

**Animal Care and Use Program
Policy
Policies & Procedures**



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BACKGROUND: Restraint is defined as limiting or restricting the normal physical movement of an awake, non-anesthetized, non-sedated animal. Prolonged 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. Mechanisms of prolonged restraint could include tethers, stanchions, slings, chairs, or any other device that limits animal movement. The brief (i.e. minutes) control of an animal by a human handler is not considered restraint, nor is normal approved housing considered restraint.

SCOPE: This policy applies to all OHSU protocols involving animals used in research or teaching.

POLICY:

- Prolonged restraint should only be invoked when less stressful procedures have been carefully considered and rejected as inadequate to meet the scientific goals of the study. Restraint can be used to protect the animal from self-inflicted injury and/or to protect the animal handler.
- The prolonged restraint for any study should be minimal in both the extent and duration of confinement while allowing the goals of the experiment to be achieved. Restraint should not be used only for the convenience of the investigator or to minimize expense.
- The nature and duration of the prolonged restraint must be carefully described and justified and, a plan for routine monitoring must be included in the IACUC protocol. Adequacy of the monitoring plan will be addressed by the IACUC on a case by case basis.
- Animals to be placed in prolonged restraint devices should be given training (with positive reinforcement, if appropriate) to adapt to the equipment and personnel. Animals that fail to adapt should be removed from the study. DCM/W (Division of Comparative Medicine/West) staff will oversee all adaptation and training for non-human primates, The research staff will notify DCM/W if the animal fails to adapt and it will be documented in the animal's record.
- Restraint required for the scientific objectives of the study does not require training of the animal subjects.

- It is the responsibility of the principal investigator to ensure that the animals are monitored as described in the IACUC protocol by an adequately trained individual and that monitoring is documented.
- The attending veterinarian, or designee, has the authority to terminate the prolonged restraint procedure in order to assure animal health and well being. The attending veterinarian should make a reasonable attempt to consult with the Principal Investigator and/or scientific staff prior to terminating a restraint procedure.

AUTHORITY: Guide for the Care and Use of Laboratory Animals, 8th Ed. 2011 pp. 29-30.

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. Animals are restrained for brief periods, usually minutes, in many research applications.

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. Dogs, nonhuman primates, and many other animals can be trained, through use of positive reinforcement techniques, to cooperate with research procedures or remain immobile for brief periods (Boissy et al. 2007; Laule et al. 2003; Meunier 2006; Prescott and Buchanan-Smith 2003; Reinhardt 1991, 1995; Saucedo and Schmidt 2000; Yeates and Main 2009).

Prolonged restraint, including chaining of nonhuman primates, should be avoided unless it is essential for achieving research objectives and is specifically approved by the IACUC (NRC 2003b). 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. Animals that do not adapt to necessary restraint systems should be removed from the study. 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.

The following are important guidelines for restraint:

- 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.
- Animals that fail to adapt should be removed from the study.
- Provision should be made for observation of the animal at appropriate intervals, as determined by the IACUC.
- 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 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.