

Prolonged Physical Restraint		
Policy Approval Date: 6/7/2021	2 Pages	Next Review Date: 6/7/2024
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Purpose

Prolonged physical restraint in the absence of anesthesia, sedatives or tranquilizers is potentially highly stressful and must only be used when it is essential for achieving research objectives. It must be detailed in the research protocol, reviewed, and approved by the IACUC. Restraint is the use of manual or mechanical means to limit some or all of an animal's normal movement for the purpose of examination, collection of samples, drug administration, therapy or experimental manipulations.

Restraint that lasts **10 minutes or longer** in an unanesthetized animal is considered "prolonged restraint." It is advised to consult with a veterinarian prior to protocol submission for assistance. All researchers are required to following these guidelines to reduce the likelihood of causing unnecessary pain or distress to the animal.

Policy

Prolonged restraint is defined as the physical restraint of an animal for a period 10 minutes or longer.

Policy Considerations

This policy defines "prolonged restraint" and is intended to ensure that:

- a. the method of restraint is appropriate for the species of animal,
- b. the period of restraint is the minimum required for experimental objectives,
- c. the personnel performing the restraint have been appropriately trained, and
- d. when prolonged physical restraint is necessary, the physical, physiological and psychological effects on the animal are minimized.

Background

Access to an animal for the purposes of obtaining samples, administering medication or accomplishing study objectives is an important component of many studies using research animals. In most cases, this period of immobility is brief. On occasion, a prolonged period of restraint may be required to achieve the project objectives.

The Guide notes that "Systems that do not limit an animal's ability to make normal postural adjustments (e.g., subcutaneous implantation of osmotic minipumps in rodents, backpack-fitted infusion pumps in dogs and nonhuman primates, and free-stall housing for farm animals) should be used when compatible with protocol objectives."¹

Examples of such devices include nonhuman primate tethering systems that allow for all types of movement except 360-degree rotations parallel to the axis of the tether. Tethering that does not restrict normal posture is described separately from restraint within the animal care and use protocol.

Responsibilities

Prolonged restraint 10 minutes or longer is considered unalleviated pain and/or distress (i.e., “Pain Category E”). Prolonged restraint must be scientifically justified in the protocol and should address the following:

1. Alternatives to physical restraint without anesthesia must be considered.
2. The period of restraint shall be the minimum required to accomplish the research objectives.
3. Animals to be placed in restraint devices shall be given training with positive reinforcement to adapt to the equipment and personnel.
4. Provision shall be made for observation of the animal at appropriate intervals, as determined by the IACUC. Animals that fail to adapt shall be removed from the study.
5. Clearly explain the purpose of the restraint and its maximal duration to personnel involved with the study.

If severe behavioral changes, lesions or illness are observed as a result of the restraint, animals must be temporarily or permanently removed from restraint and SUNY Downstate veterinary staff shall be consulted.

REFERENCES

1. *The Guide for the Care and Use of Laboratory Animals*, 8th Edition. NRC, 2011; pages 29-30.
2. [USDA Animal Welfare Act and Animal Welfare Regulations \(2017\)](#)
[\(/animalcare/informational/usda-animal-welfare-act-and-animal-welfare-regulations-2017\)](#)