

# IACUC Policy on Food and Water Restriction of Animals

## Background:

Regulation of food or fluid intake may be required for the conduct of some physiological, neuroscience, and behavioral research protocols. The regulation process may entail *scheduled access* to food or fluid sources, so an animal consumes as much as desired at regular intervals, or *restriction*, in which the total volume of food or fluid consumed is strictly monitored and controlled. The objective when these studies are being planned and executed should be to use the least restriction necessary to achieve the scientific objective while maintaining animal well-being.

## Protocol Review:

The development of animal protocols that involve the use of food or fluid regulation requires the evaluation of three factors: the necessary level of regulation, potential adverse consequences of regulation, and methods for assessing the health and well-being of the animals. In addition, the following factors influence the amount of food or fluid restriction that can be safely used in a specific protocol: the species, strain, or stock, gender, and age of the animals; thermoregulatory demand; type of housing; time of feeding, nutritive value, and fiber content of the diet; and prior experimental manipulation. The degree of food or fluid restriction necessary for consistent behavioral performance is influenced by the difficulty of the task, the individual animal, the motivation required of the animal, and the effectiveness of animal training for a specific protocol-related task.

## Policy:

Because these procedures may cause more than momentary or slight distress to the animals, the USC IACUC has established the following guidelines:

1. The animals should be closely monitored to ensure that food and fluid intake meets their nutritional needs. Special attention should be given to ensuring that animals consume a suitable balanced diet because food consumption may decrease with fluid restriction.
2. Written records should be maintained for each animal to document daily food and fluid consumption, hydration status, and any behavioral and clinical changes used as criteria for temporary or permanent removal of an animal from a protocol. Body weights should be recorded at least weekly and more often for animals requiring greater restrictions. Precautions that should be used in cases of fluid restriction include daily recording of fluid intake and body weight at least three times per week (including weekends and holidays). All log sheets must be kept with the animals and be accessible to the IACUC and DLAR staff. In the case of conditioned-response research protocols, use of a highly preferred food or fluid as positive reinforcement, instead of restriction, is recommended.
3. The objective when these studies are being planned and executed should be to use the least restriction necessary to achieve the scientific objective while maintaining animal well-being.
4. A monitoring program for these animals must be described in the AUP. This should include physiological and behavioral parameters for assessment of pain or distress, including criteria (such as weight loss or hydration state) for temporary or permanent removal of the animals from the experiment. Body weight must not be allowed to drop below 80% of normal (taking into account the normal anticipated growth for that animal).