



Title: Animal Restraint

Policy Number: 026

Policy Intent: The intent of this policy is to define what the TTU IACUC considers prolonged restraint and ensure that animals restrained for teaching and research purposes are restrained in a way that does not adversely affect animal welfare or minimizes pain and/or distress per federal requirements.

Table of Contents

1. Purpose
2. Definitions
3. Protocol Requirements
4. Animal Health Monitoring
5. References

1. Purpose

- A. Prolonged restraint for the purposes of teaching or research must be justified and approved by the TTU IACUC. This policy has been developed to ensure that Texas Tech University complies with the Guide for the Care and Use of Animals, 8th Edition, the Guide for the Care and Use of Agricultural Animals, and the Animal Welfare Act.

2. Definitions

- A. Natural Position: is a position in 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.
- B. 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.
- C. 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.
 - 1) A "fixed body part" is defined as any body part that is restrained such that normal rotational movement of that body part is not possible, such as the use of hobbles. (This definition is not intended to include the use of restraint devices such as a cat bag or a rodent conical restrainer for the purpose of blood collection for intervals less than 30 minutes).
 - 2) Prolonged physical restraint of research animals may warrant placement of animals in "Animal Use Category E" (procedures that cause distress where no method is available which would alleviate these effects without interfering with the experimental results) unless evidence is provided by the investigator that the restraint does not cause distress.
 - 3) Restraint of wild species during field studies. Restraint that significantly alters behavior of an animal under these circumstances is generally viewed differently with respect to IACUC review under federal regulation (Sikes et al. 2011:241). Restraint of mammals in live traps, birds in nets and traps, snakes and turtles in traps, amphibians in pit-fall traps, fish in nets, and other methods are routinely used to



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properly capture, restrain, and sample wild species. In cases of routine capture of vertebrates with proper consideration for checking traps overnight or more frequently, "Animal Use Category C" will generally be applied. If animals are chemically restrained after initial capture, they should be placed in Category D (Sikes et al. 2011:240; Fair et al., 2010)

D. The following circumstances are NOT considered prolonged restraint:

- 1) Holding an animal by hand or in a device (e.g., rodent restrainer, cattle chute) for a few moments in order to collect blood, perform an injection or a short procedure.
- 2) Use of sedation or anesthesia to limit animal movements during imaging procedures such as CT or MRI.
- 3) Walking a dog on a leash or transporting a cat or rabbit in a standard carrier
- 4) Farrowing and gestation crates for sow housing are currently accepted as standard housing for maximum productivity.

3. Protocol Requirements

A. Protocols including the use of Physical or Prolonged Restraints must include the following information:

- 1) Justification as to why the restraint is necessary, and why alternative methods such as positive reinforcement or conditioning are not feasible.
- 2) A description (and pictures if not standard or commercially available) of all restraint devices used in the protocol.
- 3) The estimated duration the animals will remain in the restraint device. The period of restraint should be the minimum required to accomplish the research objectives.
- 4) Methods or acclimation procedures used to minimize animal distress.
- 5) Monitoring parameters for restrained animals such as monitoring frequency and signs of distressed animals
- 6) Criteria for removal of the animal from the study based on their inability to adapt to the restraint device.
- 7) Potential adverse effects or events which may be caused by the restraint device.

4. Animal Health Monitoring

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

- 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 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) Restraint devices should not be used simply as a convenience in handling or managing animals.
- 4) Alternatives to physical restraint must be considered.
- 5) Animals to be placed in restraint devices should be given training (with positive reinforcement) to adapt to the equipment and personnel.
- 6) Animals that fail to adapt to the restraint should be removed from the study.



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- 7) Provision must be made for observation of the animal at appropriate intervals, as determined by the IACUC.
- 8) The presence of lesions, illness, or severe behavioral changes (e.g., self-injurious behavior(s)) often necessitates the 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.
- 10) All personnel must be adequately trained, both in the method of restraint and handling of the species being restrained

5. References and Regulations

- *Guide for the Care and Use of Laboratory Animals*. (2010). Washington D.C. National Academies Press.
- Sikes, R. S., W. L. Gannon, and the Animal Care and Use Committee of the American Society of Mammalogists. (2011). Guidelines of the American Society of Mammalogists for the use of wild mammals in research. *Journal of Mammalogy* 92:235-253.
- Fair, J.M., E. Paul, J. Jones, A. B. Clark, C. Davie, and G. Kaiser. 2010. Guidelines to the Use of Wild Birds in Research. The Ornithological Council, Washington, D.C.
- *Guide for the Care and Use of Agricultural Animals in Agricultural Research and Teaching*. (2010). Savory, IL. Federation of Animal Science Societies. Office for Responsible Research Page 3 of 3 Iowa State University
- USDA. Animal Welfare Act Regulations 9 CFR Part 3, Chapter 1 3.81.d.
- *Guidelines for the Care and Use of Mammals in Neuroscience and Behavioral Research*. (2003). Washington D.C. National Academies Press.