

Rabbit Anesthesia/Analgesia

Recommended Best Practices

Note that all of these doses are approximations and must be titrated to the animal's strain, age, sex and individual responses. Significant departures from these doses should be discussed with a veterinarian. Doses will also vary depending on what other drugs are being administered concurrently.

All doses are listed as milligrams per kilogram (mg/kg) unless otherwise noted. (source UCSF)

DRUG NAME	DOSE (mg/kg) & ROUTE	FREQUENCY	NOTES
Inhalation anesthetics			
Recommended: Isoflurane	1-3% inhalant to effect (up to 5% for induction)	Whenever general anesthesia is required	Survival surgery should have concurrent preemptive analgesia. Must use precision vaporizer. Mask or chamber induction without injected pre-medication may result in breath-holding and injury.
Ketamine combinations			
Recommended: Ketamine-Xylazine	35 – 50 + 5-10 IM or SC (in same syringe or with xylazine administered 10-20 minutes in advance)	As needed	May not produce surgical-plane anesthesia for major procedures. If redosing, use ketamine alone. May be partially reversed with Atipamezole or Yohimbine. Note that IM Ketamine combinations often sting upon injection.
Ketamine-Medetomidine	35 - 50 + ~ 0.5 IM or SC (in same syringe, or with medetomidine administered 10-20 minutes in advance)	As needed	May not produce surgical-plane anesthesia for major procedures. If redosing, use ketamine alone. May be partially reversed with Atipamezole. Note that IM Ketamine combinations often sting upon injection.
Ketamine-Xylazine-Acepromazine	35-40 + 3 - 5 + 0.75 – 1.0 IM or SC (in same syringe)	As needed	May not produce surgical-plane anesthesia for major

			procedures. If redosing, use ketamine alone. May be partially reversed with Atipamezole or Yohimbine. Note that IM Ketamine combinations often sting upon injection.
Ketamine-Midazolam	35 - 50 + ~ 2 IM or SC (in same syringe)	As needed	May not produce surgical-plane anesthesia for major procedures, but may be useful for restraint. Note that IM Ketamine combinations often sting upon injection.
Reversal agents			
Atipamezole	0.1 - 1.0 subcutaneous or IP	Any time medetomidine or xylazine has been used	More specific for medetomidine than for xylazine (as a general rule, Atipamezole is dosed at the same <i>volume</i> as Medetomidine, though they are manufactured at different concentrations)
Yohimbine	~ 0.2 IV or SC	For reversal of xylazine effects	
Other injectable anesthetics			
Sodium pentobarbital (Nembutal)	20 - 60 IV; 40 IP	Best for terminal/acute procedures only, with booster doses as needed	Consider supplemental analgesia (opioid or NSAID) for invasive procedures. Apnea is common at anesthetic doses.
Opioid analgesia			
Recommended: Buprenorphine	0.05 - 0.1 SC or IP	Used pre-operatively for preemptive analgesia and post-operatively every 6-12 hour	For major procedures, require more frequent dosing than 12 hour intervals. Consider multi-modal analgesia with a NSAID
Non-steroidal anti-inflammatory analgesia (NSAID) - Note that prolonged use may cause renal, gastrointestinal, or other problems			
Recommended: Carprofen	4-5 SC	Used pre-operatively for preemptive analgesia and post-	Depending on the procedure, may be used as sole analgesic, or as multi-modal analgesia

		operatively every 12-24 hour	with buprenorphine.
Meloxicam	0.1 – 0.3 PO, IM or SC	Used pre-operatively for preemptive analgesia and post-operatively every 24 hour for up to 4 days.	Depending on the procedure, may be used as sole analgesic, or as multi-modal analgesia with buprenorphine.
Ketoprofen	2 – 5 SC	Used pre-operatively for preemptive analgesia and post-operatively every 12-24 hour	Depending on the procedure, may be used as sole analgesic, or as multi-modal analgesia with buprenorphine.
Local anesthetic/analgesics (lidocaine and bupivacaine may be combined in one syringe for rapid onset and long duration analgesia)			
Lidocaine hydrochloride	Dilute to 0.5%, do not exceed 7 mg/kg total dose, SC or intra-incisional	Use locally before making surgical incision	Faster onset than bupivacaine but short (<1 hour) duration of action
Bupivacaine	Dilute to 0.25%, do not exceed 8 mg/kg total dose, SC or intra-incisional	Use locally before making surgical incision	Slower onset than lidocaine but longer (~ 4-8 hour) duration of action