

Classification of Animal Use by Pain and Distress Categories

Taken from: <https://research.ncsu.edu/administration/compliance/research-compliance/iacuc/iacuc-procedures-and-guidance/classification-of-animal-use-by-pain-and-distress-categories/>

[Federal animal welfare regulations](#) (CFR Ch.1, 2.36(b) (5-7) require that USDA-registered research facilities report an annual census of regulated animals used in research and teaching, the species used, and the number of animals placed in each of the four “Categories of Pain and Distress” (B,C, D and E). As a means of meeting this requirement and providing consistency of IACUC review, the NC State University IACUC requires that pain and distress category information is provided when submitting an application. This page intends to provide general recommendations and guidance on how to assign animals to the different categories of potential pain and/or distress.

Pain and Distress Categories (B, C, D and E) with Possible Examples

When completing the protocol form, assign each animal species listed to one of the following categories: B, C, D or E. List each animal under the highest pain/distress category that will apply to the animal at any time while on the protocol. You are not required to include nonresearch-related veterinary care in determining the category of use. Please note that the severity or duration of the pain or distress and/or the use of anesthesia or analgesia to alleviate pain or distress may result in animals being placed in different categories.

Pain Category B

Animals being bred, conditioned or held for use in teaching, testing, experiments, research or surgery but not yet used for such purposes.

- Animals being bred or housed without any research manipulations (please see additional information regarding animals being bred under Category C)

Category C

Animal use activities that involve no more than momentary or slight pain or distress (no greater than an injection) where there is no need for use of pain-relieving drugs.

- Animals being bred that will undergo genotyping procedures or will be euthanized for any reason (for example euthanizing retired breeders)
- Holding, weighing or physical examinations of animals in teaching or research activities
- Injections, blood collection or catheter implantation via superficial vessels
- Observation or positive reinforcement training of animals in a laboratory setting

- Pre-weaning (younger than 21 days of age) methods of identification or genotyping (ear notching, wing banding, tail clipping, tattooing — unless general anesthesia needed)
- Feeding studies that do not result in clinical health problems
- Routine agricultural husbandry procedures approved by the IACUC
- Humane euthanasia that meets current AVMA standards
- Live trapping with minimal potential for injury
- Chemical immobilization or restraint, such as for transport or for procedures that are not considered painful but restraint is required for the species to perform the procedure correctly.
- Studies involving clinical signs not judged to involve more than slight pain or distress
- Protocols involving clinical research on client owned animals that are undergoing surgery not related to the research may be included in category C

Category D

Animal use activities that involve accompanying pain or distress to the animals and for which appropriate anesthetics, analgesics, tranquilizing drugs and/or humane endpoints are used to avoid pain, distress or discomfort.

- Survival surgical procedures where perioperative pain or distress is alleviated (e.g., catheter cut-down, laparoscopy or biopsies).
- Non-survival surgical procedures
- Retro-orbital blood collection in mice and rats
- Exsanguinations under anesthesia
- Tail clipping in rodents 21 days old and over, or tattooing that requires general anesthesia
- Induction of a disease, infection or genotype that causes pain or distress that is alleviated with the use of pain-relieving drugs or humane euthanasia as soon as signs of pain and/or distress develop

Category E

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. Category E procedures require strong scientific justification as to why pain-relieving drugs or other methods for relieving pain cannot be used. This includes citation(s) to published studies if applicable — describing the alternatives that were considered and how alternatives will be used whenever possible, clarifying whether animals will be euthanized when moribund, and if not, what information is to be gained in the interval between moribundity and death.

- Research or testing procedures that require death as an endpoint or continuation without pain-relieving intervention, even after clinical signs of pain or distress are evident

- Induction of disease, infection, or a genotype that results in pain or distress which may not be alleviated with the use of pain-relieving drugs or humane euthanasia as soon as signs of pain and/or distress develop
- Application of noxious chemicals or stimuli (e.g., electrical shock) when the animal cannot avoid/escape the stimuli and/or it is severe enough to cause pain or distress
- Novel, prolonged restraint
- Exposure to extreme environmental conditions
- Food or water deprivation beyond that which is necessary for routine pre-surgical preparation or is deemed stressful to the animal
- Euthanasia by non-AVMA approved methods
- Any procedures for which needed analgesics, anesthetics or tranquilizers must be withheld for justifiable purposes