



Institutional Animal Care and Use Committee (IACUC) Directive 18.0: Maintenance of Blades

1.0 Directive Purpose

The purpose of this directive is to ensure that the blades used for decapitation of rodents, such as guillotine blades or surgical scissors, are kept in working order and that the animals are afforded a humane method of euthanasia in accordance with the American Veterinary Medical Association (AVMA) Guidelines.

2.0 To Whom the Directive Applies

This directive applies to all individuals using rodents at Brown University under an approved IACUC animal use protocol.

3.0 Directive Statement

The Brown IACUC adopts the AVMA Guidelines in its approach to permitting decapitation as a method of physical euthanasia for rodents. Decapitation is categorized as “Acceptable with Conditions” for use as a physical method of euthanasia in the [AVMA Guidelines for the Euthanasia of Animals: 2020 Edition](#), which further stipulates the following conditions to which Brown adheres:

- The equipment used to perform decapitation must be maintained in good working order and serviced on a regular basis to ensure sharpness of blades.
- Those responsible for the use of this method must ensure that personnel who perform decapitation have been properly trained to do so and are monitored for competence.

Maintenance of equipment and training of personnel must be documented as described in this directive.

3.1 Guidelines

- Utilizing a guillotine, dedicated surgical scissors, or single-use blades for decapitation must be described and approved in an IACUC animal use protocol prior to use.
- Personnel using a guillotine, scissors, or single-use blades must ensure that the guillotine, scissors, or blades are in good condition prior to use and must be properly trained in their use. Training shall be documented by the Principal Investigator of the protocol.
- Personnel using guillotines or scissors are responsible for their proper maintenance, including cleaning and disinfection after each use, as-needed lubrication with silicone, and sharpening the blades. The blade movement must be smooth with no perceptible binding or resistance. The blade must be rust-free, clean, sharp and able to decapitate with minimal force.

- Single-use blades must be disposed of in a puncture-proof sharps container immediately after use.
- Frequency of blade sharpening depends both upon frequency of use and the species euthanized. Guillotine blades and dedicated surgical scissors must be sharpened **at a minimum of every twelve months, when in regular use, according to the Center for Animal Resources and Education (CARE) sharpening schedule**. Depending on the species and number of animals decapitated, blades may need to be sharpened more frequently. Refer to the CARE sharpening schedule for additional guidelines.
- Log books must be maintained and located with the guillotine or dedicated scissors and these books must include a record of each use, as detailed below.

3.2 Use of Guillotine and/or Scissors

Before using the guillotine or dedicated scissors for decapitation, personnel must check for rust, ease of blade movement, and cleanliness. After use, personnel must ensure guillotine/scissors are properly cleaned and stored in accordance with the following:

- Personnel must clean the base and blade (guillotine) or blades and screw lock (scissors) to remove gross contamination, and disinfect the blade(s) (*e.g.*, quaternary ammonium compound, Clidox, or other disinfectant).
- Personnel must use a final 70% ethanol rinse to reduce the need to hand-dry the equipment.
- Personnel must store the guillotine upside down with the blades opened to facilitate drying.

3.3 Maintenance

All blades must be sharpened or replaced at a minimum of once every 12 months when in regular use and in accordance with manufacturer instructions. For safety reasons, only qualified individuals are permitted to take a guillotine apart if necessary. Please reach out to CARE for assistance.

3.4 Recordkeeping

Personnel responsible for the use of the guillotine or scissors used for decapitation must maintain a log book for each guillotine or pair of scissors. The log book must be made available to the IACUC, federal agency inspectors, or AAALAC International site visitors during inspections to ensure the following information is documented:

- Personnel Training – personnel should use the log included as [Appendix A](#) or a similar log that records the same information.
- Blade Usage – personnel should use the log included as [Appendix B](#) or a similar log that records the same information.
- Dates of blade sharpening – personnel should use the log included as [Appendix C](#) or a similar log that records the same information.

4.0 Definitions: N/A

5.0 Responsibilities

All individuals to whom this directive applies are responsible for becoming familiar with it and following this. Animal research program stakeholders (IACUC, CARE, ARC) are responsible for promoting the understanding of this document and for taking appropriate steps to help ensure adherence to it.

6.0 Consequences for Violating this Document

Violation of this document may be considered a serious event of noncompliance that is reportable to the IACUC, funding and accrediting agencies, as well as other regulatory agencies. Violations of this document are a serious matter that may adversely affect both the ability to perform animal work and acquire funding sources.

7.0 Related Information

Brown University is a community in which employees are encouraged to share workplace concerns with University leadership. Additionally, [Brown's Anonymous Reporting Hotline](#) allows anonymous and confidential reporting on matters of concern online or by phone (877-318-9184).

The following information complements and supplements this document. The information is intended to help explain this document and is not an all-inclusive list of policies, procedures, laws and requirements.

7.1 Related Policies/Directives/SOPs: N/A

7.2 Related Procedures: N/A

7.3 Related Forms: N/A

7.4 Frequently Asked Questions (FAQs): N/A

7.5 Other Related Information:

- AVMA Guidelines for the Euthanasia of Animals: 2020 Edition. AVMA: Schaumburg, IL.
- Institute for Laboratory Animal Research. Guide for the Care and Use of Laboratory Animals, 8th Edition. National Academies Press, 2020.

8.0 Document Owner and Contact

8.1 Owner: IACUC

8.2 Approved by: IACUC

8.3 Subject Matter Contact: Brown University Animal Research Compliance (ARC)

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9.0 Document History

9.1 Effective Date: October 3, 2014

9.2 Last Reviewed: October 6, 2023

9.3 Update/Review Summary: This document is not new; it was converted to the directive format and reviewed by the IACUC at its October 6, 2023 meeting.

- Section 8.3 was updated on December 2, 2020, to reflect a new office title. This content was converted to the University's new policy template and re-reviewed by the IACUC at its convened meeting on April 3, 2020. Guideline document superseded by this policy:

