

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC)

POLICY ON POST-OPERATIVE AND POST-PROCEDURAL CARE

GENERAL POLICY

Adequate and appropriate post-operative/post-procedural care must be provided to all experimental animals used in protocols involving major and minor surgical procedures as well as non surgical procedures at MGH. Provision of post-procedural care is the responsibility of the Principal Investigator (PI) through his or her designated personnel listed in the approved protocol. The Director, Center for Comparative Medicine (CCM) and his or her designees are responsible for providing consultation and guidance on post-operative care to ensure that proper procedures and practices are followed to minimize pain and distress. CCM staff may provide emergency veterinary care when the Attending Veterinarian (AV) or his or her designee determines that immediate intervention is needed to save the animal's life or relieve pain, and neither the PI nor his or her research staff members are available or cannot be contacted within a reasonable time (determined by the nature of the veterinary emergency).

The above stated interventions by CCM are not intended to compromise research results; however, unless specifically described in the protocol and approved by the IACUC, unrelieved pain associated with surgical procedures will not be permitted. The same assigned responsibilities and actions also apply to potentially painful procedures in non-surgical protocols.

DEFINITIONS

USDA-covered species, non-rodents: Animal species that are taxonomically defined as lagamorphs or higher and covered by the Animal Welfare Act Regulations (AWAR), e.g., rabbit, cat, dog, ferret, sheep, goat, swine, non-human primate.

USDA-covered species, rodents: Animals that are taxonomically defined as rodents and covered by the AWAR, e.g., guinea pigs, hamsters, gerbils, ground squirrels, and mice/rats except for mice (*Mus*) and rats (*Rattus*) bred for research.

Non USDA-covered rodents: Mice (*Mus*) and rats (*Rattus*) bred for research.

Non-mammal: Vertebrate animals that are not classified as mammals. Animals included in this category are fish, amphibians, reptiles, and birds.

PROCEDURES

USDA-covered Non Rodents Species

After surgery is completed:

1. Should be transferred to a designated recovery room or their pens/cages and monitored continuously with particular attention to adequate respiration and perfusion. A method of documentation is to be kept with the animal throughout the entire post-operative period, defined as the time until the animal can maintain sternal recumbancy (quadrupeds) or sit upright (nonhuman primates), is hemodynamically stable, and shows good respiratory exchange. Documentation of complete recovery from anesthesia can be made on the anesthetic record, the operative note, or in the [Individual Animal Medical Record](#) (IAMR). Prior to exhibiting that level of recovery, an animal should be turned from one side to its other no less frequently than every thirty minutes.
2. Once the animal is deemed stable and able to swallow, the endotracheal tube (if applicable) is removed. If the animal is under the effect of an anesthetic or paralytic that suppresses the gag reflex, even greater attention may be necessary to avoid removing the endotracheal tube prematurely so aspiration of vomitus does not occur.
3. During recovery, the animal's body temperature should be supported by applying external heat sources such as commercially available warming devices and/or administering warmed intravenous solutions. Hot water bottles and radiant heat may also be used if the animal is protected from burn injury.
4. Post-procedural analgesics will be administered as stated in the approved protocol. If an animal continues to display obvious pain or discomfort, the AV or his or her designee will determine if additional or different analgesic therapy is indicated, after consultation with the PI or their designee.
5. The PI and AV, or their designees, should be notified immediately if post-procedural complications are noted; these may include, but are not limited to, bleeding, difficulty breathing, seizures, vomiting, and the incision site dehiscence. During evenings, weekends, and holidays, the on-call veterinarian must be contacted. Contact information is posted in each facility.
6. Post-operative and post-procedural monitoring should continue as described in the IACUC-approved protocol. However, more frequent monitoring may be required for animals deemed physiologically unstable or not fully recuperated from the procedure. Skin sutures and wound clips must be removed in a timely fashion (usually 10-14 days after surgery). All observations, procedures, and treatments must be noted in the [Individual Animal Medical Record](#) (see IACUC [Policy on Animal Observation and Record Keeping](#)).

USDA-covered Rodent Species

After surgery is completed:

1. Should be transferred to a clean cage and monitored continuously until the animal is ambulatory, hemodynamically stable, and shows good respiratory exchange. The animal's body temperature should be supported by applying external heat sources, such as a water-circulating heating pad. Animals should not be returned to the housing area until they are completely recovered; moving around the cage with activity similar to what they showed prior to the procedure.
2. Post-procedural analgesics will be administered as stated in the approved protocol. If an animal continues to display obvious pain or discomfort, the AV or their designee should be contacted and will determine if additional or different analgesic therapy is indicated, after consultation with the PI or their designee.
3. Post-operative and post-procedural monitoring should continue as listed in the IACUC-approved protocol; however, more frequent monitoring may be required for animals deemed physiologically unstable or not fully recuperated from the procedure. Skin sutures and wound clips must be removed in a timely fashion (usually 10-14 days after surgery). All observations, procedures, and treatments must be noted in the IAMR

Non USDA-covered Rodents and Non-mammals

After surgery is completed:

1. Should be transferred to a clean cage/tank and monitored continuously until the animal is ambulatory, hemodynamically stable, and shows good respiratory exchange. For non-mammals, animals should be monitored continuously until alert and responsive. Animals should not be returned to the housing area until they are completely recovered; moving around the cage with activity similar to what they showed prior to the procedure.
2. Post-procedural analgesics will be administered as stated in the approved protocol. If an animal continues to display obvious pain or discomfort, the AV or their designee should be contacted and will determine if additional or different analgesic therapy is indicated, after consultation with the PI or his or her designee
3. Post-operative and post-procedural monitoring should continue as listed in the IACUC-approved protocol. However, more frequent monitoring may be required for animals deemed physiologically unstable or not fully recuperated from the procedure. Skin sutures and wound clips must be removed in a timely fashion (usually 10-14 days after surgery). All applicable procedures and treatments

must be documented, including all anesthetic and analgesic episodes, on the Rodent Record Card; observations must be documented on the Rodent Record Card, in the laboratory notebook, or using another method. For non-mammals, the Rodent Record Card, laboratory notebook or other method may be used to document observations, procedures and treatments.

RELATED POLICIES

[Policy on Anesthesia and Analgesia](#)

[Policy on Animal Observation and Record Keeping](#)

v1.1, 16 February 2005

v1.2, 20 September 2011

v1.3, 19 October 2011

v1.4, 29 April 2016

v1.5, 19 July 2017

v1.6, 16 June 2021