



Title: Use of Physical Restraint in Non-sedated Research and Teaching Animals

SOP #	AV 40-406
Version #	1
Implementation Date	11/12/2016
Next Review Date	11/12/2019

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Standard Operating Procedure

1. Purpose

To define prolonged physical restraint and provide clarification regarding when prolonged physical restraint may be used with research and teaching animals at Central Oregon Community College (COCC). This policy excludes restraint used for clinical purposes.

2. Scope

All research and teaching animal care and use protocols (AUPs) where restraint of animals is required.

3. Responsibilities

Principal Investigators (PIs) are responsible for identifying when restraint will be used, justification for restraint, what type of restraint, duration of restraint, and procedures for monitoring and minimizing animal distress during restraint. The PI is responsible for ensuring personnel are trained on the purpose and duration of restraint to be used for the research or teaching protocol.

4. Procedure

Definitions:

- **Physical restraint** is the use of manual, mechanical, or chemical (i.e., sedatives or tranquilizers) means to limit some or all of an animal’s normal movement for such purposes as examination, collection of samples, therapy, experimental manipulation, and drug administration. Typically, animals are restrained for brief periods of time, usually minutes, in most research and teaching applications. In some instances, animals can be trained, through use of positive reinforcement, to present limbs or to remain immobile for brief procedures.
- **Prolonged physical restraint** is defined by the COCC IACUC as 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. Chairing of nonhuman primates is considered prolonged restraint, regardless of duration.



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- A “natural position” is defined as a position 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.
- A “fixed body part” is defined as any body part that is restrained such that normal rotational movement of that part is not possible, such as the use of a head post for head stabilization during neurological testing procedures. (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).

Policy:

- **Prolonged restraint** should be avoided unless it is essential for achieving research objectives. Justification for prolonged restraint and consideration of alternatives must be provided in the protocol, amendment, or Standard Operating Procedure (SOP) and approval by the IACUC must be obtained before implementing such practices.

Procedure:

Important guidelines to consider when writing an animal care and use protocol (AUP), amendment or SOP for restraint of any duration:

- Restraint devices are not to be considered normal methods of housing.
- When restraint devices are used, they must be specifically designed to accomplish the research goals that are impossible or impractical to accomplish by any other means or to prevent injury to animals or personnel.
 - Alternative systems that do not limit an animal’s ability to engage in normal postural adjustments (e.g., subcutaneous implantation of osmotic minipumps in rodents, backpack fitted infusion pumps in dogs and nonhuman primates, and free stall housing for farm animals) should be considered and used when compatible with research objectives.
 - Restraint devices should not be used simply as a convenience in handling or managing animals.
- The period of restraint should be the minimum required to accomplish the research objectives.

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- The animal should be acclimated to the restraint device and laboratory equipment prior to the procedure, and provided training when appropriate to adapt to the equipment and personnel.
- Provision must be made for observation of the animal at appropriate intervals as defined in the protocol, amendment or SOP.
- Veterinary care must be provided if lesions or illness associated with restraint are observed. The presence of lesions, illnesses, deleterious or maladaptive behavior or other behavioral changes may necessitate temporary or permanent removal of the animal from the restraint device. The animal may be removed from restraint at the discretion of the veterinary staff if deemed necessary.
- Animals that fail to adapt should not be assigned to or should be removed from the study.
- The purpose of the restraint and the duration of restraint must be clearly explained to personnel involved in the study.
- The protocol, amendment, or SOP must include:
 - A general description of the restraint device.
 - Scientific justification, specific to the type of restraint proposed.
 - The estimated duration of the restraint with a maximum duration stated.
 - Monitoring procedures and methods used to minimize animal distress (e.g., acclimation to the device).

5. References

1. The Use of Prolonged Physical Restraint in Non-sedated Research and Teaching Animals. UC Davis Safety Services, 2015. (<http://ehs.ucdavis.edu/article/use-prolonged-physical-restraint-non-sedated-research-and-teaching-animals>).

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2. Institute of Laboratory Animal Resources: Guide for the Care and use of Laboratory Animals, National Academy Press, Eighth Edition (http://www.nap.edu/catalog.php?record_id=12910).
3. Animal Welfare Act and Animal Welfare Regulations. United States Department of Agriculture, 2013 (https://www.aphis.usda.gov/animal_welfare/downloads/Animal%20Care%20Blue%20Book%20-%202013%20-%20FINAL.pdf).
4. National Institutes of Health: Public Health Service Policy on Humane Care and Use of Laboratory Animals (<http://grants.nih.gov/grants/olaw/references/phspol.htm>).
5. The Federation of Animal Science Societies: Guide for the Care and Use of Agricultural Animals in Research and Teaching, 3rd Edition, 2010 (http://www.fass.org/docs/agguide3rd/Ag_Guide_3rd_ed.pdf).

6. **Definitions**

1. AV – Attending Veterinarian – responsible for the health and well-being of all laboratory animals used at the institution
2. AVMA – American Veterinary Medical Association – a not-for-profit organization for advancing the science and practice of veterinary medicine to improve animal and human health
3. SOP – Standard Operating Procedure – established or prescribed methods to be followed routinely for the performance of designated operations or in designated situations
4. IACUC – Institutional Animal Care and Use Committee – responsible for assessment and oversight of the institution’s animal care program components and facilities
5. Chair – Chairperson of the IACUC
6. PI – Principal Investigator – a Central Oregon Community College employee having the background and training in scientific and administrative oversight necessary to conduct and manage the proposed study
7. AUP – Animal Care and Use Protocol – protocol created by the principal investigator of the proposed research, testing, or educational study
8. Protocol – Animal Care and Use Protocol – protocol created by the principal investigator of the proposed research, testing, or educational study
9. COCC – Central Oregon Community College
10. Guide – the *Guide for the Care and use of Laboratory Animals*
11. AWA – Animal Welfare Act – requires that minimum standards of care and treatment be provided for certain animals bred for commercial sale, used in research, transported commercially, or exhibited to the public



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- 12. PHS – Public Health Service – establishes guidelines for the proper care of animals to be used in research
- 13. Clinical veterinarian – the Attending Veterinarian or designee

Revision	Author	Revisions Made	Effective Date	Approval
1	Cindy Elston	<ul style="list-style-type: none">• New SOP	11/12/16	Cindy Elston (AV)
		<ul style="list-style-type: none">•		