

Washington State University
Institutional Animal Care and Use Committee

Guideline #3 Pain and Distress Categorization of Animal Subjects in Research and Teaching

Approval Date: 5.26.2021 (Replacing Version 06.27.2018)

A. Purpose

According to regulatory agencies, all vertebrate animals used in research, teaching, or testing must be assigned to an appropriate pain or distress category. The WSU Institutional Care and Use Committee utilizes the USDA Pain and Distress Classification System. This Guideline is intended to outline this classification system, which can be referenced to help determine which category animals used in a WSU project may fall under.

B. Definitions

USDA Reporting (CFR Ch.1, 2.36(b)(5-8) Pain and/or Distress Category Definitions:

- **Category B:** Animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.
- **Category C:** Teaching, research, experiments, or tests conducted involving no more than momentary pain or distress, and no use of pain-relieving drugs.
- **Category D:** Experiments, teaching, research, experiments, or tests conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.
 - WSU IACUC Protocols with animals in this category or higher require that a database search for alternatives be performed (two database searches are required if the species is covered under the [Animal Welfare Act](#)).
- **Category E:** Teaching, experiments, research, surgery, or tests conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests
 - WSU IACUC protocols with animals in this category will require that additional justification for the withholding of pain-relieving measures be provided.

C. Pain and/or Distress Category Examples

Below is a chart of examples for which USDA Pain and/or Distress Category that animal-use activities may fall. Please note that this chart is not all-encompassing; it is intended to be used as a general guide for classification of WSU IACUC animal-use protocols but there may be variances for individual studies.

	Category B	Category C	Category D	Category E
WSU IACUC definitions	Animal use activities that involve only breeding or holding	Animal use activities that involve no more than momentary or slight pain or distress no greater than an injection	Animal use activities that involve accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, tranquilizing drugs or other methods for relieving pain or distress are used	Animal use activities that involve accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, tranquilizing drugs or other methods for relieving pain or distress are not used or delayed for scientific purposes. Scientific justification has to be provided.
	Examples	Examples	Examples	Examples
Activities such as...	1. Standard agricultural husbandry procedures (Ag Guide 1999) not for research, teaching or testing. (Includes vaccinations, routine castrations, and identification marking)	1. Holding or weighing animals in teaching or research activities. 2. Injections, blood collection or catheter implantation via superficial vessels.	1. Procedures that require anesthesia or analgesia, such as laparoscopy or needle biopsies. 2. Non-survival surgical procedures. 3. Survival surgical procedures,	1. Studies where death is used as an endpoint. 2. Any procedure where needed analgesics, tranquilizers, sedatives, or anesthetics must be withheld for justifiable study purposes.

	<p>2. Animal breeding procedures with no genotyping or extra research – related manipulation.</p>	<p>3. Teaching routine physical exams.</p> <p>4. Observation of animal behavior and behavioral studies that do not result in more than momentary distress.</p> <p>5. Feeding studies that do not result in clinical health problems.</p> <p>6. Humane euthanasia procedures that meet AVMA standards (Including terminal blood collection under anesthesia).</p> <p>7. Live trapping with minimal potential for injury.</p> <p>8. Short-term chemical immobilization or restraint.</p> <p>9. Studies involving clinical signs not judged to involve more than slight pain or distress.</p> <p>10. Tissue collection for</p>	<p>including biopsies and cut-downs for catheter placement.</p> <p>4. Postoperative pain or distress is alleviated.</p> <p>5. Induced infections with appropriate anesthesia and post-op/post-procedure analgesia when necessary.</p> <p>6. Genotyping that requires anesthesia, such as tail-snipping over 21 days of age.</p> <p>7. Euthanasia to relieve pain and/or distress</p> <p>8. Genetically engineered phenotypes that result in pain or distress that will be alleviated.</p> <p>9. Retro-orbital blood collection.</p> <p>10. Disease or cancer models</p>	<p>3. Application of noxious chemicals or stimuli (e.g., electrical shock) if the animal cannot avoid/escape the stimuli, and/or it is severe enough to cause pain or distress.</p> <p>4. Novel prolonged restraint.</p> <p>5. Exposure to extreme environmental conditions.</p> <p>6. Prolonged withholding of food and water.</p> <p>7. Infectious or neoplastic disease studies involving unrelieved pain or distress.</p> <p>8. Infliction of unalleviated trauma, including burns, radiation sickness, irritancy testing, etc.</p> <p>9. Euthanasia procedures not approved by the AVMA</p>
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		<p>genotyping that does not require anesthesia or analgesia to alleviate pain</p> <p>11. Live trapping and sampling of wild animals with minimal potential for injury.</p>	<p>where pain or distress is alleviated.</p>	<p>10. Disease and cancer models that involve chronic, unalleviated clinical signs of disease and impairment of motor function.</p>
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D. References

- “Guidelines for Preparing USDA Annual Reports and Assigning USDA Pain & Distress Categories” <https://oacu.oir.nih.gov/sites/default/files/uploads/arac-guidelines/usda.pdf>
- “Definition of Pain and Distress Reporting Requirements for Laboratory Animals” <https://www.ncbi.nlm.nih.gov/books/NBK99537/>
- “Animal Welfare Act” <https://www.nal.usda.gov/awic/animal-welfare-act>
- “IACUC SOP #2: Tissue Sampling in Rodents and Other Species” https://iacuc.wsu.edu/documents/2016/06/wsu_sop_2.pdf/
- “IACUC Policy #16: Antibody Production in Research and Teaching Animals” <https://iacuc.wsu.edu/documents/2019/12/policy-16.pdf/>