

	Policy	Policy on Aseptic Technique for Rodent Survival Surgeries	
	Approved by:	Institutional Animal Care and Use Committee	
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	Date Last Revised: Initial Issue	Page 1 of 2	

TITLE	:	Policy on Aseptic Technique for Rodent Survival Surgeries
SCOPE	:	This policy is applicable to all research personnel performing survival surgeries on rodents
PURPOSE	:	To describe CMRC IACUC policy on aseptic technique for rodent survival surgeries.
RELATED SOPS	:	None

GENERAL:	<ul style="list-style-type: none"> • Appropriate pre-operative and post-operative care of animals in accordance with established veterinary medical and nursing practices are required. • A dedicated surgical facility is not required for rodents. • All rodent survival surgeries must be performed using aseptic technique.
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I. Definitions

Asepsis – freedom from infection; the prevention of contact with microorganisms.

Aseptic technique – methods used to keep sterile instruments and patients free of microbial contamination.

Disinfectant - an agent that frees from infection; *especially* : a chemical that destroys vegetative forms of harmful microorganisms (as bacteria and fungi) especially on inanimate objects but that may be less effective in destroying spores.

Sterilize - to free from living microorganisms.

Tips only technique - surgeries involving only very small incisions, for example, embryo transfer or ovariectomy. The emphasis of aseptic surgical practices here is to keep the instrument tips (which enter the body) sterile, thereby preventing contamination.

II. Responsibility

A. All personnel performing survival surgery on rodents are responsible for following this policy.

III. Policy

A. Required surgical attire:

1. Clean lab coat, scrub top or jumpsuit.
2. Surgical mask except during embryo transfer surgeries because of the necessity of mouth pipetting.
3. **Sterile surgical** gloves except when the “tips only” technique is used.
4. Head cover is recommended but not required.

B. Pre-operative preparation:

1. Surgery must be conducted in a designated, disinfected, uncluttered area that promotes asepsis during surgery.
2. The animal(s) should be prepared in an area separate from where the surgery is to be conducted.
3. The animal’s hair must be removed from the surgical site.
4. The surgical site(s) must be prepared with an appropriate surgical scrub alternated with alcohol.
5. Surgeons should wash and dry their hands before aseptically donning sterile surgical gloves.

C. Intra-operative procedures:

1. The animal must be maintained in a surgical plane of anesthesia throughout the surgical procedure.
2. Lubricating ophthalmic ointment (e.g., Lacrilube™) must be placed in the anesthetized animals' eyes to prevent drying.
3. Sterile instruments must be used at beginning of surgery and handled in such a manner that they remain sterile.
4. When using the "tips only" technique, the sterility of the instrument tips must be maintained throughout the procedure.
5. Instruments and gloves may be used for a series of similar surgeries provided they are maintained clean and disinfected with a high-level disinfectant between surgeries (see E below). Alternatively, fresh, sterile gloves and autoclaved or hot bead sterilized instruments should be used for each animal.
6. Chemical disinfectants or sterilants must be rinsed off the instruments and gloves prior to touching the animal.
7. The animal's vital signs must be monitored and recording is recommended.
8. The surgical wound must be closed using appropriate techniques and materials.
 - a. Skin must be closed with a mono-filament suture material, staples or wound clips.

D. Post-operative care:

1. The animal must be monitored during recovery and moved to a warm and dry area.
2. The animal may be returned to the Animal Housing Room only after it has fully recovered from anesthesia.
3. Analgesics must be provided as appropriate and approved in the IACUC Animal Study Protocol (ASP Form 100).
4. Skin closures must be removed no later than 10-14 days post-operatively.
 - a. If exceptions are required to the 10-14 day skin closure removal, this must be justified in the CMRC IACUC Animal Study Protocol (ASP Form 100).
5. A surgical record should be maintained (e.g., annotate cage card with procedure and date).

E. Recommended instrument disinfectants

1. 70% ethyl alcohol, 85% isopropyl alcohol – requires 15 minutes contact time.
2. 10% Sodium hypochlorite (e.g., Clorox®) – must be prepared fresh, 3 minutes contact time.
3. Chlorine dioxide (e.g., Clidox®) – requires 5 minute contact time.
4. Chlorhexidine (e.g., Nolvasan-S) – requires 10 minutes contact time.

IV. References

1. Brown PA and Hoogstraten-Miller S. Principles of Aseptic Rodent Survival Surgery: Parts I & 2 In: Reuter J.D. and Suckow M.A. (Eds.), Laboratory Animal medicine and Management. Ithaca: International Veterinary Information Service (www.ivis.org), 2004; Document No. B2514.0604. [<http://www.ivis.org/advances/Reuter/brown1/chapter frm.asp?LA=1>] and [<http://www.nap.edu/readingroom/books/labrats/>].
2. For additional guidelines on survival rodent surgery, including references, tables of recommended hard surface and skin disinfectants, instrument sterilants and disinfectants, and wound closure selection please see <http://oacu.od.nih.gov/ARAC/surguide.pdf>.
3. The NIH's Aseptic Technique Training Course may be viewed at <http://oacu.od.nih.gov/UsefulResources/aseptic.htm> through Windows Media Player.