POLICIES AND PROCEDURES

SECTION: IACUC  
NUMBER: 7.18

CHAPTER: Miscellaneous Experimental Animal Use Policies

POLICY: Euthanasia using Decapitation

Purpose

The purpose of this policy is to establish clear guidelines and procedures for Animal Euthanasia using decapitation at Creighton University. Performing euthanasia correctly is an ethical imperative. Proper euthanasia is quick, minimizes pain/distress and reliably causes death. Practical issues such as degree of technical difficulty, time required to perform the procedure and readily available equipment/resources to perform the procedure as well as aesthetics and human emotion must also be considered. Standardized guidelines for humane euthanasia have been detailed in the AVMA Guidelines on Euthanasia: http://www.avma.org/issues/animalwelfare/euthanasia.pdf. This policy is approved by the Creighton University Institutional Animal Care and Use Committee (IACUC). All investigators will follow this policy unless scientific justification is provided and approved by the IACUC.

Application

Decapitation is an effective means of euthanasia in rodents and small rabbits. It can also be used on reptiles, amphibians and fish, but must be followed immediately by pithing due to the anoxia tolerance of nervous tissue in these animals.

In all animals, the preferred procedure is for animals to be anesthetized before decapitation; this reduces the potential for stress or unintended injury in the animal as well as the investigator. Decapitation may also be used to verify death in animals euthanized by other means, such as CO₂.

Investigators wishing to decapitate conscious animals must provide scientific justification for this approach in their protocol application. As for all forms of euthanasia, decapitation must be performed by trained personnel using appropriate technique and equipment.
**Policies and Procedures**

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**Procedures:**

- Decapitation may be performed using scissors or a sharp blade for neonatal or embryonic rodents. A guillotine should be used for larger animals.
- Ensure that blade edges are sharp and that the action of moving parts is smooth before proceeding.
- For conscious animals, the use of disposable plastic cones (e.g. Rodent Restraint Cone, Harvard Apparatus, Holliston, MA) is recommended to provide animal restraint, minimize distress, improve positioning, and enhance operator safety.
- Decapitation should be rapid to avoid unnecessary pain and distress in conscious animals.
- For protocols involving guillotines a record must be kept of each use to ensure blades are sharpened when required (see below).
- After use, all implements should be cleaned well to remove blood and other tissue.

**Maintenance of guillotines**

Guillotines must be well-maintained to perform efficiently and must be on a regular maintenance schedule to prevent undo pain and suffering of the animals.

- A light oil or silicone lubricant should be applied to moving parts regularly. Qualified personnel must disassemble and clean all parts if the action of the guillotine is no longer smooth.

Guillotines blades must be serviced annually or every 250 uses, whichever comes first. A commercial sharpening service may be used, or investigators may contact the Physics Department office of the Physics Machine Shop. The service need not sharpen blades deemed sufficiently sharp, but must verify that they have been checked. A record of service must be kept on or near the guillotine.