Georgia State University

Institutional Animal Care and Use Committee

(IACUC)

It is the responsibility of the Georgia State University (GSU) Institutional Animal Care and Use Committee (IACUC) to ensure judicious and humane use of animals used in its teaching and research programs that is consistent with federal requirements.*

Food and/or Water Restriction

Ethical principles and federal regulations dictate that animals be fed a wholesome and nutritionally adequate diet taking into consideration the species being used and individual animal characteristics (e.g. age, strain, housing type, etc.). However, it is recognized that the restriction of food or water intake may be required for the conduct of some experimental studies. The restriction process may entail scheduled access to food or water sources, so an animal consumes as much as desired at regular intervals, or a plan in which the total volume of food or water that is consumed is strictly monitored and controlled.

Restriction of food and/or water must be scientifically justified in the IACUC protocol and approved by the IACUC prior to initiation of the research. Because food and/or water restriction may be conducted for a variety of reasons, the IACUC will consider the maximum period and severity of restriction on a case-by-case basis with reference to the welfare of the animals (including consideration of the age, species and natural biology of the animal) as well as the goals of the particular study. The minimum period and severity of restriction needed to achieve the desired objective of the restriction should be elucidated. A monitoring plan to assess potential adverse consequences of the restriction as well as specific criteria for intervention and removal of an animal from a study must be clearly described in the IACUC protocol. Any animal under food and/or water must be observed as frequently as necessary, but at a minimum of daily, by personnel trained to evaluate the animal’s health and wellbeing. The weights of most animals approved for food restriction must be measured and recorded at no less than weekly intervals, and smaller animals such as mice, or young animals that are growing may require more frequent weighing. The weights of most animals approved for water restriction must be measured and recorded at no less than 24-hour intervals, or a record of daily water intake must be maintained to ensure adequate hydration. Written records should be maintained for each animal undergoing food and/or water restriction to document any monitoring parameters as elucidated in the IACUC protocol such as body weight, fluid consumption, hydration status, and any behavioral and clinical changes used as criteria for temporary or permanent removal from the study. The records must be available for inspection by the IACUC, University Veterinarian, and any regulatory or accrediting agencies.

If an animal under food and/or fluid restriction loses more than 15% of its body weight (compared to its pre-restriction weight), its food and/or fluid intake should be increased
immediately as appropriate until the animal regains its normal weight (+/- 15%). The weight of any animal that has lost 15% of its body weight should be measured daily to ensure that further body weight is not lost. An exception to the 15% weight loss policy may be allowed if a DAR veterinarian determines that this weight loss does not endanger the health of the animal (for example, if the animal is adequately hydrated and was initially overweight). Additionally, greater than 15% weight loss can be allowed if the IACUC has given prior approval for greater weight loss in a particular animal study. Food and/or fluid restriction in young animals that are still growing will be considered on a case-by-case basis, as weight loss is not appropriate for animals that should be growing.

In the case of conditioned-response research protocols, use of a highly preferred food or fluid as positive reinforcement, instead of restriction, is recommended. Food and water consumption are interdependent, but species differ in their circadian or other patterns of drinking and their response to food restriction. Unless specific protocols require exemption, allowing most laboratory animal species to feed at least once per day is consistent with standards of humane care and is required for species covered by USDA regulations. Constant access to water typically is provided under food control regimens, but requirements of the species and the scientific protocols may require different patterns of access. Conversely, water-deprived animals often have non-restricted access to food, but investigators should be aware that most food consumption occurs only when water is available. Water should be available long enough to maintain sufficient food intake. Animals tolerate food restriction physiologically better than water restriction, so food restriction should be used if possible. Fluid reinforcers often have advantages, however, such as in procedures that must control the position of the subject’s head or limit jaw movements. When water, sweet drinks, or fruit-flavored drinks are used as a reinforcer, access to water outside the experimental session needs to be controlled. Determining parameters of water restriction, including especially the period(s) of access during the day that do not produce dehydration or excessive weight loss requires careful consideration and sensitivity to the species. When this is done, animals need not be at risk. Careful observation of behavior, regular clinical monitoring of the animal’s health and records of measures taken are critical for ensuring successful application of fluid control procedures.

If food and/or water is being withheld, please the DAR management staff to obtain the appropriate cage label which will allow the cage to be conspicuously labeled as under food and or water restriction.

Pertinent Regulations*
U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training
Public Health Service Policy
Guide for the Care and Use of Laboratory Animals
Animal Welfare Act (AWA) and AWA Regulations

IACUC Approval Date: 6/23/2015
Signature IACUC Chair: [Signature]
Revision Dates: