

Monitoring and Management of Research-Associated Body Weight Loss	Policy No. 021
	Effective Date: 08/18/2026 Updated: 10/12/2026

1. Purpose

To establish limits for acceptable weight loss in research animals and define requirements for monitoring, intervention, documentation, and veterinary oversight when weight loss is anticipated or occurs during research activities.

2. Background

Weight loss may occur in research animals as a result of a variety of experimental procedures or conditions, including toxicology studies, cancer studies, infectious disease studies, nutritional deficiency studies, food or nutrient restriction, and other research procedures. Weight loss may also occur as a result of spontaneous disease and is an important indicator of declining health or clinical condition.

Moderate food or caloric restriction, when appropriately designed and nutritionally adequate, may be scientifically justified and may not necessarily be detrimental to animal health. However, excessive or unintended weight loss may indicate pain, distress, illness, or compromised animal welfare and must be appropriately monitored and addressed.

The Oklahoma State University Institutional Animal Care and Use Committee (IACUC) recognizes **20% loss from normal or pre-study body weight as the upper limit for acceptable weight loss in adult research animals**, unless a greater degree of weight loss is scientifically necessary and specifically justified in the approved protocol. Certain studies may require weight loss exceeding this threshold as an anticipated component of the research objectives. Examples include studies involving nutritional deficiencies, disease progression, tumor development, or other experimental conditions in which substantial weight loss is an expected outcome. In such cases, the investigator must provide scientific justification for exceeding the 20% threshold and establish appropriate monitoring criteria and humane endpoints to minimize animal pain and distress. Such animal use protocols will be scrutinized by the IACUC reviewers, will require scientific justification, and will result in a referral for Full Committee review.

For studies involving behavioral conditioning, performance, or other tasks in which animals are motivated by food restriction, the desired scientific or behavioral outcome may be achieved at a weight loss substantially less than 20%. Investigators are expected to use the least restrictive approach necessary to achieve the scientific objectives of the study.

3. Policy

3.1 General Weight Loss Limit

The upper limit of acceptable weight loss in research animals shall be **20% of normal or pre-study body weight**.

Weight loss exceeding 20% requires either:

- Humane euthanasia in accordance with the approved protocol and applicable IACUC guidance; or
- Prior IACUC approval of a scientifically justified exception to the 20% limit.

Unanticipated weight loss exceeding the approved limit must be promptly evaluated and addressed in consultation with the attending veterinarian and, when appropriate, reported to the IACUC in accordance with applicable reporting requirements.

Weight loss exceeding 25% requires:

- Notification of veterinary staff or the AV.
- Increased monitoring (i.e. 2-3 times a day) will be required by the PI when body weight loss exceeds 25% of pre-study body weight levels. This increased monitoring will be performed using an IACUC approved BCS (Body Condition Score) system.

3.2 Protocol Requirements

When weight loss is an anticipated component of a research protocol, the investigator must describe in the IACUC protocol:

- The expected degree and duration of weight loss;
- The scientific justification for the anticipated weight loss;
- The method and frequency of body weight monitoring;
- Criteria for intervention;
- Remedial measures to be implemented when weight loss exceeds established limits;
- Humane endpoints and euthanasia criteria; and
- Any additional clinical or behavioral parameters that will be used to assess animal health and welfare.

Investigators must establish appropriate intervention criteria before initiating research activities that are expected to result in significant weight loss.

3.3 Monitoring Requirements

Animals in studies in which weight loss is expected must be monitored by research personnel who are appropriately trained and experienced in recognizing clinical signs of illness, pain, and distress.

Body weights must be determined and recorded **at least daily** when significant weight loss is anticipated, unless a different monitoring frequency has been specifically approved by the IACUC or directed by the Attending Veterinarian (AV).

More frequent monitoring may be required based on the species, study procedures, rate of weight loss, clinical condition of the animal, or direction from the AV.

Weight records must be maintained by the research team and made readily available for review by the AV, veterinary staff and the IACUC.

3.4 Veterinary Oversight

The AV, or an appropriately qualified designee, may require additional monitoring, intervention, treatment, removal from study, or humane euthanasia when an animal's weight loss or clinical condition presents a concern for animal health or welfare.

Animals with greater than 20% body weight loss, as stipulated in their protocol with either be euthanized or referred to the AV or veterinary staff. The AV or designee may permit an animal to temporarily exceed the 20% weight-loss threshold rather than require immediate euthanasia when, based on veterinary clinical assessment.

For purposes of this policy, an AV designee may include a qualified laboratory animal veterinarian employed by Oklahoma State University and serving in a veterinary capacity who is not directly involved in the affected research study.

Veterinary authorization to temporarily exceed the general weight-loss limit does not replace the requirement for appropriate IACUC approval when the exception is anticipated or represents a change from the approved protocol.

3.5 Scientific Justification for Weight Loss Greater Than 20%

A research protocol proposing weight loss greater than 20% must provide **written scientific justification** for exceeding the general limit and must receive IACUC approval before implementation.

Approval of weight loss exceeding 20% will require consideration of both:

1. The scientific necessity of the proposed weight loss; and
2. Veterinary assessment that the anticipated weight loss can be achieved without unacceptable compromise to animal health or welfare.

Scientific justification alone does not establish that weight loss beyond 20% is acceptable. Animal welfare considerations and veterinary assessment must also be considered by the IACUC.

3.6 Animals for Which Body Weight May Not Be an Appropriate Sole Measure

The IACUC may request, in addition to body weight measurements, a body condition score system appropriate to the animal model in some projects including:

- Rapidly growing animals;
- Animals with tumors or other mass-forming conditions;
- Obese animals;
- Animals experiencing significant changes in body composition; or
- Animals for which the experimental procedure is expected to alter normal body weight independently of clinical condition.

In these circumstances, **body condition scoring (BCS)** and other appropriate clinical or behavioral measures may be used in conjunction with, or when scientifically justified in place of, body weight measurements.

Investigators should access the veterinary expertise of the AV or designee for the appropriate monitoring criteria in the IACUC protocol when body weight alone may not accurately reflect animal condition.

4. Responsibilities

Investigators and Research Personnel are responsible for:

- Monitoring animals as required by the approved IACUC protocol;
- Maintaining accurate and current weight and clinical monitoring records;
- Recognizing and promptly reporting concerning changes in animal condition;
- Implementing IACUC approved intervention and humane endpoint criteria; and
- Consulting veterinary staff when animals approach or exceed established limits.

Veterinary Staff will provide veterinary assessments and guidance regarding animal health and welfare, including recommendations for additional monitoring, intervention, treatment, removal from study, or euthanasia when appropriate.

IACUC is responsible for evaluating the scientific justification and animal welfare considerations associated with proposed weight loss exceeding the 20% threshold and for ensuring that approved monitoring and humane endpoint criteria are appropriate.

5. Compliance

Failure to monitor, document, or appropriately respond to research animal weight loss in accordance with the approved IACUC protocol and this policy may constitute noncompliance and may result in veterinary intervention, corrective action, protocol modification, or reporting to the IACUC as appropriate.

6. Related Guidance and References

This policy should be interpreted in conjunction with:

- The approved IACUC protocol;
- Oklahoma State University animal care and use policies and procedures;
- Applicable federal animal welfare requirements;
- The *Guide for the Care and Use of Laboratory Animals*; and
- Applicable veterinary guidance and humane endpoint criteria.