

Guidelines for Determining USDA Pain/Distress Levels

| USDA Category B | USDA Category C | USDA Category D | USDA Category E |
|--------------------------------------|---|--|---|
| Breeding or Holding Colony Protocols | No more than momentary or slight pain or distress and no need of pain-relieving drugs. | Pain or distress appropriately relieved with anesthetics, analgesics and/or tranquilizer drugs or other methods for relieving pain or distress. | Pain or distress or potential pain or distress that is <u>not</u> relieved with anesthetics, analgesics and/or tranquilizer drugs or other methods for relieving pain or distress. |
| | Examples | Examples | Examples |
| | <ol style="list-style-type: none"> 1. Holding or weighing of animals in teaching or research activities. 2. Injections, blood collection or catheter placement (without cut-down) via superficial vessels. 3. Tattooing animals. 4. Ear punching of rodents. 5. Toe clipping in mouse pups before 7 days of age 6. Tail clipping before 21 days of age in mice. 7. Fin clipping for genotyping in fish. 8. Routine physical examinations. 9. Observation of animal behavior. 10. Feeding studies, which do not restrict food amount or result in clinical health problems 11. AVMA approved humane euthanasia procedures 12. Tissue collection after euthanasia 13. Positive reward projects. 14. Physical restraint with appropriate acclimation 15. Induced seizures 16. Decapitation and cervical dislocation in rodents without anesthesia but proper training of personnel 17. Anesthesia for immobilization only 18. Fish depredation 19. Food or water restriction (under 24 hours) | <ol style="list-style-type: none"> 1. Diagnostic procedures, e.g. Laparoscopy or needle biopsies. 2. Non-survival surgical procedures. 3. Survival surgical procedures and post-operative pain alleviated. 4. Ocular blood collection in mice. 5. Terminal cardiac blood collection under anesthesia. 6. Exposure of blood vessels for catheter implantation. 7. Exsanguination under anesthesia. 8. Tumor studies with solid tumors which are localized, non-invasive, and metastases do not occur before euthanasia of the animal or early stages without affecting animals 9. Toxicological, microbiological, or infectious disease research that requires continuation until moderate clinical signs are evident but death is not the endpoint. These animals will receive appropriate supportive care. | <ol style="list-style-type: none"> 1. Death as an endpoint – Toxicological or microbiological testing or cancer research that requires continuation until death occurs. This must be scientifically justified and approved by IACUC. 2. Application of noxious stimuli such as electrical shock if the animal cannot avoid/escape the stimuli and/or it is severe enough to cause injury or more than momentary pain or distress. 3. Any potentially painful/distressful procedures for which needed analgesics, tranquilizers, anxiolytics, sedatives, or anesthetics must be withheld for justifiable study purposes. 4. Exposure to abnormal or extreme environmental conditions, which induce pain/distress. 5. Experimental allergic encephalomyelitis 6. Chemically induced or infectious colitis 7. Hypoxic and hyperoxic (>24 hours) environment 8. CFA, formalin or carrageenan injected in foot pads (only allowed for pain studies) 9. Tumor studies with known early ulceration, invasiveness and/or occurrence of metastases, 10. Induced pancreatitis 11. Parkinson's models 12. Huntington's models 13. Stroke models, both ischemic and hemorrhagic 14. Asthma models with respiratory distress Administration of drugs leading to addiction including a withdrawal period and associated withdrawal symptoms 15. LPS injections (acute and/or chronic) |

(Note: there is no USDA Category A.)

Last IACUC review/approval: January 26, 2024