Prolonged Physical Restraint

It is the responsibility of the IACUC to evaluate all research and teaching protocols for the potential to cause pain and/or distress in vertebrate animals. The IACUC also must assess the steps that are to be taken to eliminate or minimize the potential for pain and distress and ensure that alternatives to these procedures have been considered. Because physical restraint of animals can be associated with pain and/or distress, the IACUC must have sufficient information to evaluate protocols that include restraint procedures.

Definitions

Physical restraint: Defined in the NRC Guide as “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.”

Prolonged physical restraint: The ISU IACUC recognizes two general categories of physical restraint that fit the above definition. The first category is for restraint of laboratory and farm animals. For such research protocols, physical restraint is defined by the IACUC as physical restraint of unanesthetized animals for 30 minutes or longer in a natural body position or 15 minutes or longer in an unnatural body position. Restraint procedures must be detailed in the animal use protocol. 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 shown otherwise by the investigator.

The second category is for 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 example methods are routinely used to properly capture, restrain, and sample wild species. In cases of routine capture of vertebrates with proper consideration for checking traps overnight or more frequently, it is IACUC policy to place animals in Category C. If animals are chemically restrained after initial capture, they should be placed in Category D (Sikes et al. 2011:240). Restraining animals in field studies would not warrant placement of animals in Category E.

Policy

- Alternatives to restraint should be considered.
- Restraint devices are not to be considered normal methods of housing and must be justified in the protocol.
- Prolonged restraint or restraint of an unacclimated animal, except for purposes of acclimating the animal to the restraint device, should be avoided unless it is essential for achieving research objectives and is approved by the IACUC.
- The period of restraint should be the minimum required to accomplish the research objectives.
• When restraint devices are used for short periods or for prolonged restraint periods, 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 use and type of restraint devices must be described clearly in the IACUC animal use protocol.

• Acclimation or habituation to restraint methods is required for studies involving prolonged restraint and must be described in the animal use protocol. Animals should be trained to accept restraint using positive reinforcement. Prolonged restraint without acclimation or habituation must be scientifically justified in the animal use protocol.

• Frequent monitoring of animals subjected to prolonged restraint is required unless the investigator can justify why this would not be compatible with the research in question. The frequency and method of monitoring must be described in the animal use protocol.

• 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 temporary or permanent removal of the animal from restraint.

• Evidence of distress or behavioral change must be reported to the IACUC, which may necessitate the temporary or permanent removal from restraint. Animals that fail to adapt to restraint should be removed from the study.

• The purpose of the restraint and its duration should be clearly explained to personnel involved in the study.

References


