

Title: Animal Acclimation	
SOP#: 702	Division: DPR
Category: Behavioral Management Services	Subcategory: General
Original Author(s): Rita Bellanca	Created On: 6/26/2009
Current Author: Rita Bellanca	Version approval date: 05/24/2018

Purpose, Scope and Background

To promote the acclimation of our laboratory primates to novel or potentially stressful situations in order to maximize their clinical and behavioral health as well as their research potential.

Laboratory primates are known to respond to relocations and social separations with elevated stress hormones, appetite suppression, and behavioral responses such as sleep disturbance or atypical/abnormal behaviors. Laboratory experiences including sedation, jacketing, tethering, and various invasive procedures are also associated with behavioral and physiological consequences. If an animal is to be relocated or separated from its social partner(s) prior to the onset of a study, it is in the interest of the animal's well-being, as well as the quality of the research data, to provide a period of time for acclimation prior to study onset.

This SOP applies to all primates housed at WaNPRC facilities, regardless of the project they are assigned to.

Responsibility

It is the responsibility of all Primate Resources Staff (DPR) and Investigative (Research) Staff to follow this SOP.

Once an animal is assigned to a particular research project, the Research Facilitator will inform Investigative staff of the need to allow sufficient acclimation time prior to study onset. Investigative staff may request an exemption from a Veterinarian. However, exemptions will be granted only if there is sufficient justification.

Procedure

Investigators complete an Animal Assignment Request form and submit it to the Research Facilitator (RR SOP #1302 Animal Assignment) at least 21 days prior to study onset. This allows for:

- A Pre-Assignment Clinical Exam by Veterinary Staff
- A Behavioral Evaluation by Behavioral Management Staff
- PWB Coordinator input on current social status
- Dissemination of the Animal Transfer Notification Form (if applicable)
- Animal Relocation (if applicable) and 7 days for acclimation to new location, regardless of project assignment

05/24/2018

- Social Separation (if applicable) and 7 days for acclimation to single housing, regardless of project assignment.
- Note: If Social Separation and Relocation are both required, each requires 7 days of acclimation time. An animal needs 7 days to adjust to losing its partner before it is moved, after which it requires another 7 days to adjust to the new location before a study can start.

Relocation:

If relocation is necessary for any animal, the move will occur at least 7 days prior to the start of an experimental protocol or procedure, including sedation and blood draw. It is important to note that this acclimation period may be adjusted at the discretion of a Veterinarian. Incoming animals, for example, will undergo initial sedation and physical examination 3-5 days after arrival in order to balance the competing demands of acclimation with the need to perform a thorough health assessment shortly after arrival.

Animals moved for the purpose of socialization do not require 7 days of post-move acclimation (refer to SOP 720).

Social Separation:

Pairs that will remain together do not require separation prior to a move. Pairs that will not be reunited or that need to be separated for 1 month or more should be separated at least one week prior to a potentially stressful event (e.g. animal move, research procedure, etc.), depending upon the research needs and veterinary approval. Whenever possible, the partners should remain in visual contact after a social separation. To minimize the number of stressors, it may be appropriate to institute the social separation when animals are sedated for their pre-assignment clinical exams. Pregnant females in grooming-contact or in run-through caging are separated from social partners 2 weeks prior to expected due date, for the safety of the infant.

Jacket Training:

Animals being considered for a jacketing and/or tethering project will be exposed to the jackets during the pre-assignment exam period as one method of evaluating their suitability for the project. If an animal does not adjust to the jacket during the pre-assignment phase, it will not be assigned to that project. Social contact may be allowed during jacket training. However, animals on specific time-sensitive jacket/tether projects may be socially separated one week prior to their pre-assignment ultrasound and/or jacket training depending upon relocation and research needs.

Summary:

In summary, if multiple potential stressors will occur prior to study onset (for example, social separation and jacketing) each potential stressor should be separated by 7 days. If an animal has to be separated from its partner and then moved, allow for 7 days of acclimation

05/24/2018

time between the social separation and the move rather than separating them and moving them on the same day. Exemptions may be granted by a Veterinarian, but only with sufficient justification.

For animals flagged as Behaviorally Sensitive in ARMS, contact the Behavior Case Manager (BCM) with any concerns or questions. For social pairs or groups, contact the PWB Coordinators with any concerns or questions.

References

- Capitanio JP, Kyes RC, Fairbanks LA. 2006. Considerations in the selection and conditioning of old world monkeys for laboratory research: Animals from domestic sources. *ILAR Journal* 47(4):294-306.
- Capitanio JP, Lerche, NW. 1998. Social separation, housing relocation, and survival in simian AIDS: A retrospective analysis. *Psychosomatic Medicine* 60:235-244.
- Clay AW, Bloomsmith MA, Jackson Marr M, Maple TL. 2009. Habituation and desensitization as methods for reducing fearful behavior in singly housed rhesus macaques. *American Journal of Primatology* 71:30-39.
- Crockett CM, Bowers CL, Sackett GP, Bowden DM. 1993. Urinary cortisol response of longtailed macaques to five cage sizes, tethering, sedation and room change. *American Journal of Primatology* 30:55-74.
- Crockett CM, Shimoji M, Bowden DM. 2000. Behavior, appetite and urinary cortisol responses by adult female pigtailed macaques to cage size, cage level, room change and ketamine sedation. *American Journal of Primatology* 52(2):63-80
- Dettmer AM, Novak MA, Suomi SJ, Meyer JS. 2012. Physiological and behavioral adaptation to relocation stress in differentially reared rhesus monkeys: Hair cortisol as a biomarker for anxiety-related responses. *Psychoneuroendocrinology* 37: 191-199.
- Davenport MD, Lutz CK, Tiefenbacher S, Novak MA, Meyer, JS. 2008. A rhesus monkey model of self-injury: Effects of relocation stress on behavior and neuroendocrine function. *Biological Psychiatry* 63: 990-996.
- Fernstrom AL, Sutian W, Royo F, Westlund K, Nilsson T, Carlsson HE, Paramastri Y, Pamungkas J, Sajuthi D, Schapiro SJ, Hau, J. 2008. Stress in cynomolgus monkeys (*Macaca fascicularis*) subjected to long-distance transport and simulated transport housing conditions. *Stress: International Journal on the Biology of Stress* 11(6): 467-476.
- Jennings M, Prescott M, (editors). 2009. Refinements in husbandry, care and common procedures for non-human primates: Ninth report of the BVAAWF/FRAME/RSPCA/UFOW Joint Working Group on Refinement. *Lab Animal* 43(Suppl 1):S1:1–S1:47.

05/24/2018

Springer DA, Baker KC. 2007. Effects of ketamine anesthesia on daily food intake in *Macaca mulatta* and *Cercopithecus aethiops*. *American Journal of Primatology* 69:1080-1092.

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05/24/2018