Canadian Council on Animal Care

ETHICS OF ANIMAL EXPERIMENTATION

These principles are presented to provide guidance and assistance to all those utilizing vertebrates in the conduct of research, teaching or testing.

In the establishment of ethical principles concerning animal experimentation, an effort has been made to incorporate the majority of the suggestions made by members of the Canadian Council on Animal Care, the Canadian Federation of Humane Societies, and other individuals concerned with the humane treatment of animals.

The polarized views of those at the extreme ends of the spectrum of the question of animal usage have, of necessity, been precluded i.e. those wishing to conduct experiments with little or no constraints regarding infliction of pain; those opposed, on humanitarian principles, to any suffering whatsoever.

Those using conscious animals should apply to their studies such tenets as Russell and Burch’s “3R” principle of reduction, replacement and refinement1, Dr. Carol Newton’s ‘3S’ principle of good science, good sense and good sensibility2, and Dr. H.C. Rowell’s “3R” tenet: the right animal for the right reasons3.

1. In studies involving animals there must be reasonable expectation that such studies will contribute significantly to knowledge which may eventually lead to the improvement of the health and welfare of either Man or animals.

2. Investigators have a moral obligation to abide by the humanitarian dictate that experimental animals are not to be subjected to unnecessary pain or distress.

3. If pain or distress are necessary concomitants of the experimental study, then these should be minimized both in intensity and duration.

4. An animal that is observed to be in a state of severe pain which cannot be alleviated should be immediately destroyed, using a humane, acceptable method for euthanasia which must include, as an initial action, rapid production of unconsciousness.

5. Studies such as toxicological and biological testing, cancer research and infectious disease investigation may require continuation until the death of the animal. This requirement, in the face of distinct and irreversible signs that toxicity, infectious processes or tumour growth have been reached and are causing severe pain and distress would clearly violate the principles outlined above. In such cases, alternative end points should be sought which would not only satisfy the objectives of the study but also give humane consideration to the animal.

6. In test procedures the investigator should be especially cautious with tests which may cause pain and distress. Acceptance should not be based on cheapness and ease of application.

7. Experiments involving the withholding of food and water should be short-term and have no detrimental effect on the health of the animal.

8. Prolonged physical restraint procedures which result in distress or ill effects should only be used after alternative procedures have been considered and found inadequate.

9. The use of painful experiments solely for the instruction of students or for the demonstration of established scientific knowledge in e.g. exhibits, conferences or seminars, cannot be justified.

3Proceedings of the 1978 Convention of the Canadian Association for Laboratory Animal Science (to be published).
10. It is accepted that where the animal is anesthetized and insensitive to pain during an entire experimental study and euthanized before regaining consciousness, there is no conflict of opinion concerning the acceptability of experimental procedures as long as the studies abide by the principles enunciated in this document. This applies also to the conduct of an experiment which involves no pain or distress to the animal.

However, in the use of conscious animals an informed assessment of the degree of pain and its duration is required, in order to relate these to acceptable, or unacceptable, limits. Investigators must be especially prudent in their use of the following procedures:

- a) experiments involving withholding pre or post-operative pain-relieving medication;
- b) paralyzing and immobilizing experiments where there is no reduction in the sensation of pain;
- c) electric shock as negative reinforcement;
- d) extreme environmental conditions such as low or high temperatures, high humidity, modified atmospheres, etc.

It must be understood that the degree of pain involved should never exceed that determined by the humanitarian importance of the problem to be solved by the experimental study. The following procedures must be restricted and used only when, on the basis of expert opinion it is anticipated that their utilization will undoubtedly contribute knowledge or benefit to Man or animals:

- i) prey killing and fighting experiments;
- ii) experimental burn studies and fracture studies. These studies require anesthesia during procedures, followed by analgesia.

11. Certain experimental procedures are known to inflict excessive pain and are thus unacceptable. These include:

- a) utilization of muscle relaxants or paralytics (curare and curare-like) alone, without anesthetics, during surgical procedures;
- b) traumatizing procedures involving crushing, striking or beating in unanesethetized animals or in animals allowed to recover from the anesthesia.

The above principles should be applied in conjunction with the guiding principles for the Care and Use of Experimental Animals as prepared and distributed by the Canadian Council on Animal Care.

The Canadian Council on Animal Care's Special Committee on Ethics of Animal Experimentation:

Dr. Florent Depocas (Chairman)  
National Research Council,  
(Division of Biological Sciences)

Dr. Angela Hefferman,  
Canadian Federation of Humane Societies

Dr. Larry Belbeck,  
Canadian Heart Foundation  
(McMaster University)

Dr. H.C. Rowsell, (ex-officio)  
Canadian Council on Animal Care,  
(University of Ottawa)

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