Washington State University
INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

POLICY #35: POLICY ON FOOD, FLUID RESTRICTION, AND DIET MANIPULATION IN ANIMALS

A. Purpose:
This policy establishes standards and expectations for researchers performing food and/or fluid regulation or experimental diet manipulation in animals for research purposes. Food and/or fluid regulation requires special IACUC consideration due to its potential impact on animal welfare. Food and/or fluid regulation may entail scheduled access to food or fluid sources or restriction of the total daily amount of food or fluid provided to the animal.

The development of IACUC protocols that involve food or fluid regulation requires the evaluation of three factors: the necessary level of regulation, the potential adverse consequences of the regulation, and methods for assessing the health and well-being of the animals. Scientific justification must be provided when experimental diets or food and/or fluid regulation are proposed. The following refinements and alternatives should be considered, if applicable to the particular reason for regulation:

- The least restrictive schedule that will achieve scientific objectives should be utilized
- Use of highly preferred food or fluid as a positive reinforcement instead of restriction
- Consideration of breaks or easing or regulation once an animal is trained in the regime
- Consideration of subject suitability towards training before and during the training period

Animals that require experimental diets and food and/or fluid regulation must be closely monitored to ensure welfare. Written records must be maintained as described below and be made easily accessible for IACUC or veterinary review.

Definitions:

- **Regulation** is a deviation from the standard husbandry practices in the amount or availability of food or water. It includes scheduling and restriction as defined below.
- **Scheduled Access** - An animal consumes as much as desired at regular intervals.
- **Restriction** - The total volume of food or fluid consumed is strictly monitored and controlled.
- **Ad libitum** - food or water intake is the amount consumed when the animals has free access to food and/or water all times.

**B. Scope:**
For the purpose of this policy, food and/or fluid regulation and diet manipulation will include any deviation from normal husbandry procedures for the species, with the exception of fasting for surgical procedures. Pre-surgical fasting is generally for a period of less than 12 hours and these guidelines do not apply.

**C. Procedure:**
**Protocol Requirements:**
- **Food and/or Fluid Regulation**
  - Provide the scientific justification for food/fluid regulation.
  - Provide a complete description of the proposed food/fluid regulation including the feeding or watering schedule, length of regulation, identification of personnel responsible for the regulation and/or the total amount of the food/fluid restriction (i.e. an exact percentage of the amount of food/fluid being restricted that was calculated from a measured amount of normal daily consumption).
  - Describe any potential and expected adverse effects of the food/fluid regulation
  - Describe how the animals will be monitored. Monitoring must include daily observation, food/fluid consumption, and at least weekly bodyweights.
  - Indicate criteria (behavioral and/or clinical changes) to be used for temporary or permanent removal of an animal from regulation,
- **Experimental/non-standard/special diets**
  - Provide the justification for the use of experimental diet
  - Provide a complete description of the experimental diet including length of use and how it differs from the standard diet for the animals used (species, age, strain, pregnancy, gender, etc.)
  - Provide information on where and how the diet is prepared (WSU feed mill, commercial vendor, laboratory-made, etc.) and how the quality of the diet is assured for nutritional content and being free of contaminants (heavy metals, residues, etc.)
  - Provide details about the method and duration of storage of the experimental diet
  - Describe any potential and expected adverse effects of diet manipulation
Describe how the animals will be monitored. Monitoring must include daily observation. Depending on the type of manipulation, intake and bodyweights may also need to be monitored.

Include any details about potential occupational health and safety concerns that may be associated with use of the experimental diet

**Record Keeping:**

- Food and Fluid regulation: a sample daily log sheet ([sample 1](#), [sample 2](#)) for food or fluid regulation is available for use or you may develop your own log based on the template. The following items must be maintained for each animal on study:
  - Signage to clearly mark which animals are on food or fluid regulation
  - General information including protocol number, PI, contact person, etc.
  - Baseline weight (before regulation period begins)
  - Daily food consumption (for food restriction)
  - Daily fluid consumption (for fluid restriction)
  - Feeding Schedule if scheduled access
  - Daily health observations (e.g., hydration status, behavior, body condition score, presence of urine and feces or any other criteria used for temporary or permanent removal from the regulation)
  - Weekly body weight (may be more frequent if protocol requirements indicate)
  - Date, Time, and Initials of personnel who evaluated animal (daily)

**Experimental/non-standard/special diets**

- Signage to clearly mark which animals are on food or fluid regulation
- General information including protocol number, PI, contact person, etc.
- Daily health observations (e.g., hydration status, behavior, body condition score, presence of urine and feces or any other criteria used for temporary or permanent removal from diet)
- Date, Time, and Initial of personnel who evaluated animals-daily.
- If there are anticipated adverse effects, and/ or if protocol requirements indicates monitoring adverse effects such as weight loss, then additional monitoring and weighing of the animals may be necessary.

**References:**
Animal Welfare Act and Regulations, in accordance with 9 CFR, Ch.1 Part 3-Standards-Subpart A through Subpart D.


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