

ANESTHESIA GUIDELINES – NON-RODENT MAMMALS
IACUC Guideline
Approval Date: November 2023

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

Animals should receive a pre-anesthetic health observation documented in the medical record.

2. **Fasting:** Recommended fast durations vary by species and circumstance, fasting duration should be 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 surgical incision. Anesthesia must follow the approved protocol, including commitments for intra-operative analgesic drugs. Anesthesia protocols may be adjusted by a LARC veterinarian as needed.
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 commonly used parameters to determine appropriate anesthetic depth. Depending on the species and the procedure, other additional 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 to manage anesthesia, monitor the animal, and document anesthesia events during the procedure. The dedicated anesthetist must not be the surgeon.

5. **Record keeping:** Individual anesthesia records are maintained for non-rodent mammals to document monitoring at protocol specified intervals (ideally every 5 minutes, not to exceed every 15 minutes). More frequent recording is necessary in some instances. Use of continuous monitoring equipment (such as ECG, pulse oximetry, etc.) may require less frequent written charting if the data is recorded automatically and included in the medical record. An example anesthesia documentation format used routinely by LARC is available for reference and represents the suggested format ([PDF](#), [excel](#)). The anesthesia records need to extend from onset of anesthesia through the period of anesthetic recovery, and include analgesia provided.
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. Body temperature monitoring during anesthesia should be described in the protocol.
7. **Fluid administration:** Dehydration and volume depletion must be prevented. Good intraoperative veterinary care includes warmed fluid therapy by intravenous and/or subcutaneous administration. Consult with LARC veterinarians regarding fluid administration needs, as they may be altered by many variables including patient status, study type, and/or procedure duration.

8. **Recovery:** Animals must be continuously attended in person 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). Continue to check on animals periodically until they are fully ambulatory. 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 to eat safely.

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