

ANESTHESIA GUIDELINES – NON-RODENT MAMMALS
IACUC Guideline
Approval Date: November 24, 2020

1. **Acclimation period and health observation:** A 2-day or greater acclimation period is recommended before major survival surgery or general survival anesthesia. Non- survival procedures may require less acclimation time.

Animals should receive a pre-anesthetic health observation.

2. **Fasting:** Recommended fast durations vary by species and circumstance stated in the protocol or prescribed by the LARC veterinarians. Fasting durations may be adjusted for neonatal animals, debilitated animals, for special procedures and in other special circumstances. LARC veterinarians should be consulted in determining appropriate fasting periods. Water is generally not withheld for any species.
3. **Administering the Anesthetic:** Adequate depth of anesthesia must be determined prior to the initial incision. Anesthetic doses must follow the approved protocol, including commitments for intra-operative analgesic drugs.
4. **Monitoring Anesthesia:** Anesthetic depth must be continuously assessed and inadequate or excessive anesthetic depth must be adjusted as appropriate. Responsiveness to painful stimuli, heart rate, character of respiration, body temperature, and skin or mucous membrane color are useful general parameters to determine appropriate anesthetic depth. Depending on the species and the procedure, other monitoring parameters may be indicated (i.e., electrocardiography, blood pressure, tissue oxygenation, blood gas levels and expiratory capnography).

The surgical team for major survival surgery in non-rodent mammals **must** include at least one dedicated person, in addition to the surgeon, whose primary duties are to monitor the animal and document during anesthesia.

5. **Record keeping:** Individual anesthesia records documenting monitoring (at protocol specified intervals, or, if not specified, at least every 15 minutes) are maintained for non-rodent mammals. More frequent recording is necessary in some instances, while use of continuous monitoring equipment (such as ECG, pulse oximetry, etc.) may require less frequent written charting if the data is recorded automatically. Records should extend from onset of anesthesia through the period of anesthetic recovery, and should document post-operative care and analgesia provided. Longer documentation intervals, which must be approved in your protocol, may be acceptable in some non-survival situations.
6. **Provide heat:** Preferred methods for providing heat during and after surgery include: circulating warm water blankets, chemical heat packs, and Bair Huggers™. Always place an insulating layer between the animal and the heat source. Monitoring body temperature during and following anesthesia is required for most cases of general anesthesia.
7. **Fluid administration:** Dehydration and volume depletion must be prevented. Good intraoperative veterinary care includes warm fluid therapy by intravenous and/or subcutaneous administration. Consult with LARC veterinarians regarding fluid administration needs, as they may be altered based upon patient status, study type, and procedure duration.

8. **Stay in the room until animal recovers:** Animals must be continuously attended from anesthetic induction to recovery. Monitoring data should be documented per protocol. If documentation parameters are not specified in the protocol, vital signs should be recorded at 15-minute intervals until the animals can remain in sternal recumbency (i.e., recovered). Endotracheal tubes, when used, should remain in place until the animal has regained a swallowing reflex. Food is not offered until the animal is sufficiently recovered from anesthesia.

9. **For information on specific anesthetics and analgesics** for experimental animals including recommended doses, routes of administration and conditions for use, refer to [the Drug Formulary](#) and consult with LARC veterinarians.