

**Colorado State University
Institutional Animal Care and Use Committee
(IACUC)**

Policy on Multiple Surgical Procedures

It is the responsibility of the Colorado State University (CSU) 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 requirements¹ and CSU's institutional policies.

Definitions

For federal regulatory purposes, surgical procedures are defined as **major** or **minor**, and can be further subdivided into **non-survival** and **survival**. In **non-survival surgery**, the animal is euthanized before recovery from anesthesia; whereas in **survival surgery**, the animal recovers from anesthesia.

A **major operative procedure (major surgery)** is any surgical intervention that penetrates and exposes a body cavity or any procedure which produces permanent impairment of physical or physiological functions." Examples of major surgical procedures include but are not limited to: laparotomy, thoracotomy, joint replacement, limb amputation, and castration.² Many orthopedic or neurosurgical procedures would also be major surgeries, but all surgical procedures are judged on a case-by-case basis.

Minor surgeries do not penetrate and expose a body cavity and produce little or no physical impairment. Examples include but are not limited to: wound suturing, peripheral–vessel cannulation, percutaneous biopsy, routine farm animal procedures such as dehorning, and most procedures routinely performed on an outpatient basis in a veterinary practice.

Requirement for Appropriate Pain Relief

The requirement for the provision of appropriate pain relief does not depend on whether the procedure is classified as major or minor, but rather whether the procedure would be likely to cause more than momentary pain or distress. Sufficient pain relief must be provided and the IACUC and veterinary staff will evaluate the proposed procedures on a case-by-case basis.

Requirement for IACUC Approval of Multiple Major Survival Surgeries

Multiple major survival surgeries are allowable only if scientifically justified as **related** components of a **single** protocol; i.e., an animal surviving a major surgery may not be involved in a second protocol that also requires a major survival surgery. That animal may, however, be involved in a second protocol which includes minor surgery or a major NON-survival surgery.

¹ [Animal Welfare Act Regulations §2.31\(d\)\(1\)\(x\)](#)
[Guide for the Care and Use of Laboratory Animals, 8th ed., 2011; p. 30 & 117](#)
[Public Health Service \(PHS\) Policy, Part II & Part IV \(A\)\(1\)](#)

² Per the USDA-APHIS-AC, castration is considered a major surgery by USDA.

Bilateral surgeries must be scientifically justified in an animal use protocol and approved by the IACUC, regardless of whether they are categorized as major or minor.

Requirement of Documenting Surgical and Post-surgical Care

Animals surviving a major surgical procedure must be identified by written documentation in the medical records to prevent their use in a second major survival procedure on an unrelated study. For all surgical procedures, pre-, intra-, and post-operative monitoring and care must be documented in the medical records.

Exception to Prohibition on Multiple Major Survival Surgeries on Unrelated Studies

An exception to the prohibition against multiple survival surgical procedures on an animal as a part of different IACUC-approved protocols must be sought from the USDA through the IACUC and Institutional Official.

Multiple Minor Surgical Procedures

There is no regulatory limitation to the number of minor surgical procedures performed on an individual animal. However, CSU’s IACUC is committed to the ethical and humane treatment of animals, and will use its professional judgment to limit the number of minor surgical procedures or of any non-surgical interventions that adversely affect the health or well-being of an animal. Minor surgeries and other procedures must be scientifically justified in an animal use protocol or in an amendment and approved by the IACUC.

Institutional Endorsement

The “Policy on Multiple Surgical Procedures” approved by the IACUC on May 24, 2022 for recommendation to the Institutional Official supports the research, teaching and service mission of Colorado State University, and ensures the welfare of animal subjects used therein will be protected. Therefore, as the Institutional Official, I declare the IACUC-recommended policy to be the institutional policy of the Colorado State University Program of Animal Care and Use.



[Alan Rudolph \(May 26, 2022 13:32 MDT\)](#)

Institutional Official

Date

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Vice President for Research