

## Commonly Used Analgesics

The following analgesics are intended for general use in the species of laboratory animals commonly used at NEOUCOM. The animals' genetic background and other factors may have a profound effect on the efficacy, safety, and incidence of side effects of these agents in these species. Although most of the information below is taken from published reports, some is based upon the clinical experience of other investigators.

Other less commonly used analgesics and combinations are available for use in the listed species and others. Blank entries indicate that no information was identified for use of the analgesic agent in the species indicated or that the agent is not well suited for the species. Please feel free to contact the CMU office at extension 6555 for other agents and additional information regarding effects, mode of action, metabolism, and side effects.

<b>LEGEND:</b>	<b>IM - Intramuscularly</b>	<b>IV - Intravenously</b>	<b>PO - Per os (by mouth)</b>	<b>SC - Subcutaneously</b>
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ANALGESIC	COMMENTS	SPECIES:									
		Bat	Cat	Dog	Gerbil	Guinea Pig	Hamster	Mouse	Pig	Rabbit	Rat
Acetaminophen	NSAID, administer orally for short term mild pain		Contra- indicated	10 mg/kg every 8 hours				300 mg/kg PO once daily			100-300 mg/kg PO every 4 hours
Amitriptyline	Tricyclic anti-depressant, administer by injection, indicated for chronic pain							1.2-5 mg/kg by IP or SC injection			1-10 mg/kg by IP or SC injection every 3-12 hours
Aspirin	Nonsteroidal anti-  Inflammatory drug (NSAID), administer orally for short term mild pain		10 mg/kg PO every 48 hours	10-20 mg/kg PO every 8 hours		86 mg/kg PO every 4 hours		100 mg/kg PO every 4 hours	10 mg/kg PO every 4-6 hours, use enteric coated tablets	100 mg/kg PO every 4 hours	100 mg/kg PO every 4 hours

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Bupivacaine	Local anesthetic, up to 12-18 hour duration, 0.25, 0.50, & 0.75% solutions available, usually 0.25% used for infiltration & 0.5% for nerve block		Used for local infiltration of incision sites (0.25%)	Used for local infiltration of incision sites (0.25%)			Used for local infiltration of incision sites (0.25%)		Used for local infiltration of incision sites (0.25%)	Used for local infiltration of incision sites (0.25%)	Used for local infiltration of incision sites (0.25%)
Buprenorphine	Opiate, administer by injection	Consult with the CMU	0.005-0.01 mg/kg by SC or IM injection every 8-12 hours	0.01-0.03 mg/kg by SC or IM injection every 6-12 hours	0.1-0.2 mg/kg SQ every 8 hours	0.05-0.06 mg/kg IM or SC every 8-12 hours	0.05 mg/kg SC every 8-12 hours	0.05-0.1 mg/kg SC injection every 12 hours	0.005-0.1 mg/kg by IM injection every 8-12 hours; Rec. 0.05 mg/kg initial dose	0.01-0.05 mg/kg by SC, IM or IV injection every 6-12 hours	0.01-0.05 mg/kg by IP or SC injection every 6-12 hours
Butorphanol	Opiate, administer by injection. Provides moderate analgesia	Consult with the CMU	0.4 mg/kg by SC injection every 6 hours	0.2-0.5 mg/kg by SC injection every 6 hours		0.025-0.4 mg/kg IM or SC every 4-12 hours		0.05-5.4 mg/kg by SC injection every 2-4 hours	0.1-0.3 mg/kg by IM injection every 4-6 hours	0.1-0.5 mg/kg by IV injection every 4 hours	0.05 – 2 mg/kg by SC injection every 2-4 hours
Carprofen	NSAID, administer orally incl., in jelly or jello, available in an injection form in Europe	Consult with the CMU		4 mg/kg PO once daily				5 mg/kg by SC injection once daily			5 mg/kg by SC injection every 12 hours

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Fentanyl	Opiate, administer by injection or transdermal patch			50 microgram per hour patch for a 10-20 kg dog, lasts 3 days, other sizes available				Not recommended	0.02-0.05 mg/kg by IM injection every 2 hours; or 50 to 100 microgram patches per 25 kg pig, lasts 3 days.		Not recommended
Flunixin	NSAID, administer by injection, may not be as effective in rodents as once thought			1 mg/kg by IV injection every 24 hours (limit to 2 days)				2.5 mg/kg by SC or IM injection every 12 hours		1.1 mg/kg SC, IM every 12 hours	1.1-2.5 mg/kg by SC or IM injection every 12 hours
Ibuprofen	NSAID					10 mg/kg IM every 4 hours		7.5 mg/kg PO once daily			7.5 mg/kg PO once daily
Imipramine	Tricyclic anti-depressant, administer by injection, indicated for chronic pain							2.3 mg/kg by SC or IP injection every 12 – 24 hours			
Ketoprofen	NSAID;by injection; limited clinical experience;GI bleeding reported.	Consult with the CMU			1-2 mg/kg IP or Intra-nasally once daily	3 mg/kg by IM injection once daily		5 mg/kg by SC injection once daily up to 3 days	3 mg/kg by IM injection once daily up to 2 days	1-3 mg/kg by IM injection once daily	5 mg/kg by SC injection once daily up to 3 days

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		Bat	Cat	Dog	Gerbil	Guinea Pig	Hamster	Mouse	Pig	Rabbit	Rat	
Lidocaine	Local anesthetic, short acting, 0.5%, 1% or 2% solutions usually used (Approximate 2 hour duration)		Used for local infiltration of incision sites and spinal anesthesia	Used for local infiltration of incision sites and spinal anesthesia				Used for local infiltration of incision sites and spinal anesthesia		Used for local infiltration of incision sites and spinal anesthesia	Used for local infiltration of incision sites and spinal anesthesia	Used for local infiltration of incision sites
Meloxicam	Non-steroidal anti-inflammatory		0.1 mg/kg PO once then 0.05 mg/kg once daily – Use liquid formulation	0.3 mg/kg once PO or SC then 0.1 mg/kg per day		0.5 mg/kg PO	Dilute injectable to 0.5 mg/ml and give 1 mg/kg SC or PO once daily.	Dilute injectable to 0.5 mg/ml and give 1 mg/kg SC once daily. Can also use oral suspension or diluted injectable orally at same dose.				
Meperidine	Opiate, administer by injection, less potent than morphine, causes sedation and respiratory depression		2-10 mg/kg by SC or IM injection every 2-3 hours	2-10 mg/kg by SC or IM injection every 2-3 hours	2 mg/kg by SC or IM injection every 3-4 hours	10-20 mg/kg IM or SC every 2-3 hours		10-20 mg/kg by SC or IM injection every 2-3 hours	2-10 mg/kg by IM injection every 4 hours	5-10 mg/kg by SC or IM injection every 3 hours	10-20 mg/kg by SC or IM injection every 2-3 hours	

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Morphine	Opiate, administer by injection, causes sedation and respiratory depression		0.1 mg/kg by SC or IM injection every 4-6 hours, higher doses may cause profound excitement	0.25-0.5 mg/kg by SC or IM injection every 4-6 hours	1.5 - 4.5 mg/kg by SC injection	2-10 mg/kg IM or SC every 2-4 hours	10 mg/kg by SC or IM injection every 2-4 hours	10 mg/kg by SC or IM injection every 2-4 hours	Not recommended	2-5 mg/kg by SC or IM injection every 2-4 hours	10 mg/kg by SC or IM injection every 2-4 hours
Oxymorphone	Opiate administer by injection, causes minimal respiratory depression in dogs and excellent analgesia			0.05-0.15 mg/kg by SC, IM or IV injection every 3-5 hours					0.15 mg/kg by IM injection every 4 hours		0.22-0.33 mg/kg by SC injection every 2-4 hours, causes more respiratory depression in rats than morphine
Pentazocine	Opiate administered by injection or PO		2-3 mg per kg SC, IM or IV every 4 hours	2-3 mg/kg IM injection every 4 hours or 15 mg/kg PO every 8 hours				10 mg/kg by SC injection every 3-4 hours	2.5 mg/kg by IM injection every 4 hours	10-20 mg/kg SC or IM every 4 hours	10 mg/kg SC every 4 hours