



TITLE: Personnel Protective Equipment (PPE) for Surgical Procedures with NHP

PURPOSE: To protect personnel from possible contamination from NHP and to protect the NHP from human contamination when entering a NHP room or for prepping a NHP for a surgical procedure.

REVIEW/REVISION: Permanent amendment/revisions to this SSP must be presented to the IACUC for review before implementation and should be developed by UAC, the Surgical Attending Veterinarian and PI together.

EFFECTIVE DATE: 1/27/05; **Revised/Re-Approved:** 2/24/05, 8/25/06, 11/2/06, November 1, 2007

PERSON(S) RESPONSIBLE: BSS Technicians, Surgical Attending Veterinarian(s), Research Personnel

POLICY:

All persons participating in any aspect of NHP surgery must wear Personnel Protection Equipment (PPE) as described below. Persons not properly attired are not allowed in prep, surgery, or recovery areas.

INITIATION OF PROCEDURE:

When preanesthetizing a NHP for a Surgery in the surgical area

MATERIALS REQUIRED:

- | | |
|--|---|
| PAPR (Powered Air Purifying Respirator) | Two pairs of biohazard gloves |
| Bonnet | <i>(Double gloving required during pre-op phase, optional during surgery)</i> |
| Surgical mask
<i>(tie or N95 only-must have closed sides)</i> | Tyvek boot covers |
| Beard Guard | Two pairs of plastic shoe covers |
| Fluid resistant isolation gown | Non-slip shoe covers |

PROCEDURES: It is expected that all individuals participating in surgery will already have changed into scrubs prior to donning PPE

1a). **Occupational Health and Risk Management recommend the use of the PAPR (Powered Air Purifying Respirators) during NHP surgeries.**

Personal protection equipment (PPE): while wearing a PAPR, put on materials in the following order:

- A. **Bonnet** - Place bonnet on head around forehead, under ears and below hair line in the back of the neck. Make sure all hair is tucked under the bonnet
- B. **Surgical mask** - Place a surgical mask (tie or N95) around your nose and mouth area and secure. As per Occupational Health and Risk Management representatives, the mask must not be open sided.
- C. **Fluid resistant isolation gown** - Insert arms into the arm holes of the gown and tie gown around neck and waist
- D. Put on **PAPR** per SOP#_____



- E. **Tyvek boot covers** - Place white Tyvek boot covers over shoes and secure using the ties and two sided tape strips provided
 - F. **Shoe coverings for entering a NHP room:** Booties - Place two pairs of plastic booties over Tyvek boot covers
 - G. **Shoe covers for entering NHP prep room 1236:** Non-skid shoe covers - place one pair of non-slip shoe covers over Tyvek boots covers
 - H. **Gloves** - Make a hole in the fluid resistant isolation gown at the end of each sleeve with your thumb and keep thumb in the hole. Place each glove over your hand and thumb. Pull the gloves over the sleeve of the gown to insure that wrists are not exposed. Double gloves must be used during pre-operative procedures.
- 1b). As per the request of an investigator, an alternative to the use of a **PAPR** has been reviewed and allowed by the IACUC although it has been noted that **Occupational Health and Risk Management do not approve or recommend this alternative method of PPE.**

When utilizing the alternative Personal protection equipment (PPE): put on materials in the following order:

- A. **Bonnet** - Place bonnet on head around forehead, under ears and below hair line in the back of the neck. Make sure all hair is tucked under the bonnet
- B. **Beard Guard** - A beard guard is placed over the bonnet and tied under the chin, covering the upper half of the forehead, the out half of the cheeks, the chin, and the neck. (This is to be utilized regardless of whether the individual opting for this alternative has a beard or not.)
- C. **Surgical mask** - Place a surgical mask (tie or N95) around your nose and mouth area and secure
As per Occupational Health and Risk Management representatives, the mask must not be open sided.

The upper edge of the surgical mask is taped with clean surgical tape to the face, to prevent the escape of exhaled air toward the eyes.

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- D. **Fluid resistant isolation gown** - Insert arms into the arm holes of the gown and tie gown around neck and waist
- E. **Safety Glasses** - Wrap-around safety glasses are placed over the eyes. Surgical tape can be used to secure the top of the glasses to the lower edge of the beard guard that covers the forehead.
(1) Surgical loupes/glasses may be used in lieu of regular safety glasses if required by the surgeon.
- F. **Tyvek boot covers** - Place white Tyvek boot covers over shoes and secure using the ties and two sided tape strips provided
- G. **Shoe coverings for entering a NHP room:** Booties - Place two pairs of plastic booties over Tyvek boot covers
- H. **Shoe covers for entering NHP prep room 1236:** Non-skid shoe covers - place one pair of non-slip shoe covers over Tyvek boots covers
- I. **Gloves** - Make a hole in the fluid resistant isolation gown at the end of each sleeve with your thumb and



keep thumb in the hole. Place each glove over your hand and thumb. Pull the gloves over the sleeve of the gown to insure that wrists are not exposed. Double gloves are required during the pre-operative procedures.

- J. **Face Shield** - During drilling, gas-sterilized face shields will be placed over the face of the surgeon and the assistants exposed to splash or aerosols.
 - (1) A suction device must also be utilized during the drilling procedures to evaluation aerosolized particulates.
2. When leaving NHP home room remove one pair of shoe covers and one pair of gloves. Proceed to NHP prep room 1236
3. When leaving the surgical area during or after a surgical procedure, remove PAPR (if applicable) per SOP#. Disinfect the PPE/PAPR per SOP #2111, Section 7. Remove bonnet, (beard guard if applicable) fluid resistant gown, mask, non-slip shoe covers and tyvek boot covers and place in biohazard trash. Remove both pairs of gloves and place in trash. Spray hands with disinfectant then wash and dry hands.

JUSTIFICATION:

The Institutional Animal Care and Use Committee (IACUC) determined that comprehensive individual Non-Human Primate Standard Surgical Practices (NHP-SSP) should be written for: Surgical Prep - This includes not only the actual pre-operative preparation of the animal, but also required prep for participants; Anesthesia Induction - Standard induction procedures should be described; Post-Operative Recovery - this should specify criteria for extubation as well as post-operative monitoring, placement of the animal, and provision for emergency care.

Authority line - During pre-op procedures and immediate post-operatively, until animal is able to sit upright, the Surgical Attending Veterinarian will be present and have decision making authority. The Surgical Attending Veterinarian may not be physically present in the room during surgery, but is on call. During surgery, the Surgeon is responsible for procedures going on in the surgical theater. Specific allocation of duties for each NHP-SSP will be determined at the pre-surgery conference and will be designated to the Surgical Attending Veterinarian, PI, BSS Clinical Staff, or Research staff.