



CARE 564.01 Environmental Enrichment Program for Hamsters

The intent of this standard operating procedure (SOP) is to describe the methods to provide an environmental enrichment program for hamsters. This SOP is intended for principal investigators and anyone caring for hamsters. This procedure is approved by the Cornell Institutional Animal Care and Use Committee (IACUC) and the Cornell Center for Animal Resources and Education (CARE). Any exemption must be approved by the IACUC prior to its application.

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1. Introduction

The purpose of environmental enrichment is to provide hamsters with the opportunity to fulfill and express basic non-injurious behavioral needs that are typical to the species. Meeting these behavioral needs by providing a biologically relevant environment (i.e., opportunity to hide, socialize, and forage) will optimize physiologic and psychological well-being thereby enhancing animal welfare.

2. Materials

- PVC pipe
- Nesting material
- Hardwood block

3. Procedures

a. Social Contact

- i. Pair- or group-house hamsters of same gender, except for:
 - Pregnant females
 - Incompatible animals
 - Animals under a specific protocol for which the IACUC has approved single housing
 - Animals isolated for medical reasons by the veterinary staff

b. Housing System

- i. House hamsters in solid-bottom cages with contact bedding, unless specifically described otherwise in a protocol and approved by the IACUC.

- ii. Minimal space recommendations for a standard cage (~143 sq. inches):
 - 1 female with one litter until weaning
 - Do not exceed 400 g (total weight of all hamsters) per cage
 - House hamsters of similar weight together.
- c. Dietary Enrichment
 - i. Provide food pellets inside the cage.
 - ii. Provide hamsters with dietary supplement as directed by CARE veterinary staff or principal investigator staff.
- d. Objects
 - i. Shelter and nesting material
 - ii. Provide a paper shelter and nesting material (e.g., NESLET) in every cage.
 - iii. Transfer the nest to the clean cage with the animals, with additional nesting material, and provide a new shelter if necessary.
 - iv. Provide a block of hardwood (e.g., maple) inside the cage.

NOTE: do not use aromatic cedar or pine, as they can cause liver damage.

4. Safety

When working with animals wear appropriate PPE and be aware of allergy, zoonosis and injury risks. Refer to appropriate references below.

5. Contingencies N/A

6. References

- *Comfortable Quarters for Laboratory Animals*, Animal Welfare Institute (AWI), 2002: <http://www.awionline.org/pubs/cq02/cqindex.html>
- *Enrichment Strategies for Laboratory Animals*, ILAR Journal: Vol. 46(2), 2005; NRC.
- *Guide for the Care and Use of Laboratory Animals* (a.k.a. *The Guide*), National Research Council (NRC), National Academy Press: Washington, DC, 1996: <http://books.nap.edu/html/labrats/contents.html>
- *Making Lives Easier for Laboratory Animals*, Animal Welfare Institute (AWI), 2007: <http://www.awionline.org/pubs/LAREF/LAREF-bk.html>
- Zoonosis: <http://www.research.cornell.edu/care/zoonoses.html>
- Allergens Prevention: [http://www.research.cornell.edu//CARE/documents/OHS/AllergyPreventionFact Sheet.pdf](http://www.research.cornell.edu//CARE/documents/OHS/AllergyPreventionFactSheet.pdf)
- CARE 707.01 Animal Related Injury: <http://www.research.cornell.edu/care/documents/SOPs/CARE707.pdf>

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