IACUC Guideline
PHYSICAL RESTRAINT OF LABORATORY ANIMAL SPECIES FOR EXPERIMENTAL PURPOSES

The University of Pennsylvania’s Institutional Animal Care and Use Committee (IACUC) has adopted the following guideline to clarify the responsibilities of the institution, the IACUC, the Attending Veterinarian, and research personnel to outline the minimally acceptable standards for physical restraint of laboratory animal species for experimental purposes.

Definitions:
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 (1). Brief physical restraint of agricultural animals for examination, collection of samples, and a variety of other experimental and clinical manipulations can be accomplished manually or with devices such as stocks, head gates, stanchions, or squeeze chutes (2). If routine restraint does not cause distress or discomfort to the animal, a detailed description is NOT required in the IACUC protocol.

Prolonged Restraint is defined as physical restraint of a conscious animal lasting longer than 30 minutes. Prolonged restraint, including chairing of non-human primates, should be avoided unless it is essential for achieving research objectives and is specifically approved by the IACUC (3).

For prolonged restraint purposes, the protocol must include:
- Description of the restraint device
- Amount of time the animal will be restrained
  - If the time of prolonged restraint (> 6 hours) limits the ability of the animal to access food and water, the protocol must include:
    - Description of when the food and water will be given
    - How the body weight will be monitored
    - How hydration status will be monitored

General Restraint Guidelines:
The following are important guidelines for restraint of any duration and species (Guide):
- Provisions should be made for the observation of the animal at appropriate intervals, as determined by the IACUC. It is preferable to not leave a restrained animal unattended.
- 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.
- Restraint devices should be suitable in size, design, and operation to minimize discomfort, pain, distress, and the potential injury to the animal or research staff.
- Restraint devices are not to be considered normal methods of housing and must be justified in the animal use protocol.

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- Restraint devices should not be used simply as a convenience in handling or managing animals. Chemical restraint can be used as an alternative to avoid convenience of restraint devices.
- 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.
- 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.
- Animal Welfare Regulations [AWR 3.81 (d)] require a period of rest for primates that are restrained for 12 hours or more. Frequency and type of rest periods, for extended periods of restraint, must be described in the animal use protocol.

References

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