



Johns Hopkins University Animal Care and Use Committee

Guidelines on Restraining Animals¹

Physical restraint

Physical restraint² is the use of manual or mechanical means to limit some or all of an animal's movements for the purpose of examination, collection of samples, drug administration, therapy or experimental manipulation. Animals are restrained for brief periods, usually minutes, in most research applications. Restraint devices should be suitable in size, design, and operation to minimize discomfort and injury to the animal. Restraint devices are not to be considered normal methods of housing.

Restraint may cause distress and/or pain, if not carried out properly or, if, animals are not habituated to a restraint procedure. The period of restraint should be the minimum required to accomplish the research objective. Species-specific methods of restraint should always be used.

Short term Restraint

Short term restraint of laboratory animals involves animal confinement or placement in a standard restraining device³, appropriate for the species, for brief periods, for the purposes of collection of samples, administration of substances, performing procedures or examining the animal. Frequent handling or conditioning of an animal to particular forms of restraint reduces the level of discomfort or distress. Routine restraint usually does not require detailed description in the animal protocol form.

Prolonged restraint

When prolonged physical restraint is required, animals should be conditioned to the restraint equipment by a gradual process such as increasing the time of restraint on each occasion. A description of the conditioning regime and monitoring of the restraint should be included in the protocol.

Less restrictive systems that do not limit an animal's ability to make normal postural adjustments, such as tether systems for nonhuman primates and stanchions for farm animals, should be used when compatible with protocol objectives^{2,4}.

¹ Approved by the Animal Care and Use Committee: September 19, 2002, reviewed September 25, 2012.

² Guide for the Care and Use of Laboratory Animals. NRC. National Academy Press, 1996. p11.

³ Handling rodents in non-permeable sleeves can lead to a fatal hyperthermia and extreme care needs to be exercised in such situations.

⁴ Methods and Animal Welfare Considerations in Behavioral Research with Animals: Report of a National Institutes of Health Workshop. Morrison, AR, Evans, HL, Ator, NA, Nakamura, RK (eds.) 1996. NIH Publication No 02-5083. Chapter 5.

Nonhuman primates must not be maintained in restraint devices unless required for health reasons as determined by the attending veterinarian or by a research proposal approved by the Committee at research facilities. Maintenance under such restraint must be for the shortest period possible. In instances where long-term (more than 12 hours) restraint is required, the nonhuman primate must be provided the opportunity daily for unrestrained activity for at least one continuous hour during the period of restraint, unless continuous restraint is required by the research proposal approved by the Animal Care and Use Committee at research facilities⁵.

For the comfort and safety of the animal, certain kinds of restraint equipment such as jackets or harnessing devices⁶ animals should be periodically monitored. Animals in chairs and slings require closer monitoring than those restrained by tethering jackets or harnesses.

Attention must be given to the possible development of lesions or illnesses associated with the restraint including contusions, decubital ulcers, dependent edema, and weight loss. If these or other problems occur, prompt veterinary care must be provided. This may require temporary or permanent removal of the animal from the restraint device depending upon advice of the attending veterinarian.

⁵ 9 CFR Chapter 1 Subchapter A Part 3 § 3.81 (d)

⁶ Methods and Animal Welfare Considerations in Behavioral Research with Animals: Report of a National Institutes of Health Workshop. Morrison, AR, Evans, HL, Ator, NA, Nakamura, RK (eds.) 1996. NIH Publication No 02-5083. Chapter 5.