

# Aseptic Surgery Techniques

Presentation created by:

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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

# Getting Your Workspace Ready: External Heat Source

Always have a heat source available to prevent hypothermia



# Getting Your Workspace Ready: Equipment

Make sure you have all instruments and materials you will need prior to prepping the animal including pink surgery cards.



# PPE To Be Worn

- ✓ Clean scrubs or a dedicated clean lab coat that is fully closed
- ✓ A disposable yellow gown may be used over your scrubs
- ✓ Mask and cap if not working in Laminar Flow Hood
- ✓ Gloves: Non-sterile for prepping the animal and sterile for the surgical procedure



# Anesthetizing the Patient: Pre Anesthesia

- ✓ 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



# Anesthetizing the Patient: Anesthesia Depth

- ✓ 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
- ✓ ***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: Eye Lube

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



# Anesthetizing the Patient: Hair Removal

Make a large enough margin around the incision area to prevent hair from getting into your incision site

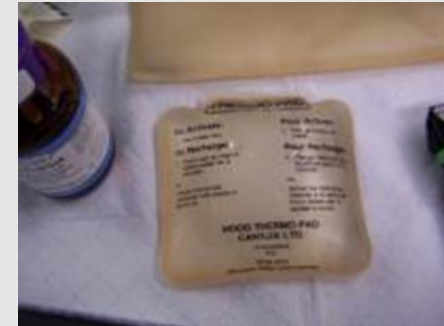
In an area that is separate from your surgical area, shave the hair as closely as possible being sure not to nick the skin **(Use a #40 blade)**

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



# Anesthetizing the Patient: External Heat Source

- ✓ Place the animal on a heat source
- ✓ 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



# Anesthetizing the Patient: Monitoring

Monitor the animal's:

- ✓ Respirations
- ✓ Heart Rate
- ✓ Color



## At All Times

# Prepping the Patient: Surgical Scrub

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 the soap has been removed

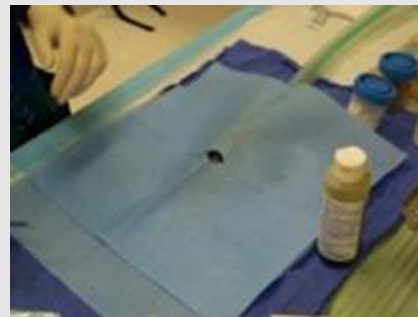
# Prepping the Patient: Surgical Scrub Cont.

- ✓ 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



# Prepping the Patient: Surgical Draping

- ✓ 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: Instruments

- ✓ Always make sure your surgical area, drapes, gloves, instruments and suture materials are sterile
- ✓ Use a new autoclaved pack for each animal
- ✓ Re-sterilize 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

# Keep it Sterile: Gloves and Suture

- ✓ Be aware of where your hands are
- ✓ Do not touch anything that is not sterile
- ✓ **Immediately change your gloves if you touch a non-sterile surface**
- ✓ 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

# Suture Selection:

- ✓ Always use the smallest gauge material
  - ✓ 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

# Suture Selection: Internal and Body Wall

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

# Suture Selection: Skin

Use a nonabsorbable monofilament suture

- ✓ Prolene
- ✓ Nylon
- ✓ Stainless Steel
- ✓ Wound Clips or Staples

# 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

# 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
- ✓ For more information see [IACUC Policy 102 “Surgery”](#)

# QUESTIONS & SUPPORT

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