

Center for Biomedical Research / IACUC Standard Operating Procedure - Guidelines

Physical Restraint and Prolonged Physical Restraint

A. Physical Restraint

Physical restraint is the use of manual or mechanical means to limit some or all of an animal's normal movement without anesthesia for the purpose of examination, collection of samples, drug administration, therapy, or experimental manipulation. With regard to wildlife studies utilizing traps, physical restraint is defined as any trap that tethers the animal. 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. Primary housing enclosures and humane wildlife traps are not considered restraints.

When physical restraint is used during a procedure, it must be described in the Experimental Details section in Novelution within the procedure description.

B. Prolonged Physical Restraint

Prolonged physical restraint is the use of manual or mechanical means to restrict an animal's movement for more than a certain amount of time. The length of time depends on the position of the animal's body. This does not include animals subjected to chemical restraint.

When prolonged physical restraint is used during a procedure, it must be described and justified in the Special Concerns for Animal Use section in Novelution under the Physical Restraint Tab section. Alternatives to its use must be considered and described in the Protocol Details section in Novelution under the literature search section, and the procedure must be described within the Experimental Details section.

Definition (body position and time that is considered prolonged)

- **Natural position:** A position the animal would normally assume, which is considered prolonged if held in this position for greater than 30 minutes.
- **Unnatural position:** A position the animal would not normally assume and is considered prolonged if held in this position for greater than 10 minutes.
- **Fixed body part:** A body part that is completely restricted from movement and is considered prolonged if held in this position for greater than 0 minutes.

When is prolonged restraint allowed?

- When it's essential for research objectives.
- When other methods are not feasible.
- When it's approved by the UND Institutional Animal Care and Use Committee (IACUC).

What are the guidelines for prolonged restraint?

- Physical restraint devices should not be considered a normal method of housing and must be justified in the animal use protocol.
- Physical restraint devices should not be used simply as a convenience in handling or managing animals.
- Alternatives to prolonged physical restraint should be considered.
- The period of prolonged physical restraint should be the minimum required to accomplish the research objectives.

- Animals that fail to adapt to prolonged physical restraint should be removed from the study if not precluded by the research objectives.
- Provisions should be made for the observation of the animal at appropriate intervals and approved by the IACUC. Written documentation must be maintained of the animal's physical condition and behavior during a procedure that involves prolonged physical restraint.
- Veterinary care must be provided if lesions or illnesses associated with prolonged physical 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.
- The IACUC protocol must describe the type and maximum duration of restraint.
- Animals should be offered positive reinforcement to get used to the restraint equipment and personnel, if applicable.
- Restraint devices should be designed to achieve research goals and prevent injury to animals and handling personnel.

References: Guide for the Care and Use of Laboratory Animals, 8th Edition, Page 29-31.
<https://grants.nih.gov/grants/olaw/guide-for-the-care-and-use-of-laboratory-animals.pdf>.