

UPEI / AVC

Guidelines for Categories of Invasiveness and Rest Periods for Teaching Animals

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Background

The UPEI Animal Care Committee (ACC) recognizes that animals can be a valuable resource in a professional veterinary education program providing that appropriate pedagogical merit is provided. The privilege of using animals in teaching at UPEI/AVC requires guidelines be in place to protect their health and welfare by minimizing discomfort, pain and distress and ensuring appropriate respite periods follow all procedures to which they may be subject. In addition to creating consistent procedures for using animals in teaching, this document provides Categories of Invasiveness for teaching procedures and corresponding periods of required rest and recovery. Course coordinators and instructors will use this document to provide the ACC with appropriate categories of invasiveness for all proposed procedures and to schedule laboratory sessions using the designated rest periods. Final decisions on the assignment of categories and compliance with guidelines will reside with the ACC.

1. Purpose

The primary purpose of this SOP is to protect the health and welfare of animals belonging to UPEI/AVC by providing parameters governing animal use in both undergraduate and graduate teaching programs. This SOP approximately follows, but does not replace, the Categories of Invasiveness described by the Canadian Council on Animal Care (CCAC) "Guide to the Care and Use of Experimental Animals".

2. Scope

All teaching procedures involving animals owned by UPEI/AVC, either through purchase or donation, fall under the guidance of this document.

3. Responsibility

This SOP applies to all teaching faculty, contractual staff, animal health technicians, university staff, house officers and students working with animals owned by UPEI/AVC in a teaching environment. The course coordinator and the Chair of the Department will have the responsibility of determining appropriate Categories of Invasiveness to be recommended to the ACC. Compliance with this SOP is the responsibility of the ACC, the Chairs of the Clinical Departments and the University Veterinarian.

4. Policy and Procedure

4.1 UPEI Animal Care Committee

4.1.1 All teaching activities involving the use of animals belonging to UPEI/AVC must have an approved UPEI ACC Animal Use Protocol (AUP) prior to proceeding. The categories of invasiveness described here are to be referenced in the AUP.

4.2 Assumptions

- 4.2.1 Individual procedures vary in severity and in the corresponding stress that they create for each animal, and therefore should be assigned a category that accounts for the maximum level of invasiveness that can be reasonably expected to be encountered.
- 4.2.2 Each described procedure will be conducted by a relatively inexperienced student, thereby resulting in the potential for greater discomfort and stress than might normally be expected. In cases where more experienced handlers are responsible for performing a specific procedure (eg. a demonstration), such additional expertise may warrant a reduction in the assigned category, with corresponding implications for scheduling.
- 4.2.3 Individual animals will react differently to procedures and exhibit varying degrees of stress to various procedures. Animals which demonstrate sensitivities to particular procedures should be spared such manipulations wherever possible and should be given extended periods of rest beyond those described here.
- 4.2.4 A procedure may include multiple activities involved in performing the exercise appropriately (eg. Catheter placement prior to general anesthesia). In these cases, the category is assigned based on the overall duration of the exercise and/or the component that carries the maximum level of invasiveness, whichever is greater.
- 4.2.5 Procedures that involve unalleviated pain or distress will not be considered acceptable.

4.3 Categories of teaching animal use

- 4.3.1 All categories are subject to interpretation, and instructors should recognize that their expert recommendations as well as the collective expertise and opinions of the members of the ACC will often be required to decide which category to best assign a given procedure.

4.3.2 Categories

Category	Definition
A	<p>Procedures that are minimally invasive, of short duration and obviously result in short and/or long term benefit to the health and welfare of the animal. This category applies to physical exams and procedures deemed part of routine handling and husbandry for a given species (eg. grooming, vaccinations). Minimally invasive activities involving post-procedural management of cases (eg. bandage changes, drug administration, physical examination) also fall under this category.</p> <p>Weight = 0</p>
B1	<p>Procedures that cause minimal discomfort or stress, are not expected to result in residual discomfort, and carry minimal risk for complications that could impinge on the animal's welfare. Each procedure in this category may require positioning of an animal for a period that is not expected to exceed 30 minutes and will not involve general anesthesia. Examples include certain injections (i.m., s.c., i.v.), routine rectal palpations, and clinical monitoring (external abdominal ultrasound or ECG).</p> <p>Weight = 1</p>
B2	<p>Procedures that cause mild discomfort or stress, have the potential to result in residual discomfort, and carry a low risk for complications that could impinge on the animal's welfare. Each procedure in this category may require positioning of the animal for a period that is not expected to exceed 60 minutes in duration and will not involve general anesthesia (Category C). Examples include urinary catheterization, endoscopy, endometrial biopsy, and arthrocentesis (horse), Liver Biopsy (cow).</p> <p>Weight = 2</p>
C	<p>Procedures that cause mild to moderate pain or stress, have a moderate potential to result in residual discomfort, and/or carry a moderate risk for complications that could impinge on the animal's welfare. Procedures in this category likely will require sedation, regional or general anesthesia, and/or analgesics. Procedures in this category would not be expected to exceed 2 hours in duration. Examples include minor surgery (defined as surgery that doesn't enter the body cavity or require exploration below subcutaneous tissue) and atlanto-occipital CSF collection.</p> <p>Weight = 4</p>
D	<p>All procedures that have the potential to cause moderate to severe pain or stress but will be alleviated through appropriate analgesic/anesthetic regimens. This includes all surgical procedures other than those classified as minor (see above) and procedures that require positioning of an animal for a period greater than 2 hours.</p> <p>Weight = 4</p>

- 4.3.3 The periods of time an animal spend in the procedure area while students organize themselves and while faculty provide a lecture component will not count towards the maximum procedural time as described in the categories. However, the maximum cumulative time of an animal's involvement in a teaching session (including those periods) will be 2 ½ hours unless a deviation from this SOP is granted by the Animal Care Committee or if a Category D is assigned.
- 4.3.4 Clinical faculty may elect to use chemical restraint (other than general anesthesia), local anesthesia, or analgesics without a change in category for any procedure if doing so will improve the safety, comfort and welfare of an animal or the handler/manipulator. Chemical restraint may not be used solely for the purpose of immobilization of an animal without providing relief from discomfort or pain induced by the procedure.
- 4.3.5 Appropriate physical restraint methods are expected to be used for the safety of the animals and of the handler. Such restraint may include manual manipulation, stocks, ties, halters, leads, collars, towel wraps, cat-bags and others that do not cause obvious discomfort to an animal. More invasive modes of physical restraint such as nose twitch, nose tongs, muzzles, may be used at the discretion of the clinical faculty when warranted but should be limited to brief periods. Unacceptable forms of restraint devices include breeding hobbles, electric collars, prong collars and others that cause obvious pain and distress to the animal.
- 4.3.6 A course instructor is not required to supervise a category (A) procedure being performed by students as part of the course, providing the student is appropriately trained for the procedure. All procedures in categories other than (A) must be conducted under the direct supervision of a qualified faculty or clinical staff member. Agricultural teaching animals are not to be moved from their housing without the presence of a faculty member, animal health technician or an AVC Animal Care Employee.

4.4 Maximum allowance and frequencies

- 4.4.1 Each category carries a weight (**Table 4.3.2 Categories**) to assist with establishing a maximum amount of procedural stress per animal over a time period.
- 4.4.2 No individual animal may be subjected to total procedural stresses with a combined weight greater than 4 in any 24 period (eg. 4 x B1 procedures, 2 x B2. once C or a D).

4.5 Rest Periods

4.5.1 Rest periods are assigned based on the maximum Category of Invasiveness of procedures performed on a particular day, not the overall number of procedures performed. (eg. 4 x B1s in one session will result in a 36 hour rest period.)

Maximum Category	Required Rest
A	No restriction.
B1	Minimum 36 hours rest following the time the procedure in this category is performed.
B2	Minimum of 60 hours rest following the time the procedure in this category is performed.
C	Minimum of 10 full days of rest.
D	A maximum of 2 procedures in this category are permissible for each animal, the second of which (if elected) must be terminal. No minimum rest period is required before a second category D procedure but a minimum of 3 full weeks rest must be granted before the next B1, B2 or C category procedure.

4.5.2 Under special circumstances and by special request to the ACC the above rest periods may be altered only if doing so is considered to be a justifiable and unavoidable component of the proposed exercise. These instances must be reported to the University Veterinarian to establish an appropriate post-procedural rest-period that will be at least as long as that defined for the maximum Category of Invasiveness of the exercise.

4.5.3 Annual Rest Periods

Each animal must be allowed a minimum of 12 weeks of prolonged rest from all teaching activities. These may be scheduled as three separate 4-week uninterrupted rest periods. At the discretion of the University Veterinarian, and in consultation of the responsible departmental faculty, these rest period may be prolonged for particular animals.

4.5.4 Replacement

Animals are to be maintained for teaching for a maximum of 4 years, at which time their health, disposition and suitability must be re-evaluated on an annual basis. The appropriate Department Chair and the University Veterinarian together are responsible for determining the suitability of animals which remain in the teaching program.

5. Deviations

5.1. **Deviations from this SOP or a UPEI ACC teaching protocol must be reported to the University Veterinarian and/or the UPEI Animal Care Committee.**