

RECORDKEEPING GUIDELINES FOR SURGICAL PROCEDURES ON LABORATORY ANIMALS

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1. Background

As per the *Guide for the Care and Use of Laboratory Animals (Guide)*, all animals that experience anesthesia or surgical procedures must have a concurrently recorded and readily available record outlining anesthesia data, intra-operative monitoring, and pre- and post-procedural care.

Investigators who find a recommended procedure to be incompatible with the scientific needs of their research may submit a written request for the Animal Care and Use Committee (ACUC) to consider an exception to these guidelines.

2. Rodents, Birds and Ectotherm

- a) A record of intra-operative monitoring must be maintained in laboratory records (see [Appendix 2](#) for an example).
- b) The depth of anesthesia and analgesia should be monitored at least every 15 minutes during most procedures and recorded.
- c) Plans for intra- and post-operative monitoring must be included in the AUP.
- d) Post-operatively, a record of the date and name of each surgical or invasive procedure performed on rodents, birds and ectotherms must be maintained and easily identified. This can be done by listing the information on the animal's post-surgical cage card (see Appendix 1 for an example) or by maintaining a separate record in the animal's room.
- e) Note the frequency and doses of anesthetic and analgesic used. Entries should be initialed or signed by the person who made the observation or administered the treatment and traceable to the person who recorded or performed it.
- f) These records should be in place as long as the animal remains alive.

3. Non-Rodent Mammals

The following records must be maintained for each surgery or invasive procedure that is performed under anesthesia on non-rodent mammals (e.g., rabbits, cats, nonhuman primates). This includes acute procedures performed in investigators' laboratories.

- a) Anesthesia Flow Sheets (see [Appendix 3](#) for an example):
 - i) This chronologic record must include: date and time of procedure, animal's identification number, animals' weight as recorded on the day of surgery, the name, dose, route and time of each drug administered, all major surgical or anesthetic events, and measurements of the animal's physiologic parameters including heart rate, respiratory rate, and body temperature. These physiological measurements must be assessed and recorded at least every 15 minutes throughout the procedure.
 - ii) The individual who is assigned to monitor the animal's anesthetic level throughout the procedure is responsible for consistently maintaining the flow sheet. He/she must be identified on the record as the anesthetist. If the anesthetist changes during the course of the procedure that person must also be identified by name. The completed flow sheet must be kept with the animal's health records. Investigators may create their own flow sheet forms as long as all required information is recorded and at the specified intervals.
- b) Animal Record:
 - i) An animal's record must remain in a location accessible to the AV at all times while the animal is alive.
 - ii) If the procedure was non-survival, the completed animal record and anesthesia flow sheet must be received by OLAC or the ACUC within one week.
 - iii) The records will be reviewed, filed, and maintained for a minimum of three years.

4. References

- Institute of Laboratory Animal Research (ILAR). National Research Council (2011). [*Guide for the Care and Use of Laboratory Animals \(8th edition\)*](#). Washington, D.C.: The National Academies Press.
- University of Minnesota Institutional Animal Care and Use Committee. <http://www.research.umn.edu/iacuc/guidelines/index.html>
- University of Texas Office of Research Support http://www.utexas.edu/research/rsc/iacuc/policies_index.html
- University of California, San Francisco <http://www.iacuc.ucsf.edu/Policies/awStandardProcedures.asp>

**Appendix 1
Post-surgical Record Card Example**

Post-Surgical Record		Post-surgical record
Animal ID*: _____	Date: _____ Anesthesia/dose _____	
Surgical procedure: _____		
Post-operative analgesic _____		
Date/Time given: _____ Amount given: _____		
Date/Time given: _____ Amount given: _____		
Additional analgesia/comment _____		

Contact person/surgeon: _____		

Comments: _____

Appendix 2 ANESTHESIC MONITORING RECORD

Animal ID _____ Body weight _____ g

Surgeon Name(s) _____ PI Name _____

Anesthetist Name(s) _____

Date _____ Start Time _____ End Time _____

Procedure Performed _____

Anesthetics: Induction: _____

_____ Maintenance: _____

Analgesics: _____

Any other drugs/compounds/agents administered: _____

Time											
Withdrawal reflex	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
Resp. Rate											
mm color											

Recovery:

Time										
Resp. Rate										
mm color										
Alertness										

Notes: _____

Appendix 2 (cont.)

VITAL SIGNS

Time	HR	O2 sat	RR	Temp	Fluids	Comments

Other Information:

Appendix 3

ANESTHESIA FLOW SHEET

Date of procedure _____ Time of procedure _____

Building _____ Room _____ Principal Investigator _____

Type of procedure _____

Name and/or number of animals _____ Species _____

DOB or age _____ Sex _____ Weight _____ lbs kgs gms (circle one)

Surgeon(s) _____ Anesthetist _____

***** **PHYSICAL**

EXAM _____

Preanesthetic(s) _____ Time admin. _____

Induction _____ Time begun _____

Maintenance _____ Time begun _____

Time ended _____

Time intubated _____ Tube size _____ Time extubated _____

FLUID ADMINISTRATION

Type _____ Route _____ I.V. catheter _____ GA

Rate _____ Total volume received: _____

PROCEDURE Time begun _____ Time ended _____

COMMENTS _____

