

## FOOD OR FLUID RESTRICTION DEFINITIONS, POLICIES AND GUIDELINES

### Food or Fluid Restriction Definitions

- **Standard for Food Intake:** “Animals should be fed palatable, uncontaminated diets that meet their nutritional and behavioral needs at least daily, or according to their particular requirements . . . “ p. 65 in the Guide for the Care and Use of Laboratory Animals, NRC 8<sup>th</sup> ed. 2011 (the Guide). The IACUC interprets this to mean "ad lib" feeding unless otherwise justified.
- **Standard for Water Intake:** "Animals should have access to potable, uncontaminated drinking water according to their particular requirements-" (P. 67, " the Guide , 2011). The IACUC interprets this to mean "ad lib" feeding unless otherwise justified.
- **Restriction** is any deviation from the standards for food and water intake.
- **Deprivation** is total withholding of either food or fluid.
- **Fasting for surgical procedures** is usually for a period of less than 12 hours, with the exception of farm animals which may require a longer period of fasting. This is not considered deprivation and the following guidelines below do not apply. Pre-operative fasting of rodents is not recommended except as specific procedures require.

### Food or Fluid Restriction Policy and Guidelines

The IACUC endorses as policy the following excerpt from page 31 of the Guide:

“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. . . . The animals should be closely monitored to ensure that food and fluid intake meets their nutritional needs. Body weights should be recorded at least weekly and more often for animals requiring greater restriction.”

Restriction of either food or fluid intake should be justified based on the scientific objectives of the study, and the least restriction that will achieve these objectives should be used. The plan for appropriate periodic weighing, starting with a pre-experimental weight, and monitoring of animal health must be included in the protocol. When **food deprivation or restriction** is planned, the following humane endpoints apply, unless alternate endpoints have been appropriately justified and approved by the veterinarian and the IACUC:

- Animals that acutely lose more than 20% of their body weight (compared to matched controls and/or a normal anticipated growth curve) should be eliminated from the study (euthanized) or placed back on a normal diet.

- When weight losses greater than 30% occur over a prolonged period of time (taking into account the normal anticipated growth for that animal), the deprivation or restriction must be terminated or the animal must be euthanized if weight loss continues beyond 30%.

This policy should not be construed to prohibit moderate caloric restriction of animals which are being housed for long-term studies. “Management of caloric intake is an accepted practice for long-term housing of some species . . . for example; there is good evidence that mice and rats with continuous access to food can become obese with attendant metabolic and cardiovascular changes. . . Benefits of moderate caloric restriction in some species may include increased longevity and reproduction, and decreased obesity, cancer rates and neurogenerative disorders. “(p. 67, the Guide). However, a plan should still be included in the protocol for periodic (at least weekly) monitoring of body weights for animals on caloric restriction.