

# NU – IACUC

## POLICY

Northeastern University Institutional Animal Care and Use Committee

### Rodent Surgery

Rodent surgery at Northeastern University will adhere to the specifications as outlined in the [Guide for the Care and Use of Animals](#).

#### **Surgery Location.**

Surgery must take place in a work area or laboratory removed from the mainstream of traffic. The area must be uncluttered and sanitizable. It is not recommended to perform surgery directly on a table or bench surface without coving the area for sanitation reasons and warmth for the animal. A disposable absorbent chuck fulfills this requirement.

#### **Surgical Instruments.**

All surgical instruments must be sterilized prior to use. Multiple surgeries may require the use of at least two separate sets of instruments, each set being disinfected alternatively between surgeries. The use of a glass bead sterilizer on instruments between animals is acceptable. However, these instruments must still be initially sterilized.

#### **Required Garments for performing rodent surgery.**

- A clean laboratory coat, surgical mask, and sterile gloves must be worn.
- Hands must be thoroughly washed prior to donning sterile gloves.

#### **Please follow the steps listed below for rodent surgery:**

1. Weigh the animal.
2. According to body weight, anesthetize the animal with the appropriate dose of approved anesthetic. (see the NU-IACUC policy on the Recommended Doses Anesthetics and Analgesics of Laboratory Animals).
3. Prepare the animal for surgery

- Remove the hair at the intended incision site using clippers (preferred), depilatory cream, or “plucking” prior to placement of the animal on the surgery table.
  - Disinfect the skin at the intended incision site by first scrubbing the area with betadine followed by a rinse with 70% alcohol and repeat.
  - Place the animal on a clean, warm surface to minimize heat loss. Warmth can be maintained by the use of a drape, chuck pad, or circulating water heating pad placed under another drape or pad. Remember, all anesthetics and many surgical procedures will result in heat loss and body temperature management is an important factor in survival and recovery.
  - Apply ophthalmic ointment to anesthetized animal’s eyes to prevent ocular drying and potential irritation or ulceration.
  - Draping of the animal is recommended.
4. The surgery must be performed using aseptic technique. Meaning the sterile surgical instruments should not touch any non-sterile areas outside the surgical field. If an instrument is contaminated, it should be re-sterilized using chemical or heat sterilization.
  5. If post-surgical analgesics are required, administer them upon completion of the surgery. This will ensure that when the animal is recovering, it is not in any pain. For the proper dose of analgesic, see the NU-IACUC policy on the Recommended Doses Anesthetics and Analgesics of Laboratory Animals.

### **Post-Surgical Care/Monitoring**

The Principal Investigator, or designate, is responsible for the monitoring of animals recovering from anesthesia and surgery.

#### 1. Immediate post-surgery period:

- The animal must be monitored until it is ambulatory (walking).
- To hasten recovery, the animal must be kept warm. Place a drape, blanket or pad between the animal and the heat source to prevent overheating and/or burns.
- To prevent potential cannibalism, house anesthetized and conscious animals separately.
- Place a yellow “Post Procedural” card on the cage housing the animal(s). This card is placed on the cage for 7-10 days post surgery and indicates what procedure was done to the animal. After this time period, the card is placed behind the original cage card. If the animal is permanently disabled, the card must remain displayed on the cage. This card should not be used as the animal’s primary cage ID card.

#### 2. Extended Daily Monitoring: 4 – 7 days post-op:

- Evaluate adequate hydration by “tenting” loose skin between the shoulder blades. Skin should normally fall back immediately to the body when tented. The absence of this response may indicate the animal is dehydrated and is in need for intravenous or subcutaneous fluid therapy (consult veterinarian for best type, dose, and route of fluids).
- Evaluate adequate nutrition by palpating spine and/or ribs. Daily weights will ensure undisputed proof of food intake or lack thereof.
- Observe incision site for cleanliness and healing
- Evaluate the presence of pain or distress. Administer the proper analgesic if required. For the proper dose of analgesic, see the NU-IACUC policy on Pain / Distress, Alleviation / Avoidance of and the Policy on Recommended Doses Anesthetics and Analgesics of Laboratory Animals.
- Sutures or wound clips must be removed 7 – 10 days post-op.

Approved: