	STANDARD OPERATING PROCEDURE #418
McGill	# HUMANE INTERVENTION POINTS FOR ANIMALS USED IN TRAINING

1. PURPOSE

This Standard Operating Procedure (SOP) provides instruction on how to set humane intervention points for animals used as part of McGill University's institutional training program.

2. RESPONSIBILITY

Veterinary care staff, Facility Animal Care Committee (FACC).

3. INTRODUCTION

3.1. Animals used for teaching and training are not being used to discover, prove, or develop new ideas and techniques and should only be used where it is based on sound ethical justification and proven educational objectives that demonstrate pedagogical merit.

3.2. Animals are used in training to develop manual skills and expertise in specific techniques (for example, animal handling or surgical skills).

3.3. Before any animal is used for training, efforts should be made to find a replacement alternative. Replacement alternatives may include:

   3.3.1. Film and video.

   3.3.2. Models, mannequins and simulators.

   3.3.3. Multimedia computer simulation.

   3.3.4. Ethically-sourced animal cadavers and tissue.

   3.3.5. Clinical work with animal patients and volunteers.

   3.3.6. Student self-experimentation.

   3.3.7. In vitro labs.

   3.3.8. Non-invasive field studies.

3.4. If no pedagogically sound replacement is available, then effort should be made to reduce the number of animals used and refine techniques.

3.5. Humane intervention points are clear criteria set to prevent or relieve unnecessary pain or distress to animals used as part of the institutional training program. Humane interventions are defined as actions or instructions including, but not limited to, the following:

   3.5.1. Limiting the frequency and number of training sessions for each animal.

   3.5.2. Limiting number of manipulations per training session.

   3.5.3. Adequate veterinary treatment, analgesia and/or supportive therapy to the animal(s).

   3.5.4. Euthanasia.

3.6. Our current training program is divided into Modules, each Module regrouping a small number of techniques or procedures. Refer to the description of the Modules here: http://mcgill.ca/cmarc/workshops. This SOP takes into consideration that Modules encompassing non-invasive, CCAC invasiveness category B procedures, e.g., handling, restraint, inhalant anesthesia, are more frequent that those with more invasive, CCAC invasiveness category C procedures, such as injections or blood collection.

Example of the typical sequence of use for a cage of training rodents:

Module 1 non-invasive → Module 2 invasive → Module 3 non-invasive → Module 1 non-invasive → Module 6 invasive → Module 1 non-invasive

4. PROCEDURES

4.1. Animal selection:

    4.1.1. Animals used in training should be at least 5-6 weeks of age and should not be kept past the age of 12 months.

    4.1.2. When animals are received as donations from another Animal Use Protocol (AUP), select animals of strains or genotypes that do not demonstrate any traits that affect the general condition and wellbeing of the animals.

    4.1.3. Animals that are donated to be used for training purposes should be experimentally naïve.

4.2. Identification and Recordkeeping:

    4.2.1. Clearly identify animals or cages of animals used in training.

    4.2.2. Maintain records for each group of animals used for training purposes that include:

        4.2.2.1. Source of the animals, i.e., vendor information or AUP.

        4.2.2.2. Date donated or date received.

        4.2.2.3. Date of birth.

        4.2.2.4. Details for each training session including the date and type of training.

4.3. Humane intervention points:

    4.3.1. Each animal is to be used for one procedure per training session.

    4.3.2. Limit the number of attempts to 3 for each procedure per training session, per animal. After 3 unsuccessful attempts, use a different animal.

    4.3.3. Limit the number of training sessions to once every 7 days for each animal, regardless of the procedure.

    4.3.4. Animals that exhibit signs of discomfort or distress following a training session should not be used for a minimum of 14 days.

    4.3.5. Limit the total number of training sessions to a maximum of 6 per animal, regardless of the procedure, taking into consideration that the most frequently-requested training sessions involve non-invasive procedures such as handling/restraint. The sixth training session is terminal.

    4.3.6. Euthanize animals used for surgical training before recovery from anesthesia.

    4.3.7. Euthanize animals that exhibit signs of illness, injury or poor general condition.

5. REFERENCES

5.1. Guidelines on Training of Personnel Working with Animals in Science, Canadian Council on Animal Care, Canada, 2015: https://www.ccac.ca/Documents/Standards/Guidelines/CCAC_Guidelines_on_Training_of_Personnel_Working_With_Animals_in_Science.pdf

5.2. Canadian Council on Animal Care Three R's Microsite, Teaching and Training: http://3rs.ccac.ca/en/teaching-and-training/

5.3. McGill University SOP 404 – Substance Administration: http://www.mcgill.ca/research/files/research/404-substance_administration_-_sept_2017_0.pdf

5.4. Canadian Council on Animal Care Categories of Invasiveness in Animal Experiments https://www.ccac.ca/Documents/Standards/Policies/Categories_of_invasiveness.pdf

SOP REVISION HISTORY

2018.03.07	(NO TEXT)	**3.6. Our current training program is divided into Modules, each Module regrouping a small number of techniques or procedures. Refer to the description of the Modules here: http://mcgill.ca/cmarc/workshops. This SOP takes into consideration that Modules containing non-invasive procedures, e.g., handling, restraint, inhalant anesthesia, are more frequent that those with more invasive procedures such as injections or blood collection. Example of a typical sequence of use for a cage of training animals:**
2018.03.07	(NO TEXT)	**4.3.1. Each animal is to be used for one procedure per training session.**
2018.03.07	4.3.5. Limit the total number of training sessions to a maximum of 10 per animal, regardless of the procedure, taking into consideration that the most frequently-requested training sessions involve non-invasive procedures such as handling/restraint.	4.3.5. Limit the total number of training sessions to a maximum of ~~10~~ **6** per animal, regardless of the procedure, taking into consideration that the most frequently-requested training sessions involve non-invasive procedures such as handling/restraint. **The sixth training session is terminal.**
2018.03.20	4.2.2. Maintain records for each animal used for training purposes that include:	4.2.2. Maintain records for each **group of** animal**s** used for training purposes that include:
2018.05.14	3.6. Our current training program is divided into Modules, each Module regrouping a small number of techniques or procedures. Refer to the description of the Modules here: http://mcgill.ca/cmarc/workshops. This SOP takes into consideration that Modules encompassing non-invasive, e.g., handling, restraint, inhalant anesthesia, are more frequent that those with more invasive, such as injections or blood collection.	3.6. Our current training program is divided into Modules, each Module regrouping a small number of techniques or procedures. Refer to the description of the Modules here: http://mcgill.ca/cmarc/workshops. This SOP takes into consideration that Modules encompassing non-invasive, **CCAC invasiveness category B** procedures, e.g., handling, restraint, inhalant anesthesia, are more frequent that those with more invasive, **CCAC invasiveness category C** procedures, such as injections or blood collection.
2018.05.14	(NO TEXT)	5.4. **Canadian Council on Animal Care Categories of Invasiveness in Animal Experiments https://www.ccac.ca/Documents/Standards/Policies/Categories_of_invasiveness.pdf**

Comparative Medicine & Animal Resources Centre

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