

Institutional Animal Care and Use Committee		HSC
Title: Special Care of Animals (Formerly Food and Water Restriction)		
Document #: 028	Version #: 05	
Approved by IACUC Date: January 23, 2024		

A. BACKGROUND INFORMATION

- a. Special Care of animals, such as food and water restriction, special diet, treated water, or PI maintained animals may be required in order to achieve a variety of research and/or husbandry objectives.
- b. According to the Guide (Pg. 27), “Certain animal use protocols include procedures or approaches that require special consideration during the IACUC review process due to their potential for unrelieved pain or distress or other animal welfare concerns”.
- c. Justification for these special considerations must be stated in the protocol.

B. RESPONSIBILITIES

- a. It is the responsibility of the Principal Investigator to provide a description and justification of the special care for the animals, while addressing any animal welfare concerns. In addition, the Principal Investigator and research staff share the responsibility of following this SOP.
- b. The IACUC is responsible for weighing the objectives of the study against potential animal welfare concerns when reviewing the justification for the need of special care. The IACUC is also responsible for communicating and assuring this SOP is followed.
- c. DLAM will be responsible for following the instructions on the special care card.

C. PROCEDURES

- a. Categorization of Protocols (Only for Food and Water Restriction)
 - i. Food and/or water restriction studies conducted in **healthy** animals will be considered category C if:
 - 1. The final weight is not less than 80% of the body weight from established growth curves, unrestricted control animals or, in the case of adults, healthy pre-study control weights
 - 2. The target weight is not less than 85% of this established body weight
 - 3. The experimental treatment is not expected to produce further weight loss than the restriction alone
 - 4. If the restriction is temporary and not a lifelong restriction.
 - ii. Deviation from these conditions may rank the protocol as category E.

iii. Food and/or water restriction studies in species other than mice or rats will be considered category E unless the IACUC determines otherwise.

b. Justification

i. Food and Water Restriction:

1. A statement indicating the need for dietary restrictions and how it relates to the study objectives, as well as the length of time in which the animals will be restricted. Please note that studies involving restriction for greater than 24 hours need to be scientifically justified.
2. The type of restriction should be described with the degree of restriction in % of the ad libitum or normal daily intake or as a percentage change in an animal's body weight. Please note that the protocol must use the least amount of restriction needed to achieve the scientific goal while maintaining the animal's well-being.
3. A description of the program for monitoring the physiologic and behavioral well-being of those animals on restriction and the criteria for temporary or permanent removal of an animal from the experimental protocol. Please note that body weights must be recorded weekly at a minimum, and more frequent for severe caloric restriction (CR). Records must also include the daily food and fluid consumption (as applicable) and any behavioral or clinical changes. These records must be made available to the IACUC or DLAM staff upon request.
4. When restricting food from swine, please be sure to complete the "Request for Swine Food Restriction" form and follow the instructions on the form.
5. Other Considerations for food and water restricted animals:
 - a. In conditioned response research, use of highly preferred food as positive reinforcement should be used instead of food restriction and literature searches for alternatives must be provided.
 - b. Whenever an animal obtains any portion of its diet through positive reinforcement (food reward), the investigator must ensure that the sum of the nutritional value of the food earned through reward and of the food provided "free" (without necessity of earning it) is sufficient to maintain the animal in a stable weight.
 - c. The investigator is responsible for assuring that specially formulated diets are nutritionally adequate and palatable and

fortified at levels to maintain health especially in long term restriction defined as over 14 days.

d. Intervention endpoints must be specified in the protocol.

Examples of specific endpoints include:

- i. Failure of animals that would normally be growing to gain weight.
- ii. For mice and rats, when segmentation of vertebral column is evident; dorsal pelvic bones are readily palpable.

c. Special Diet / Treated Water:

- i. A statement of the need for altering the diet or water for the animals, as related to the study objectives.
- ii. A statement that the food is nutritionally balanced. If it is not nutritionally balanced, it should describe the effects the diet might have on the animal.
- iii. If animals will be provided fluids other than water, a description of the fluid given should be provided, along with any adverse effects it may have on the animals.

d. PI Maintained Animals:

- i. The Protocol should clearly state what the PI will be responsible for in the care of the animals, and when the PI maintenance is in effect.
- ii. Investigators must use the Special Care Form to document the special care given to the animals by the PI or by DLAM. The form is found on the DLAM website and should be submitted to the DLAM office by email (HSCDLAM.Office@unthsc.edu). This form should be submitted at least one business day prior to the start of the special care.
- iii. Specific instructions and guidance on completing the form can be found on the second page of the form.
- iv. A yellow “Special Care by the PI” cage card must be completed and placed on each cage of animals. These cards indicate special care given to animals by the PI.
- v. A teal “Special Feed / Water” cage card must be completed and placed on each cage of animals. These cards indicate that DLAM will use special feed or water provided by the PI to care for the animals.
- vi. You can find these cards in the DLAM facility, alternatively, DLAM staff may assist you in locating these cards.
- vii. Once the special care is no longer needed, the PI must immediately notify DLAM through email (HSCDLAM.Office@unthsc.edu) and remove the special care card from the animal’s cage.

e. Exceptions to Housing Requirements:

- i. Protocols requesting special housing of animals outside of the recommendations from the Guide standards must be described in the protocol with scientific justification. Examples of this includes singly housing social animals, removing enrichment from the cages, or implementing a special caging for housing of animals (i.e., metabolic caging).
- ii. At times there are veterinarian recommended exceptions. For example, social housing of obese animals may enter into an area where they appear to be exceeding the space requirements set forth within the Guide. Based on a veterinary recommendation, these animals may continue to be housed together to fulfill their social housing needs, although close observation may be needed to ensure spacing needs are met.
- iii. There may be times when there are exceptions to the enrichment program. All animals will receive enrichment in accordance with IACUC SOP 048: Enrichment for Laboratory Animals. However, protocols may have special considerations regarding environmental enrichment, in which a justification will be required, and enrichment will be provided in accordance with the IACUC approved protocol, with approval from the Attending Veterinarian (AV).

D. REFERENCES & ATTACHMENTS

- a. [The Guide for the Care and Use of Laboratory Animals \(2011\), National Academies Press, Washington, D.C.](#)
- b. [Special Care by PI form with instructions](#)
- c. Special Care by the PI cage card example
- d. [Request for Swine Food Restriction Form](#)

Special Care by the PI Cage Card Example:

Special Care

SPECIAL CARE BY THE PI

Protocol # _____

Cage/Group ID: _____

Please check the appropriate item(s) :

<input type="checkbox"/> No Food	<input type="checkbox"/> No Water
<input type="checkbox"/> PI Will Feed	<input type="checkbox"/> PI Will Water
<input type="checkbox"/> Do Not Change The Cage	
<input type="checkbox"/> Other (See room sheet for details)	

PI ASSUMES RESPONSIBILITY FOR ITEM(S) CHECKED ABOVE.

Special Feed/Water

DLAM feeds special feed/water. PI is responsible for providing feed/water. If special feed/water is not available, DLAM will resume normal diet.

Protocol # _____

Cage/Group ID _____

Type of Feed/Water _____

Location of Feed/Water _____

Single Housed

Single Housed

- Breeding
- Social Incompatibility
- Veterinary
- Research (must be justified in IACUC protocol)

No EE

No Environmental Enrichment

*must be justified in IACUC protocol