

## Prolonged Restraint

### 350.1 Purpose

The Guide distinguishes between short-term and “prolonged” physical restraint of animals, and Emory University is obligated to report the use of prolonged restraint in animal research to the Association for the Assessment and Accreditation of Laboratory Animal Care International (AAALAC). This policy defines what the IACUC considers to be “prolonged” physical restraint, and to establish guidelines for research protocols that use prolonged physical restraint in conscious research animals. See Appendix for important general guidelines for restraint.

### 350.2 Scope/Applicability

This policy applies to all research and teaching protocols at Emory University that contain physical restraint of animals. This policy does not apply to restraint used for veterinary treatments, routine caging, handling and transportation.

### 350.2 Definitions

**350.2.1 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 (The Guide, 2011). Such restraint may cause distress and/or pain, if not carried out properly and habituation techniques should be used to reduce any level of discomfort. Systems that do not limit an animal’s ability to make normal postural adjustments (i.e. tether system) should be used when compatible with protocol objectives. Depending on the level of restraint (minimal, partial and complete) and duration of restraint, it is classified as momentary, short-term or prolonged (see chart below).

Degree of Immobility	Short-Term	Prolonged
<b>Minimal Physical Restraint</b> – rotational movement of the body can occur; no portion of the body is completely immobilized (ex: chair restraint)	<b>5-60 minutes</b>	<b>&gt;60 minutes</b>
<b>Partial Physical Restraint</b> – one or more immobilized body parts, allowing some movement (ex: most rodent restraint devices)	<b>5-30 minutes</b>	<b>&gt;30 minutes</b>
<b>Complete Physical Restraint</b> – all body parts are immobilized, no normal movement is possible	<b>5-10 minutes</b>	<b>&gt;10 minutes</b>

**350.3 Guidelines for the use of prolonged restraint** (See Appendix for important general guidelines for restraint):

**350.3.1** The type and maximal duration of restraint should be stated within the protocol. The use of prolonged restraint needs to be scientifically justified, and has to be approved by the IACUC.

**350.3.2** Prolonged restraint should be avoided unless it is essential for achieving the research objectives. Restraint devices should be suitable in size, design, and operation to minimize discomfort or injury to

the animal. Less restrictive systems that do not limit an animal's ability to make normal postural adjustments should be used if compatible with research or teaching objectives.

**350.3.2.1** Animals should be acclimated to the use of prolonged restraint. Prolonged restraint of a non-acclimated animal can only be approved by the IACUC if it is essential for achieving research objectives (for instance in the context of studies in which restraint is used to induce stress).

**350.3.2.2** Non-human primates must receive special attention through the entire restraint period and at least one hour of unrestricted activity if the period of restraint is over 12 hours.

### **350.4 Further Reading**

**350.4.1** The Animal Welfare Act, 7 U.S.C. § 2131 et seq.

**350.4.2** USDA Animal Welfare Regulations, 9 CFR Chapter I, subchapter A

**350.4.3** *Guide for the Care and Use of Laboratory Animals*, National Research Council, National Academy Press, Washington, D.C., Eighth Edition, 2011.

**350.4.4** *Public Health Service Policy on Humane Care and Use of Laboratory Animals*, Health Research Extension Act of 1985, Public Law 99-158.

### **350.5 Appendix**

**350.5.1** General guidelines for all restraint procedures

### **350.6 Document Properties**

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**Appendix** - General Guidelines for all restraint procedures (based on “The Guide for the Care and Use of Laboratory Animals, Eighth Edition”, pp. 29-30).

The following should be considered by the Principal Investigator and IACUC in planning or evaluating experimental procedures that involve the physical restraint of animals:

- Restraint devices should not be considered a normal method of housing, and must be justified in the animal use protocol.
- Restraint devices should not be used simply as a convenience in handling or managing animals.
- Alternatives to physical restraint should be considered.
- The period of restraint should be the minimum required to accomplish the research objectives.
- Animals to be placed in restraint devices should be given training (with positive reinforcement) to adapt to the equipment and personnel. For chair training methods used with non-human primates (NHPs), see Yerkes SOP 5.7.
- Animals that fail to adapt to the restraint should be removed from the study.
- Provision should be made for observation of the animal at appropriate intervals, as determined by the IACUC. For monitoring of NHPs during restraining, see Yerkes SOP 5.11.
- Veterinary care must be provided if lesions or illnesses associated with restraint are observed. The presence of lesions, illness, or severe behavioral change (e.g., self-injurious behavior(s)) often necessitates the temporary or permanent removal of the animal from restraint.
- The purpose of the restraint and its duration should be clearly explained to personnel involved with the study.