

Aseptic Surgery Techniques

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Getting Your Workspace Ready

- Make sure you have designated areas for prep, surgery and recovery



- All areas need to be wiped down with disinfectant and a sterile drape needs to be applied to the table surface when beginning to work at that station
- Always have a heat source available to prevent hypothermia



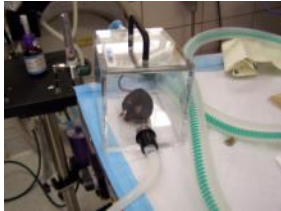
- Make sure you have all instruments and materials you will need prior to prepping the animal





Anesthetizing the Patient

- All animals need to be assessed for health concerns prior to anesthesia
- Weigh the animal and verify the dosage of all medications is correct
- Administer anesthesia and monitor the animal continuously



- Verify depth of anesthesia by performing a toe pinch or by touching the inside corner of the eye and observing if the animal jerks or blinks
- During a procedure there should be no response from the animal when procedures are being performed. If an animal flinches during surgery stop working and wait until the plane of anesthesia is deep enough



Anesthetizing the Patient cont.

- After anesthetizing the animal, place a small amount of ophthalmic lubrication in the eyes to prevent corneal drying



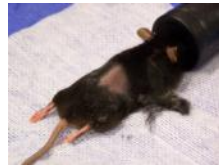
- Place the animal on a heat source and never leave the animal unattended
- Make sure there are layers of material between the heat source and the animal if using an electric heating pad
- Monitor the animal's respirations, heart rate and color at all times

Prepping the Patient

- In an area that is separate from your surgical area, shave the hair as closely as possible being sure not to nick the skin



- Use a #40 blade on mice and rats
- Make a large enough margin around the incision area to prevent hair from getting into your incision site



- Depilatory creams can be used for hair removal but make sure area is rinsed thoroughly to prevent skin irritation



Prepping the Animal cont.

- Scrub the area with a soap based disinfectant such as Chlorhexadine Scrub or Povidone Iodine Scrub followed with a scrub of 70% alcohol



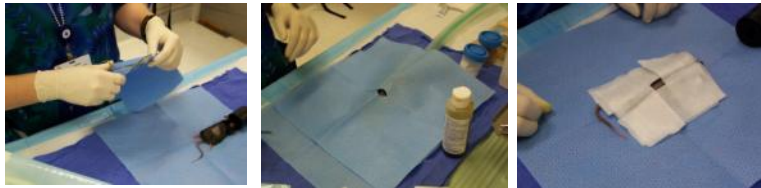
- Repeat this sequence three times making sure after the final time all of the soap has been removed
- Always start in the middle of the incision area and circle your way outwards.



- Make sure you do not get the animal too wet as this can cause hypothermia
- Move the animal to the designated surgery area. Apply sterile gloves. If used, drape the animal with a sterile drape making sure the entire animal is covered.



- Fenestrate the drape so only your surgical area is exposed



Keep it Sterile

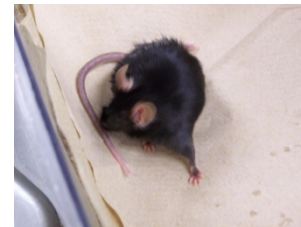
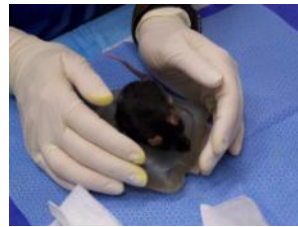
- Always make sure your surgical area, drapes, gloves, instruments and suture materials are sterile
- Do not drag your suture across the table as that causes it to lose its sterility. Always hold the end of the suture to prevent this
- Always be aware of where your hands are. Do not touch anything that is not sterile. If you accidentally touch a non-sterile surface, immediately change your gloves
- Use a new autoclaved pack for each animal or resterilize instruments with a hot bead sterilizer in between patients if performing multiple surgeries in one session. **If using a hot bead sterilizer, make sure you cool instrument tips between animals by dipping the ends of the instruments in sterile saline.**





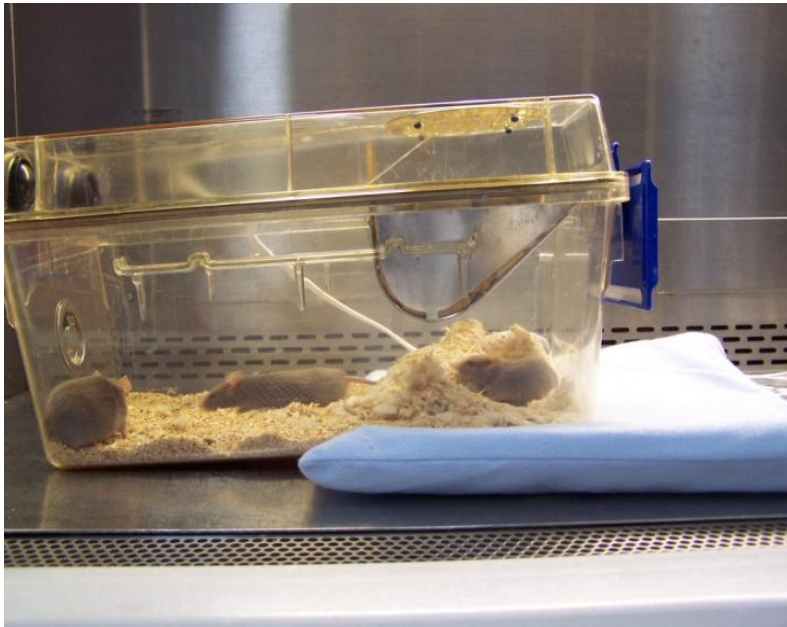
Post-operative Care

- Administer analgesics as stated in your protocol, either pre, intra or post op.
- Maintain animal on a heat source until fully awake and in sternal recumbency and moving well



- Take care in making sure animal is not becoming overheated. Maintain heating pad on low and always make sure there is material between the animal and heating pad. Turn animal from side to side occasionally to prevent burns

Alternate Heat Source



A heating pad set at the lowest setting placed halfway under the recovery cage can be used as an alternate heat source. You should not place the pad under the entire cage but only under one half of the cage. This will enable the recovering animals to move away from the heat source if they choose.

Post-operative Monitoring

- Monitor animal as dictated in your protocol
- Monitor for indices of pain, appetite, hydration status, membrane color, fecal and urine output
- Monitor incision site for swelling, redness, discharge or signs of dehiscence
- Record observations on pink surgery card
- Feel free to contact vet services with any concerns you may have

Suture Selection

- For closure of the body wall and internal wound closures, use an absorbable suture material
 - Vicryl or Dexon absorbs in 60-90 days
 - PDS or Maxon absorbs in 6 months, use when extended wound support is desired
- For skin closures use a nonabsorbable monofilament suture
 - Prolene, Nylon, Stainless Steel Wound Clips or Staples
- Always use the smallest gauge material, typically 3-0 or 4-0
- **Do not use silk or chromic gut for wound closure because of the chance of wicking and inflammation**
- Sutures, staples or clips should be removed 7-14 days post surgery