



# Guidelines for Rodent Surgery & Completion of Post-Operative Records



# Pre-Operative Planning and Essentials



## Planning

- Everyone on the surgical team should participate in surgical planning.
- Surgical plan should identify personnel, their roles and training needs, as well as equipment, supplies, and facilities needed for the procedure.
- Surgical plan should also specify requirements for post surgical monitoring, care, and record keeping.
- LAR veterinarians are available for pre-surgical consultation and planning upon request
  - Contact [lar-vets@fsu.edu](mailto:lar-vets@fsu.edu) for assistance



# Pre-Operative Planning and Essentials

## Essentials

- Animals must be in good health.
- Withholding food and/or water from rodents is usually not necessary.
- Any animal under anesthesia for over 30 minutes should have an ophthalmic ointment placed into the eyes.
  - Paralube or Lacrilube are both acceptable.
- If necessary, anesthetize the animal before skin preparation.
  - Remove fur from large enough area around incision to avoid contamination.
  - Use appropriate skin disinfectants to prepare the surgical site.
  - Skin prep should be done away from the surgical area to avoid contamination.





# Important Pre-Operative Things to Remember

- The surgical area should be uncluttered and disinfected prior to performance of any procedure.
- Personal protective equipment to wear during surgery:
  - A clean lab coat or disposable gown
  - Sterile gloves
  - Surgical mask (recommended, but not required)





# Peri-Operative Protocol



- All animals must be in a surgical plane of anesthesia before ANY incision is made. State of anesthesia must be checked repeatedly throughout the procedure.
  - Checks can include a tail or toe pinch, palpebral response, respiratory or heart rate, and mucous membrane color.
- Body temperature should be maintained via drapes, re-circulating warm water pad, or warm water bottles.
  - Do not use dry electric heating pads or heat lamps.
- Use sterile instruments.
- Practice good surgical technique.
- Appropriately close incisions.



# Post-Operative Care



- Move animal to a warm and dry area while they recover.
- Never leave an unconscious animal unattended.
- Only return animals to their original cages after they have fully recovered from anesthesia.
- Always administer analgesic drugs as described in the protocol
- Fill out and maintain daily post-operative records until the incision is healed, sutures/staples are removed, the animal dies, or the animal is euthanized.
  - This is not optional.
- Be sure to remove skin sutures/staples 7 to 10 days after surgery.



# Post-Operative Care

- Should signs of pain, ill health, or problems with an incision be noted, notify an LAR veterinarian immediately for treatment recommendations or to assist with determining endpoints.
- Signs of pain include:
  - Decrease in body weight / decline in body condition
  - Decreased food and water consumption
  - Decrease in fecal / urine production
  - Reduced level of activity
  - Increased irritability or aggression when handled
  - Hunched posture or squinted eyes
  - Staggering, twitching, or pressing (rats)
  - Presence of porphyrin staining
  - Incision site changes (redness, swelling, discharge, or dehiscence)





# Why Should We Maintain Post-Operative Medical Records?

- Records uphold a standard of veterinary care.
- Detailed records promote compliance with ACUC protocols.
- Detailed records aid in public perception of lab animal research as a whole.

FSU RODENT POST OPERATIVE RECORD FORM  
(All information must be legible)

Principal Investigator \_\_\_\_\_ Protocol # \_\_\_\_\_

Animal Identification \_\_\_\_\_

Surgical Procedure \_\_\_\_\_

Date procedure performed \_\_\_\_\_

Person performing the procedure \_\_\_\_\_

Technique used to sterilize instruments \_\_\_\_\_

Anesthetic agent(s), dose \_\_\_\_\_

Pre/Peri-operative analgesic(s), dose and volume \_\_\_\_\_

Emergency Contact Information \_\_\_\_\_

Postoperative observations. Note treatments administered and date sutures/staples were removed.  
Note weight and food & water intake if required.

Date	Observations	Treatments	Initials

As a minimum, daily observations must be recorded until sutures are removed, the animal dies, or is euthanized (whichever event occurs first.)





# FSU Rodent Post-Operative Record

- Cards are to be placed on the animal's cage within the cage card holder.
- Observations must be made for 7 to 10 days following surgery or:
  - until incision is healed
  - until sutures or staples are removed
  - when the animal dies
  - when the animal is euthanized - whichever occurs first.
- For every day the animal is observed, there needs to be an observation and initials.
- What treatment was administered, who administered it, and how much was administered must be recorded.
- Records may be maintained in a notebook that is kept in the animal room as an alternative.



# FSU Rodent Post-Operative Record Form

- Required information that must be included on the card
  - Administration of analgesic drugs, amount and dose given, and the initials of the individual who administered them
  - Date of suture / staple removal
  - Weight of animal (if specified in ACUC protocol)
  - Water and food consumption (if specified in ACUC protocol)
  - General information such as:
    - Principle investigator name, ACUC number, procedure, date, animal ID, name of person performing the surgery, how instruments were sterilized, and emergency contact information.
- All daily observations must include initials



## How To Fill Out the Front of the Post-Operative Card

Principal Investigator: **Investigator's Name**

Protocol #: **e.g. 1825**

Animal Identification: **e.g. K22**

Surgical Procedure: **Name of Procedure**

Date of Procedure Performed: **Date of Surgery**

Person Performing Procedure: **Surgeon's Name**

Technique Used to Sterilize Instruments: **Your Means of Sterilization**

Anesthetic Agent(s), Dose: **Name of Drug, Dose**

Pre/Peri-operative Analgesic(s), dose, and volume: **Name of drug, dose, and volume used**

Emergency Contact Information: **Emergency Contact Phone Number, email, etc.**



## How To Fill Out the Back of the Post-Operative Card

Date	Observations	Treatment	Initials
10/22/18	e.g. IRRI, APP/P	Treatment Given	HMF
10/23/18			
10/24/18			
Etc.			

\*Acronyms may be used for observations.



# Post-Operative Observation Acronyms

Acronym	Meaning
APP / (P, F, G)	Appetite (poor, fair, good)
Abx (list drug & dose)	Antibiotic
BAR	Bright, alert, and responsive
E/D (-, +, ++)	Eating / drinking (none, yes, very well or lots)
F/U (-, -/+, ++)	Feces / urine (none, scant, normal)
IRRI	Irritable or aggressive

Acronym	Meaning
IMPR	Improved: followed by a variable number of +'s to indicate degree of improvement
NAF	No abnormal findings
NG	Not grooming
POR	Porphyrin staining
R/S or S/R	Removed sutures / Sutures removed
WNL	Within normal limits



# Other Information



- Initials alone do not constitute an observation.
- The day sutures or staples are removed or the day on which the incision is healed must be recorded.
  - Sutures or staples must be removed unless exempted in the ACUC approved protocol.
- Entries must be legible.
- Surgical records should be kept as long as the animal is kept in FSU facilities.
  - After the death of the animal, surgical records for non-USDA covered species must be kept by the investigator for a period of time no less than one year. USDA covered species' records should be retained for 3 years after the animal's death.