

ANALGESIA: THE GUINEA PIG

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

DRUG NAME	DOSE (mg/kg) & ROUTE	FREQUENCY	NOTES
Inhalation anesthetics			
Recommended: Isoflurane or Halothane or Sevoflurane	1-3% inhalant to effect (up to 5% for induction). Up to 8% for Sevoflurane	Whenever general anesthesia is required	Survival surgery requires 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- Midazolam	5-10 + 0.1-0.2 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.
Recommended: Ketamine-Diazepam	6 - 11 + 0.05 – 0.2 IV (in same syringe)	As needed	May not produce surgical-plane anesthesia for major procedures.
Ketamine- Medetomidine	5 - 10 + 0.6 – 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. Note that IM Ketamine combinations often sting upon injection.
Ketamine-Xylazine	25-80 mg/kg + 0.15 -13 mg/kg IM	As needed	May not produce surgical-plane anesthesia for major procedures
Ketamine alone	40-250 mg/kg IM	As needed	Deep sedation, but not surgical anesthesia. Not often used alone.
Other injectable anesthetics			
Sodium pentobarbital (Nembutal)	20 - 60 IV	Recommended 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.
Propofol	12-26 IV	As needed	Only useful IV, so therefore limited usefulness. Respiratory depression upon induction is possible.
Opioid analgesia			
Buprenorphine	0.05 mg/kg SC	Every 8-12 hours	
Non-steroidal anti-inflammatory analgesia (NSAID) -- Note that prolonged use may cause renal, gastrointestinal, or other problems			
Flunixin	2.5-5 mg/kg SC	Every 12-24 hours	Consult with vet services regarding repeated administration
Local anesthetic/analgesics (lidocaine and bupivacaine may be combined in one syringe for rapid onset and long duration analgesia)			

Bupivacaine	1-2 mg/kg maximum dose, mixed with lidocaine at 1-4 mg/kg lidocaine	Before incision is made	
Lidocaine	1-4 mg/kg maximum dose, mixed with bupivacaine at 1-2 mg/kg bupivacaine	Before incision is made	