

Anesthetics, Analgesics, Tranquilizer Drugs and Dosages for Rodents and Rabbits

Analgesics

Drug: Carprofen Class of Drug: NSAID	
Mouse	5 mg/kg SC or PO; q 12 – 24 hours
Rat	5 – 7 mg/kg SC or PO; q 12 – 24 hours
Guinea pig	2.5 mg/kg SC; q 24 hours
Rabbit	1 – 5 mg/kg SC; q 24 hours

Drug: Ketoprofen Class of Drug: NSAID	
Mouse	5 mg/kg SC; q 24 hours
Rat	5 mg/kg SC; q 24 hours
Guinea pig	1 mg/kg SC; q 24 hours
Rabbit	3 mg/kg SC; q 24 hours

Drug: Meloxicam Class of Drug: NSAID	
Mouse	5 mg/kg SC or PO; q 12 – 24 hours
Rat	1-2 mg/kg SC or PO; q 12 – 24 hours
Guinea pig	1-2 mg/kg SC or PO; q 24 hours
Rabbit	0.3 – 0.6 mg/kg SC or PO; q 24 hours

Drug: Buprenorphine (regular) Class of Drug: Opioid	
Mouse	0.05 – 0.1 mg/kg SC; q 6-8 hours
Rat	0.01 – 0.05 mg/kg SC; q 6-8 hours
Guinea pig	0.05 mg/kg SC; q 8 – 12 hours
Rabbit	0.02 – 0.1 mg/kg SC; q 6 – 12 hours

Drug: Buprenorphine extended release (Ethiq^a XR™, 1.3 mg/ml) Class of Drug: Opioid	
Mouse	0.05 ml/20 gm body weight (3.25 mg/kg), SC; q 72 hours
Rat	0.1 ml/200 gm body weight (0.65 mg/kg), SC; q 72 hours
Guinea pig	Not approved for this species
Rabbit	Not approved for this species

Anesthetics, Tranquilizers, Sedatives, and Reversal Agents

Drug: Isoflurane Class of Drug: Inhalant Anesthetic	
All rodents and rabbits	1 – 4 % inhalant to effect (recommend up to 4% for induction)

Drug: Ketamine and Xylazine Class of Drug: Dissociative anesthetic and Alpha-2 agonist, respectively	
Mouse	[90 – 120 mg/kg (K)] + [8 – 12 mg/kg (X)] IP or SC (in same syringe)
Rat	[40 – 90 mg/kg (K)] + [5 – 10 mg/kg (X)] IP or SC (in same syringe)
Guinea Pig	[40 mg/kg (K)] + [5 mg/kg (X)] IP or SC (in same syringe)
Rabbit	[35 mg/kg (K)] + [5 mg/kg (X)] SC (in same syringe)

Drug: Ketamine and Dexmedetomidine Class of Drug: Dissociative anesthetic and Alpha-2 agonist, respectively	
Mouse	[75 – 150 mg/kg (K)] + [0.5 – 1 mg/kg (D)] IP or SC (in same syringe)
Rat	[75 – 90 mg/kg (K)] + [0.5 – 0.75 (D)] IP or SC (in same syringe)
Guinea pig	[40 mg/kg (K)] + [0.25 mg/kg (D)] IP or IM (in same syringe)
Rabbit	[25 mg/kg (K)] + [0.5 mg/kg (D)] IM (in same syringe)

Drugs: Ketamine + Xylazine + Acepromazine Class of Drug: Dissociative anesthetic, Alpha-2 agonist, Phenothiazine tranquilizer, respectively	
Mouse	[65 mg/kg (K)] + [13 mg/kg (X)] + [2 mg/kg (A)] IP (in same syringe)
Rat	[75 mg/kg (K)] + [10 mg/kg (X)] + [2 mg/kg (A)] IP or SC (in same syringe)
Guinea pig	Not recommended
Rabbit	[35 mg/kg (K)] + [5 mg/kg (X)] + [1mg/kg (A)] IM (in same syringe)

Drug: Lidocaine Class of Drug: Local Anesthetic	
Mice	Dilute to 0.5%; drip in surgical incision; do not exceed 7 mg/kg
Rats	Dilute to 0.5%; drip in surgical incision; do not exceed 7 mg/kg
Guinea pigs	Dilute to 1%; drip in surgical incision; do not exceed 4 mg/kg
Rabbits	Do not need to dilute; drip in surgical incision; do not exceed 2 mg/kg

Drug: Bupivacaine	
Class of Drug: Local Anesthetic	
*recommended over lidocaine due to longer duration of action	
Mice	Dilute to 0.25%; drip in surgical incision; do not exceed 8 mg/kg
Rats	Dilute to 0.25%; drip in surgical incision; do not exceed 8 mg/kg
Guinea pigs	Dilute to 0.25%; drip in surgical incision; do not exceed 2 mg/kg
Rabbits	Do not need to dilute; drip in surgical incision; do not exceed 2 mg/kg

Drug: Yohimbine	
Class of Drug: Alpha-2 antagonist	
(reversal for Xylazine)	
Mice and Rats	1 – 2 mg/kg SC, IP, or IV
Guinea pigs and Rabbits	0.5 mg/kg IM or 0.2 mg/kg IV

Drug: Atipamezole	
Class of Drug: Alpha-2 antagonist (reversal for Xylazine and Medetomidine)	
Mice and Rats	1 – 2.5 mg/kg SC, IP, or IV
Guinea Pigs and Rabbits	0.1 – 1 mg/kg SC, IP, IM, or IV

References

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3. Fox JG, Anderson LC, Otto GM et al. (2015) Laboratory animal medicine. (3rd edition), Elsevier Academic Press; San Diego, CA.
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6. Ethiq XR™ product labeling; <https://ethiqxr.com>.