

NONAME Standard Operating Procedures		
SOP Title	Number	Version
Personal protective equipment for use in Non-human primate holding areas	230.01	1.0

**Introduction:** Monkeys (Non-human primates; NHP) are wild animals and, depending on the size, age, sex and species, can cause serious physical injury or infection through bites, scratches, spitting, needle-sticks, and passively by contact between contaminated fluids, tissues or equipment and broken or inflamed skin or oral or conjunctival mucous membranes.

**Purpose:** Provide guidelines for the use, availability and care of Personal Protective Equipment (PPE) at the NONAME Primate Center. This Standard operating procedure (SOP) does not discuss all possible hazardous conditions. Individuals are required to use sound judgment to determine the need for PPE when hazardous situations arise that may not be discussed in a SOP. Each of the categories of PPE is described along with common uses and limitations in an attempt to assist with making those judgments. Additional assistance is available from supervisors and the Center's Safety Office. NONAME Primate Center provides PPE at no cost to the employee. Supervisors are responsible for monitoring the use of PPE in their departments/labs.

The appropriate PPE is determined via risk assessment outlined in SOP 2.4

**Target Users:** Research staff, animal care technicians, facilities managers, veterinarians, veterinary technicians, and all other personnel entering non-human primate areas.

#### **Responsible Persons and Enforcement**

- All personnel working with or around NHPs are responsible for the implementation of this policy.
- Principal investigators, veterinarians, the Institutional Animal Care and Use Committee (IACUC), laboratory managers, and occupational health and safety officers will monitor compliance with this policy.
- Any person observing violation of this policy will report the incident to the IACUC.

#### **Equipment and SOP:**

1. Specific requirements for PPE will be posted outside all primate housing and procedure areas. These must be followed.
2. Employees shall wear PPE that is required for OSHA standard on human bloodborne pathogens (29 C.F.R. § 1910.1030).
3. Mandatory equipment for working in NHP housing rooms:
  - a. Face masks (surgical masks)
    - i. Several types of marks are available for use. • Ear loop • Cone shape
    - ii. Worn whenever entering an animal area or coming within 10 feet of outdoor enclosures. Masks are worn when there is a possibility of mucous membrane exposure. The mask needs to cover your nose and mouth.
    - iii. Facemask can be worn throughout the day as long as the integrity is not compromised. Facemasks are disposed of in the biohazard waste bins or containers.
  - b. Eye protection:
    - i. Downward face shields are required when working with macaques
    - ii. Safety glasses or goggles are required when working with other NHP species
      1. Goggles are the only eye protection that provides protection from splash hazards. Goggles are used whenever there is the potential for a hazardous eye splash. Goggles come in many styles.
      2. Goggles are required when there is a potential for an eye splash. Goggles are required eye protection in monkey areas when cleaning with

a hose or emptying pans. Goggles should fit securely around the eyes leaving no gaps between the goggles and the skin.

3. Goggles are reusable and are cleaned when contaminated in warm soapy water. Do not use abrasive detergents on goggles. Goggles are disposed of when their integrity is no longer intact. Fog fixer may help with fogging and is available from supervisors or the safety office.
4. Safety Glasses are used for protecting the eye from projectiles.
5. Safety Glasses should cover the entire eye with side shield and a brow shield. Safety glasses are not appropriate for splash protection and are not for use in NHP animal
6. Safety Glasses are reusable and are cleaned when contaminated in warm soapy water. Do not use abrasive detergents on safety glasses. Safety glasses are disposed of when their integrity is no longer intact.

**Warning:** eyeglasses, by themselves, are not sufficient protective eyewear.

c. Laboratory coats

- i. Primary barrier for skin protection. Coveralls are available as back up. Made of cotton polyester blend. Not fluid resistant or fluid repellent. May help protect the skin from scratches.
- ii. May be cloth or disposable but must be clean
- iii. Uniforms are worn with the correct name, sleeves down and shirt buttoned.
- iv. Replace the uniform when it becomes wet or soiled. Torn or damaged uniforms are not used. Soiled uniforms are not worn outside of animal areas i.e. meeting rooms, offices and lounge. Dirty uniforms are placed in the designed bins located in the locker room. Damaged uniforms are identified with a tag describing the problem and attached to the uniform. Uniforms do not leave the work place.

d. Shoe covers

- i. Protection for shoes. Prevents tracking hazards outside the contaminated area. Provides some fluid protection from spills.
- ii. Use over shoes or boots when entering animal areas. Covers are not necessary in animal areas when wearing designated work shoes. Shoe covers may be required in BSL-3 laboratories.
- iii. Shoe/boot covers are generally one time use only and are disposed of as biohazard waste.

e. Work Boots

- i. Work boots have steel toes to protect the foot from heavy objects falling or rolling on feet. Boots are chemical resistant, water repellent and provide protection during cleaning procedures.
- ii. Work boots are worn when duties require the use of chemicals and spraying such as non human primate (NHP) animal husbandry.
- iii. Work boots are replaced when their integrity is compromised (worn, torn, no longer keeps your feet dry). Work boots do not leave the work place. Spray boots clean before entering non-animal areas. Clean boots by brushing off gross contamination and spraying with soapy water.

f. Work Shoes

- i. Work shoes have steel toes and arch support.
- ii. Work shoes are worn when performing activities that have the potential for heavy objects rolling or falling on your feet, however, work shoes do not provide protection for chemical or fluid hazards.
- iii. Any gross contamination is brushed off shoes. Work shoes do not leave the work place.

- g. **Warning:** Open-toed shoes are dangerous in the animal room work environment because they expose the foot to traumatic injury and are a trip hazard if rapid movement is required.

- h. Gloves: The glove needs to match the hazard.
    - i. Gloves protect the hands from exposure to hazards such as fluids, chemicals, cuts or extreme temperatures. Cut resistant gloves provide varying degrees of protection from cuts and scratches.
    - ii. Latex, nitrile or poly vinyl chloride medical exam gloves are fluid repellent and are required when handling biohazards in animal and laboratory settings. They must be worn when entering any NHP room
    - iii. Cut resistant gloves such as Leather gloves are required for handling of small, conscious New World primates (e.g. squirrel monkeys, owl monkeys, marmosets, tamarins) Cut resistant gloves are required when working with awake unrestrained animals, handling NHP animal cages, cage pans and transfer boxes. Cut resistant gloves should be used when working with sharp objects that pose a cut or scratch risk such as cutting tissue with the cryostat. Cut resistant gloves are worn with fluid resistant (latex) gloves.
    - iv. In addition to medical exam gloves, kevlar protective lining gloves are recommended and will be made available to personnel handling, manipulating or injecting awake NHP.
  - i. Dedicated footwear is required for animal care staff and recommended for investigators and veterinary staff.

**Caution:** Animal care staff should not wear dedicated footwear home.
  - j. Hair covers are not required but strongly recommended.
  - k. Cut resistant sleeves
    - i. Cut resistant sleeves provide varying degrees of protection from cuts, scratches and animal bites to the arm.
    - ii. Cut resistant sleeves are required when working with awake unrestrained animals, handling NHP animal cages, cage pans and transfer boxes.
    - iii. Cut resistant sleeves may be worn for as long as their integrity remains intact. Check sleeves to make sure they are in good repair and fit your arm snugly.
  - l. Bouffant/surgical head cover
    - i. Barrier protection for the head, hair and scalp from chemical and biohazard contamination. Generally not fluid repellent.
    - ii. Wear when cleaning or spraying NHP animal areas. Scalp protection is required in Great Ape areas. Bouffants that completely cover the hat are required when wearing a hat that can not be decontaminated or disposed of on site.
    - iii. Bouffant/surgical head cover is generally one time use only and is disposed of as biohazard waste. Dispose of head covers when they become visibly contaminated or their integrity is compromised. Reusable head covers are changed daily or when visibly contaminated. Reusable head covers worn in animal areas are laundered on site.
4. Don PPE before entering room.
  5. Discard PPE after leaving animal room, if out of presence of the animal. Remove gloves last.
  6. Gloves and shoe covers should be removed and new pair donned when entering a different monkey room within the same facility.
  7. Employees with cutaneous lesions such as dermatitis, abrasions and lacerations shall report to a health care provider, such as the occupational health nurse, before working with animals to evaluate the need for additional PPE such as bio-occlusive dressings or assignment to a different task.
  8. Personal hygiene:
    - a. Frequent hand washing is the most important part of good personal hygiene.
    - b. Employees are required to wash hands after working with NHP in the holding room or elsewhere, especially before eating.
    - c. It is recommended that all employees working with NHP shower at the end of the workday before changing into street clothes.
  9. Training: All employees who will be working with primates will be trained by the facility supervisor, the NONAME trainer, or the facility veterinarian at the time of hire in the following:

- a. Safe work practices in animal care and use
- b. Risks associated with working with monkeys
- c. Herpes B virus transmission for employees working with macaque species
- d. Zoonosis training
- e. Standard operating procedures for PPE: How to put on, remove and dispose
- f. Limitations of PPE
- g. Injury reporting
- h. Continuing education will be provided as necessary

Reviewed by:	Review Date	Author	Approval Date
NONAME SOP Committee NHP Risk Assessment Committee		Valerie Pederson	