

Clemson University
Institutional Animal Care and Use Committee (IACUC)

Policy Number: 3.6

Policy Title: Aseptic Techniques

Section 1: Purpose

The following policy provides guidance on the use of aseptic techniques during surgical procedures performed on vertebrate animals.

Section 2: Scope

This policy applies to all vertebrate animals used for research, teaching, testing, or demonstration within or associated with the University.

Section 3: Policy

Aseptic Technique

Aseptic techniques are practices performed prior to and during surgical procedures that reduce the potential for microbial contamination of surgical/procedure sites to the lowest level possible thus minimizing post-operative complications due to infection. These techniques include, but are not limited to:

- Cleaning and preparation of procedure rooms/areas (if applicable)
- Sterilization of instruments and other materials
- Cleaning and sanitizing of the surgical site on the animal and the surgeon's hands and arms
- Proper personal protective equipment during procedures (sterile gloves, gowns, face masks, etc.)
- Proper pre, intra, and post-operative techniques

Survival Surgery

Survival surgery is an operative procedure performed with the intention of recovering animals from anesthesia and maintaining them for a period after recovery. Survival surgeries are further classified as major or minor. Major surgical procedures are defined as any intervention that penetrates and exposes a body cavity or any procedure that produces permanent impairment of physical or physiological functions. Minor surgical procedures are generally described as procedures that do not expose a body cavity and causes little or no physical impairment. Examples include, but are not limited to: wound suturing, peripheral vessel cannulation, dehorning, or prolapse repair. The IACUC may consider a procedure major that does not expose a body cavity or induce impairment, based on the nature of the procedure and expected outcomes.

The Guide for the Care and Use of Laboratory Animals (The Guide) states, “principles of aseptic technique should be followed for all survival surgical procedures.” Below are species-specific considerations:

- **Laboratory Rodents**
Major and minor surgery in rodents does not require a facility dedicated for surgical use, but must be performed using aseptic procedures.
- **Laboratory Non-Rodents Species**
Major operative procedures on non-rodents will be conducted only in facilities intended for that purpose which shall be operated and maintained under aseptic conditions. Minor operative procedures do not require a dedicated facility, but must be performed using aseptic procedures.
- **Wildlife Field Studies**
Operative procedures conducted at field sites need not be performed in dedicated facilities, but must be performed using aseptic procedures.
- **Agriculture Animals**
Major survival surgeries should be performed in facilities designed and prepared to accommodate surgery and aseptic procedures should be employed. Minor survival surgical procedures may be performed under less stringent conditions if performed in accordance with standard veterinary practices. At times during agriculture animal production, emergency surgeries are required. Rigid aseptic standards are often not achievable during these events. However, every effort should be made to adhere to these principals as closely as possible.

Surgical outcomes should be continually and thoroughly assessed to ensure that appropriate procedures are being followed and timely corrective changes are instituted. Modification of standard techniques may be required, but should not compromise the well-being of the animals.

Non-Survival Surgery

Non-survival surgery is a surgical procedure performed with no post-operative anesthetic recovery. Euthanasia is performed at the conclusion of the procedure. These procedures do not require aseptic technique or dedicated surgical facilities. However, the areas to be used should be clean, free of clutter, and prepared using acceptable veterinary sanitation practices as would be used in a standard examination/treatment room. Personnel present in the area should observe reasonable cleanliness practices for both themselves and the animals.

Training

Prior to performing any surgical procedure, the surgical team must be trained in proper aseptic techniques. Consult with the Attending Veterinarian for guidance on training requirements and training opportunities.