

This Fact Sheet describes conscious restraint standards that comply with *The Guide for the Care and Use of Animals*, 8th Edition and the Animal Welfare Act & Regulations (9 CFR 3.81(d)). These standards ensure animal welfare when conscious physical restraint must be used for research purposes.

1. Definitions

Physical Restraint: Physical 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 manipulation.

Prolonged Restraint: is the use of a physical restraint of a non-sedated animal for 30 minutes or longer in a natural position, 10 minutes or longer in an unnatural position, or any duration for any position (natural or unnatural) in which a body part is fixed. Chairing of nonhuman primates is considered prolonged restraint, regardless of duration.

A "natural position" is a position which an animal normally engages in (e.g., any normal postural position for that species). An "unnatural position" is one in which the particular animal species would not typically engage, assuming it is a healthy animal.

2. Considerations

A. Prolonged Physical Restraint

- 1) Prolonged restraint should be avoided unless it is essential for achieving research objectives. Justification for prolonged restraint and consideration of alternatives must be provided in the protocol, amendment, or Standard Operating Procedure (SOP) and approval by the IACUC must be obtained before implementing such practices.
- 2) Restraint devices should be suitable in size, design, and operation to minimize discomfort, pain, distress, and the potential for injury to the animal and the research staff.
- 3) Prolonged restraint, including chairing of nonhuman primates, should be avoided unless it is essential for achieving research objectives and is specifically approved by the IACUC.
- 4) Animals that do not adapt to necessary restraint systems should be removed from the study.
- 5) When restraint devices are used, they should be specifically designed to accomplish research goals that are impossible or impractical to accomplish by other means or to prevent injury to animals or personnel.

B. Physical Restraint of Any Duration

- 1) Restraint devices should not be considered a normal method of housing, and must be justified in the animal use protocol.

- 2) Restraint devices should not be used simply as a convenience in handling or managing animals.
- 3) When restraint devices are used, they should be specifically designed to accomplish research goals that are impossible or impractical to accomplish by other means or to prevent injury to animals or personnel.
- 4) The period of restraint should be the minimum required to accomplish the research objectives.
- 5) Animals to be placed in restraint devices should be given training (with positive reinforcement) to adapt to the equipment and personnel.
- 6) Provision should be made for observation of the animal at appropriate intervals, as determined by the IACUC.
- 7) Animals that fail to adapt should be removed from the study.
- 8) Veterinary care must be provided if lesions or illnesses associated with restraint are observed. The presence of lesions, illness, or severe behavioral change often necessitates temporary or permanent removal of the animal from restraint.
- 9) The purpose of the restraint and its duration should be clearly explained to personnel involved with the study.

3. Information Required in IACUC Protocol

- Justify why the restraint is necessary, and why alternative methods such as positive reinforcement or conditioning are not feasible;
- Describe:
 - Restraint devices to be used;
 - Estimated duration that animals will remain in the restraint device;
 - Methods or acclimation procedures to minimize animal distress;
 - Monitoring parameters for restrained animals, such as monitoring frequency and signs of distress;
 - Criteria for excluding animals from this procedure, e.g., inability to adapt to the restraint device, etc.; and
 - Potential adverse effects or events caused by the restraint device.