Cabinets are to be checked by laboratory personnel for proper functioning each time they are used. All laboratory personnel should be trained on the proper use and operation of a Biosafety Cabinet.

Biosafety Cabinets must be certified according to the National Sanitation Foundation / American National Standards Institute (NSF/ANSI) 49 Standard annually, when newly installed, or when moved, and the inspection record should be posted on the Biosafety Cabinet (certification sticker). Certification is performed by approved Caltech vendors operating according to the NSF/ANSI 49 Standard.

### *Needles and Non-Needle Sharps*

When appropriate, the use of sharps should be eliminated or minimized. If sharps must be used, the following precautions are to be implemented:

- Needles and other sharps will not be bent, recapped, removed, sheared, or purposely broken.
  - Needles will never be recapped using two hands. If a needle must absolutely be recapped, a one-handed method or a mechanical device (e.g., forceps or hemostats) should be used.

- Contaminated sharps must be placed in puncture-resistant sharps containers labeled with the biohazard sign.
  - Biohazard sharps containers must not be overfilled. When the container is 2/3 full as indicated by the “full line” on the container, employees will close it and contact the EH&S Office for pick up by completing the online request form in the [Facilities Service Requests](#) portal.
- Sharps with engineered sharps injury protection should be used when working with human material, unless engineered sharps injury protection is not available. Note: to determine if there is an alternative device engineered to prevent sharp injuries, do a web search and/or consult with the BSO, OLAR staff/veterinarian (for animal procedures & surgeries), and/or the safety engineer. Caltech stock rooms may also have safe sharps alternatives that you can sample.
- Blades and other cutting tools should be engineered with safe and self-retracting blades whenever possible.

For employees within the research groups, Caltech identifies the need for changes in engineering controls and work practices through regular EH&S and BSO reviews of laboratory spaces. Laboratories handling human-derived material or OPIM operate at Biosafety Level 2 in accordance with the *Biosafety in Microbiological and Biomedical Laboratories (BMBL) 6th Edition* (4), published by the U.S. Department of Health and Human Services. New procedures or products are evaluated in consultation with the IBC and the BSO.

For employees within the support groups, Caltech identifies the need for changes in engineering controls and work practices through regular EH&S inspections and assessments. New procedures or products are evaluated by EH&S Safety Engineers, the BSO and/or the unit supervisors.

For medical personnel (nurses and medical assistants) at the Student Wellness Services, changes in engineering controls and equipment are assessed by the SWS Medical Director.

### 3. Personal Protective Equipment (PPE)

PPE is provided to Caltech employees at the appropriate size and at no cost to them. Training in the use of the appropriate PPE for specific tasks or procedures is provided by their supervisors, by the EH&S Office, or by the BSO, depending on the task and the training requirement.

Examples of the types of PPE available to employees are:

- Nitrile gloves
- Latex gloves
- Safety glasses
- Safety goggles
- Face masks
- Face shields
- N95 respirators (must be fit tested and enrolled in the respiratory protection program)
  - Completing the [Respiratory Medical Evaluation](#) materials
  - [Respiratory Protection Program](#)
- Lab coats
- Disposable gowns

PPE is located in each research laboratory (BSL2-designated areas) or patient room at the Student Wellness Services. PPE is also available in an on-site EH&S storage unit for EH&S Safety Engineer response purposes. Exact locations for specific PPE may be obtained through lab supervisors, EH&S personnel, or employee Supervisors.

All employees using PPE must observe the following precautions:

- Wear appropriate gloves when it is reasonably anticipated that there may be hand contact with blood or OPIM and when handling or touching contaminated or potentially contaminated items or surfaces.

- Never wash or decontaminate disposable gloves for reuse – nitrile and latex gloves are one-time use only.
- Utility gloves may be decontaminated for reuse if their integrity is not compromised; discard utility gloves if they show signs of cracking, peeling, tearing, puncturing, or deterioration.
- Wear appropriate face and eye protection when splashes, sprays, splatters, or droplets of blood or OPIM pose a hazard to the eyes, nose, or mouth.
- Remove PPE immediately after it becomes contaminated and before leaving the work area.
- Discard used PPE in a biohazard/biomedical red bin and red bag waste containers.
- Always wash hands immediately, or as soon as feasible, after removing gloves and other PPE.

Personnel engaged in research activities with live HIV should don and doff specialized PPE according to the laboratory SOP as reviewed and approved by the IBC and the BSO.

#### **4. Waste Management and Housekeeping**

Regulated waste is to be placed in containers which are closable, constructed to contain all contents and prevent leakage, appropriately labeled and/or color-coded, and closed prior to removal to prevent spillage or protrusion of contents during handling.

- Bloodborne Pathogen or BSL2 solid waste is placed in a solid red bin lined with red bags that are labeled with the universal biohazard symbol and the ASTM markings required by the California Department of Public Health (5,6). These containers should not be used for sharps or other materials that can easily puncture the plastic liner.
- Sharps (needles and non-needle objects that could readily puncture or cut the skin) are discarded in dedicated biohazard sharps containers, which are closeable, puncture-resistant, and leak-proof. Each department is responsible for supplying appropriate sharps containers.

All contaminated items are to be discarded immediately or as soon as possible in appropriate containers at the point of use.

Containers (bins and pans) are to be cleaned and decontaminated as soon as feasible after visible contamination. A solution of freshly made 10% bleach is an appropriate disinfectant for surfaces and containers in a research laboratory setting. Clinical settings can also use EPA-registered disinfectant(s).

Broken glassware that may be contaminated is only to be picked up using mechanical means such as tongs or a brush and dustpan.

Lab coats should be laundered on a regular basis. Each department is responsible for the organization of the laundry service to be used. If a lab coat is visibly contaminated with human blood or OPIM, it is highly recommended to discard it in the biohazardous solid waste container. Disposable gowns must be discarded in biohazardous waste containers. Employees must not take their gowns and launder them at home.

Work practices should include regular, beginning of the day, and end of the day surface decontamination for patient rooms/treatment areas, research benches, and biosafety cabinets used to handle human-derived material. An appropriate disinfectant such as a solution of freshly made 10% bleach or Accelerated Hydrogen Peroxide solution should be used. Clinical settings can also use an EPA-registered disinfectant.

A portable (tabletop) steam sterilizer is used in the Student Wellness Services clinic for the sterilization of small instruments (e.g., forceps, scissors) used in minimally to non-invasive procedures. The ability of the sterilizer to reach physical parameters necessary to achieve sterilization should be monitored by mechanical, chemical, and biological indicators.

Cleaning tools used in blood emergency scene cleanup by support groups are to be decontaminated chemically with 10% bleach after use. In case of heavy contamination, it is highly recommended to discard the tools in a biohazardous waste container of the appropriate size.

#### **5. Labels and Communication**

The following labeling methods are used at Caltech to communicate the presence of hazards in the work environment:

- Research laboratory doors are labeled with biohazard signs indicating the use of human blood or OPIM inside the laboratory space. Labels include access and emergency contact information.
- Waste containers (red bin and sharps containers) have all visible sides marked with a biohazard label.
- Labeling methods for the Student Wellness Services are described in detail in their Infection Control Program.

EH&S is responsible for ensuring that warning labels are affixed and/or red bags are used as required for regulated waste. Employees are to notify the EH&S Office (626-395-6727 or x6727) if they discover regulated waste containers, refrigerators containing human blood or OPIM, contaminated equipment, etc. without proper labels or liners. Labs are responsible for the purchase of related sharps/waste containers, the EH&S Office provides the red bags.

## CHAPTER V: HEPATITIS B VACCINATION

Hepatitis B vaccination is offered, free of charge, to all Caltech employees who have occupational risk of exposure to bloodborne pathogens, including designated first-aid providers.

EH&S and the BSO will provide training to Caltech employees on Hepatitis B vaccinations that addresses safety, benefits, efficacy, methods of administration, and availability of the vaccine. The Hepatitis B vaccination series is available at no cost after initial employee training and within 10 days of initial assignment to all Caltech employees identified in the exposure determination section of this document.

Vaccination is encouraged unless 1) documentation exists that the employee has previously received the series, 2) antibody testing reveals that the employee is immune, or 3) medical evaluation shows that vaccination is contraindicated.

If an employee declines the vaccination, the employee must sign a [declination form](#). Employees who decline may request and obtain the vaccination at a later date during their employment at no cost to them. Hepatitis B vaccination offers record is kept on file in the EH&S Office.

Vaccination will be performed by the Caltech-contracted Occupational Health Provider:

8:00am-5:00pm: Concentra Urgent Care - 9350 Flair Dr., Unit 102, El Monte 91731 / 626.407.0300

Vaccination records are kept as confidential patient information by Concentra under HIPAA regulations.

## CHAPTER VI: POST-EXPOSURE MANAGEMENT

Caltech operates under an [Injury and Illness Prevention Program \(IIPP\)](#), and the EH&S Office investigates and follows up on incidents and accidents in conjunction with all necessary reporting and follow-up requirements.

Caltech ensures that the health care provider responsible for the occupational health program for employees is properly informed about research and support activity taking place at Caltech as it relates to potential Bloodborne Pathogens exposure, Hepatitis B vaccination program, post-exposure evaluation, and follow-up.

### A. POST-EXPOSURE RESPONSE

Personnel accidentally exposed via ingestion, skin puncture, or obvious inhalation of an infectious agent should immediately receive or self-perform appropriate first aid. Personnel are trained on the following first-aid procedures:

#### 1. For a Needle Stick or a Cut from a Contaminated Sharp

- Immediately wash the area with soap and water or an appropriate disinfectant; and
- Treat the area with appropriate disinfectant (alcohol wipes, iodine pads, hydrogen peroxide).

## 2. For a Splash in the Eye

- Immediately flush the eye with temperate water from the nearest eyewash station (tested monthly) for 15 minutes. If an eyewash station is not available, use temperate water from the faucet or an emergency eye saline solution for 15 minutes.
- Hold the eyelid open to ensure effective rinsing.

## 3. For Contamination on the Body

- Remove contaminated clothing, shoes, jewelry, etc.
- Immediately flood exposed skin with water and wash with soap and water at the nearest safety shower. If a safety shower is not available, use a faucet.

## B. OBTAINING MEDICAL ATTENTION AND REPORTING INSTRUCTIONS

Immediately following first-aid procedures, the exposed individual will be advised to seek medical attention to determine available treatment and/or post-exposure prophylaxis, and follow-up by an Occupational Health Care Physician, adhering to the following procedure:

Call security at x5000 or 626-395-5000 and indicate the nature of the incident.

1. Security will call 911 if paramedics are necessary and will escort them to the campus location.
2. When an injured employee needs a ride to the clinic and is unable to drive themselves, [Concentra](#) offers free Lift/Uber pick-ups. For after-hours, employees can receive a ride from Campus Security to an Emergency Room.

### *Occupational Health Clinics*

Report to one of the following Occupational Health Clinics contracted by Caltech:

#### **Monday to Friday:**

8:00am-5:00pm: **Concentra Urgent Care** - 9350 Flair Dr., Unit 102, El Monte 91731 / 626.407.0300

*NOTE: There are numerous Concentra locations throughout Los Angeles. [Click](#) for list of Occupational Health Service locations and hours of operation.*

5pm-8:00am: **Huntington Memorial Hospital** 711 S. Fairmount Ave., Pasadena 91105 / 626.397.5000

#### **Weekends:**

Huntington Memorial Hospital (address/phone above)

In addition, all injuries, accidents, and/or exposures must be reported to the employee's Supervisor and the Caltech EH&S Office at 626-395-6727 or x6727 using the [Supervisors Injury Investigation Report](#), with the original copy provided to the Disability & Leave Administration Unit at Mail Code 170-84, within three working days after the incident.

Research Laboratories that use HIV or HIV-derived virus containing greater than ½ the HIV viral genome must review, post, and adhere to the HIV Exposure Response Procedure designed for the laboratory. Personnel exposed or potentially exposed to HIV or HIV pseudo virus will follow the posted procedures.

## C. PROCEDURES FOR EVALUATING THE CIRCUMSTANCES SURROUNDING AN EXPOSURE INCIDENT

EH&S and/or the BSO will review the circumstances of all exposure incidents to determine:

- Engineering controls in use at the time
- Work Practices followed
- Description of the device used (type/brand)
- PPE or protective clothing used at the time
- Location of the incident

- Procedure being performed when incident occurred
- Employee's training

The [Disability and Leave Administration Unit](#) at Caltech will record all percutaneous (through the skin) injuries from contaminated sharps in a Cal/OSHA Log 300 Form.

## CHAPTER VII: EMPLOYEE TRAINING

All Caltech employees who have potential occupational exposure to Bloodborne Pathogens receive initial and annual refresher training (in person or online).

Employees of the Student Wellness Services are trained by the Medical Director for the Center.

Employees of the Athletic Center are trained by the Assistant Director for Recreation.

All Caltech employees who have occupational exposure to Bloodborne Pathogens receive training on the epidemiology, symptoms, and transmission of Bloodborne Pathogens diseases. In addition, the training program covers, at a minimum, the following elements:

- An explanation of the OSHA Bloodborne Pathogens standard.
- An explanation of the ECP and how to obtain a copy.
- An explanation of methods to recognize tasks and other activities that may involve exposure to blood and OPIM, including what constitutes an exposure incident.
- An explanation of the use and limitations of engineering controls, work practices, and PPE.
- An explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE.
- An explanation of the basis for PPE selection.
- Information on the Hepatitis B vaccine, including information on its efficacy, safety, methods of administration, the benefits of being vaccinated, and that the vaccine will be offered free of charge.
- Information on the appropriate actions to take and people to contact in an emergency involving blood or OPIM.
- An explanation of the procedures to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.
- Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident.
- An explanation of the signs and labels and/or color coding required by the Standard and used at Caltech.
- An opportunity for interactive questions and answers with the person conducting the training session.

Training materials are available at the EH&S Office, at Student Wellness Services and at the Athletic Center.

## CHAPTER VIII: RECORDKEEPING

### A. BBP TRAINING RECORDS

BBP Training records are created for each employee. EH&S training documents are kept for at least three years.

The training records include:

- The date of training
- The name of the course (BBP)
- Completion status – attended/not attended
- The name, Caltech ID number of the person attending the training

EH&S employee training records are provided upon request to the employee or the employee's authorized representative within 15 business days. Such requests should be addressed to the EH&S Office at [safety.training@caltech.edu](mailto:safety.training@caltech.edu).

## B. MEDICAL RECORDS

Medical records are maintained for each employee with occupational exposure in accordance with section 3204 “Access to Employee Exposure and Medical Records.” Caltech contracted occupational health care providers are responsible for maintenance of requisite medical records. These confidential records are kept for at minimum the duration of employment plus 30 years.

Employee medical records are provided upon request to the employee or to anyone having written consent from the employee within 15 business days. Such requests should be sent to the Caltech contracted occupational health care provider directly.

## C. OSHA RECORDKEEPING

Exposure incidents require completion of a [Supervisors Injury Investigation Report](#). Once completed, email the form to [safety@caltech.edu](mailto:safety@caltech.edu) then return the original completed form to the Disability & Leave Administration Unit at Mail Code 170-84 within three working days after the incident. Exposure incidents are evaluated and recorded by the [Disability and Leave Administration Unit](#) using the Cal/OSHA Log 300 Form to determine if the case meets OSHA’s Recordkeeping Requirements (Title 8 Sections 14300–14300.48). All recorded incidents include at minimum:

- Date of injury
- Witness(es) to injury
- Department/work area where injury occurred
- Description/explanation of how injury occurred

This log is reviewed as part of the annual program evaluation and maintained for at least five years from the date the exposure incident occurred.

\* \* \*

## References

1. 1910.1030 - Bloodborne pathogens. | Occupational Safety and Health Administration [Internet]. [cited 2023 Dec 21]. Available from: <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030>
2. California Code of Regulations, Title 8, Section 5193. Bloodborne Pathogens. [Internet]. [cited 2023 Dec 21]. Available from: <https://www.dir.ca.gov/title8/5193.html>
3. Establishing an Effective Infection Prevention and Control Program in SNF [Internet]. [cited 2023 Dec 21]. Available from: [https://www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/SNF\\_EstablishingIC\\_Program.aspx](https://www.cdph.ca.gov/Programs/CHCQ/HAI/Pages/SNF_EstablishingIC_Program.aspx)
4. Biosafety in Microbiological and Biomedical Laboratories—6th Edition.
5. Medical Waste Management Program [Internet]. [cited 2023 Dec 21]. Available from: <https://www.cdph.ca.gov/Programs/CEH/DRSEM/Pages/EMB/MedicalWaste/MedicalWaste.aspx>
6. Horner T. Medical Waste Management Act 2017. 2017;