

MOUSE STANDARD ANALGESICS AND ANESTHETICS

	Analgesic	Dose (mg/kg)	Route	Frequency of Administration	Notes
Opioids	Buprenorphine HCL*	0.1-0.5	SC/IP	4-6 hours	
	Buprenorphine ER* (ZooPharm)	0.5-1.0	SC	48 hours	Available in two concentrations 0.5 mg/ml (mice) and 1.0 mg/ml (rats). Do not dilute.
	Buprenorphine XR* (Ethiq)q)	3.25	SC	48 hours	Once broached, the vial needs to be discarded at 56 days.
NSAIDs	Meloxicam	5-10	SC	8-12 hours	
	Meloxicam ER (Zoopfarm)	2-4	SC	24 hours	Do not dilute
	Carprofen	10-20	SC	24 hours	
Local	Bupivacaine	2.5	SC	4-8 hours	Dilute to 0.25%, Do not exceed 8 mg/kg
	ER Bupivacaine (Nocita)	1.0	SC	48-72 hours	Do not dilute

Multimodal Analgesia = Opioid + NSAID +/- Local

Anesthetic	Dose (mg/kg)	Route	Frequency of Administration	Notes
Isoflurane	3-5% for induction 1-3% for maintenance	Bell jar/ Drop box in fume hood	Continuous	Calculate 0.05mL Isoflurane for each 1% dose concentration (up to 5%) per 1 Liter chamber internal volume (see chart below).
Isoflurane	3-5% for induction 1-3% for maintenance	Vaporizer	Continuous	
Ketamine*/ Xylazine*	80-120 ket/ 10-15 xyl	IP	Initial loading dose, then 1/3-1/2 of loading dose of ketamine ONLY as needed to maintain (typically 30-45 min. intervals)	Cocktail, Redosing should be ketamine only
Ketamine*/ Xylazine*/ Acepromazine	80-120 ket/ 2-6 xyl/ 1-2 ace	IP	Initial loading dose, then 1/3-1/2 of loading dose of ketamine ONLY as needed to maintain (typically 30-45 min. intervals)	Cocktail, Redosing should be ketamine only
Ketamine*/ Dexmedetomidine (Dexdomitor)	50-75 ket/ 0.5-1.0 dexmed	IP	Initial loading dose, then 1/3-1/2 of loading dose of ketamine ONLY as needed to maintain (typically 30-45 min. intervals)	Cocktail, Redosing should be ketamine only
Pentobarbital	60-80 mg/kg	IP	Initial loading dose, then 1/4-1/3 of loading dose as needed to maintain (typically 30-45 min. intervals)	Pharmaceutical grade or compounded in a certified/accredited pharmacy

*controlled substance

Internal volume of anesthetic chamber	Concentration of Isoflurane				
	1%	2%	3%	4%	5%
1 liter	0.05	0.10	0.15	0.20	0.26

Volumes are in mL and indicate the volume of isoflurane to be applied to a cotton swab or gauze in the bell jar/drop box. Isoflurane-soaked swab cannot come in direct contact with the animal.