Dos and Don’ts of Rodent Aseptic Surgery

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Objectives

• To identify & correct common mistakes that lead to breaks in aseptic technique made when performing survival rodent surgery

• Illustrate various practical uses of Press’n Seal to perform aseptic rodent surgery
  • Although Press’n Seal is a grocery item, it is packaged sterile
  • Always place sticky side towards surface intended to be draped. Non-sticky side should be away from this surface

• The angel or devil icons throughout this presentation indicate whether the technique is correct or wrong
  • 😇 = Correct technique
  • 😈 = Poor technique
Missing gown or lab coat
No face mask
Non-sterile gloves
Touching non-sterile surface
Using non-sterile gloves
No hair cover
No surgical attire at all
All required PPE is in place:
1. Gown
2. Sterile gloves
3. Face mask
4. Hair cover
5. Arm sleeves (not required but highly recommended)
This is the surgery table

Clipping hair where surgery is going to take place

橛橛
This is where you clip hair, away from surgery table to avoid debris from falling in the surgical wound.
Applying a petroleum based product to protect eyes
Only *ophthalmic* ointment should be used to protect eyes when an animal is anesthetized.
Sterile instruments placed on non-sterile surface
All instruments are on sterile field 😇
Draping with cotton material leads to wicking of fluids and bacteria into the surgical wound.
Impermeable material such as Press’n Seal as seen on this rat makes for an ideal drape 😊
Overcrowded hot bead sterilizer 😈
Too many instruments will cool down beads precluding sterilization of instrument tips
Only a few instruments should be placed in the hot bead sterilizer to properly sterilize instrument tips 😇
Suture and thumb forceps crossing over into non-sterile field
Suture and all instruments are within the sterile field.

Sterile Side

Non-Sterile Side
Autoclaved package is compromised – torn package renders items non-sterile.
Autoclaved package has not been compromised and all contents are considered sterile.

Cat. 92510  
Qty. 1 ea

Self-Seal Sterilization Pouch, 5 1/2" x 10" 😊

For Single Use Only

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Post-op recovery cage is dirty
Post-op recovery cage is clean, which decreases the potential for post-op infections 😊
There are many devils in this picture. See if you can identify them before going to the next slide 🅱️
Here are the devils:
1. Not wearing hair cover
2. Touching contaminated object (glasses) with gloves
3. Using non-sterile (nitrile) gloves
4. Syringe outer package on sterile field
5. Tube of ophthalmic ointment on sterile field
6. Suture outer package on sterile field
7. Anesthesia tube & animal not covered with sterile drape
8. Sterile glove outer packaging on sterile field
9. Red top blood tube on sterile field
10. Disinfectant bottle on sterile field
The Solo Surgeon

• Frequently investigators assign surgery duties to a member of their lab without additional help. The lab member ends up performing every aspect of the surgery alone

• So what happens if non-sterile items such as the anesthesia dial, stereotaxic apparatus knobs, light handles and microscope dials have to be manipulated during surgery?

• The next slides provide practical solutions to the “Solo Surgeon”
Surgeon touching non-sterile parts with sterile gloves 😈
Covering the anesthesia machine dials with Press’n Seal or autoclaved aluminum foil prevents cross-contamination of the surgical wound.
Covering parts of the stereotaxic apparatus that need to be manipulated with Press’n Seal or autoclaved aluminum foil prevents cross-contamination of the surgical wound.
Covering knobs of the surgical microscope with Press’n Seal or autoclaved aluminum foil
Covering light handles with Press’n Seal or autoclaved aluminum foil