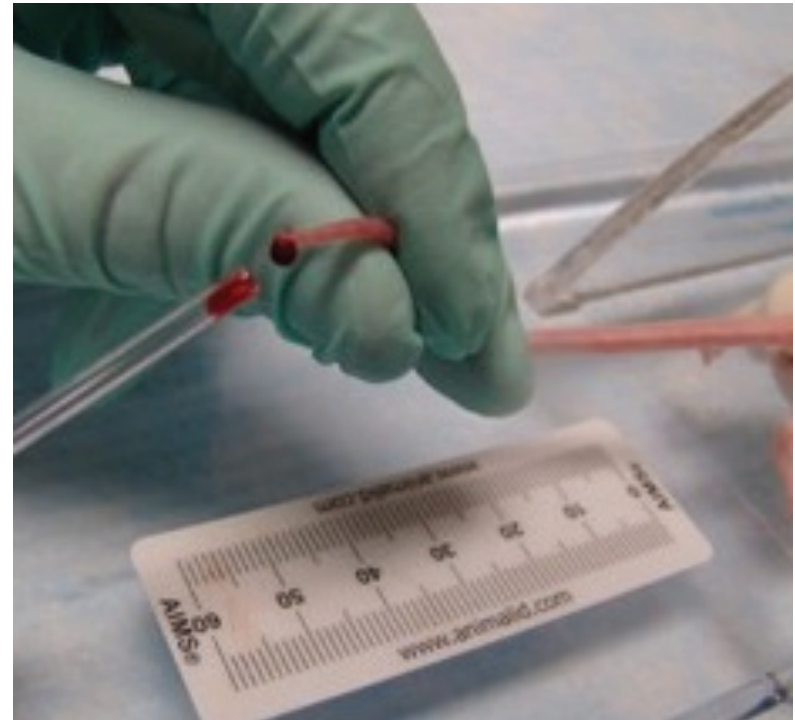


Tail Clipping in Mice

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Applications

- Blood collection
- Genotyping



Alternatives

	ID	Genotyping
Toe clipping	X	X
Tail clipping		X
Ear punch	X	X
Tattooing	X	
Metal ear tag	X	
Microchip	X	
Toe nail clipping	X	
Blood sampling		X
Dye on skin/hair clip	X	
Saliva/epithelial cells		X
Rectal scrapings/feces		X
Hair follicles		X

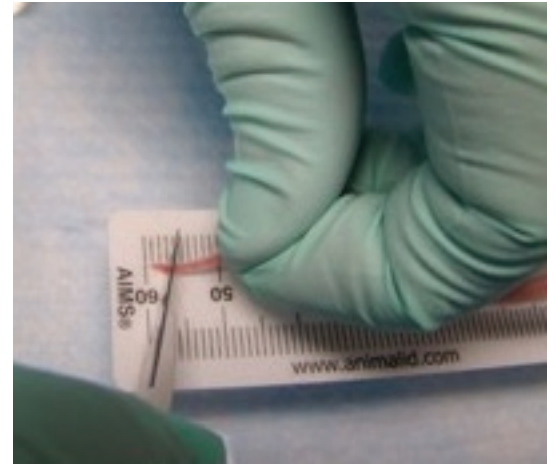
UTD Policy

- Up P21 – anesthesia not required
- P22+ anesthesia/analgesia required
- Aseptic technique – alcohol minimum
- Bleeding control – required

P = Postnatal day

Technique

- Anesthesia/analgesia for P22+ (not required up to P21)
- Sharp scissors or surgical blade (preferred)
- Wipe tail and scissors with alcohol
- Remove up to 5 mm
- Bleeding control



Anesthesia/Analgesia – P22+

- Gas - isoflurane
- Topical
- Local with lidocaine with epinephrine
- Local hypothermia
- If systemic analgesics, should be administered at least 30 min < tail snip

General Anesthesia

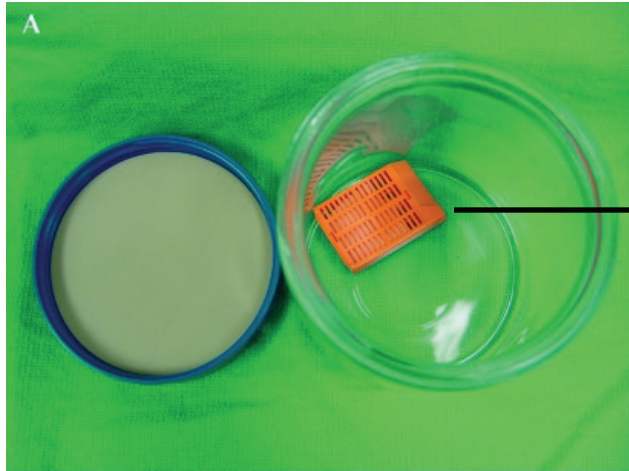
- Isoflurane
 - Vaporizer induction chamber
 - Open drop technique

Isoflurane - Vaporizer

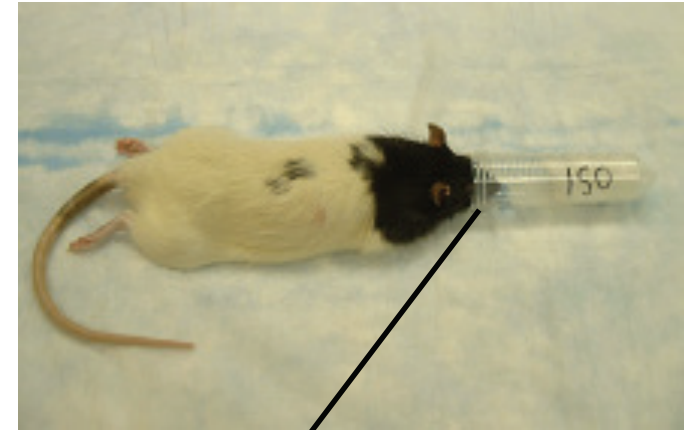
- Induction chamber
 - 3-5% isoflurane
 - 0.5 L/min oxygen



Open Drop



Pathology cassette with isoflurane soaked material



Centrifuge tube
Depth of anesthesia can be controlled by moving the nose cone closer or farther away from the nostrils



Wire or plastic grate

Absorbent material
Isoflurane soaked

Open Drop

- Scavenging required (e.g., fume hood)
- Used for short term anesthesia (vs. calibrated vaporizer)
- Prolonged use (beyond a couple of minutes) results in deaths



Topical Anesthesia

- Cetacaine
 - Benzocaine, Butamben & Tetracaine
- Ethyl chloride
 - Topical anesthetic skin refrigerant
 - Flammable
 - Freezing may cause tissue distortion



Local Anesthesia

- Infiltration: Lidocaine 2% with Epinephrine 1:100,000
- Epinephrine?
 - Prolongs anesthetic effect of lidocaine
 - Vasoconstriction facilitates hemostasis
- Helpful for clipping older mice P22+ (with justification)



Bleeding Control

- Kwik Stop



- Silver Nitrate



- Gauze

