PAIN MANAGEMENT

Effective pain management is a critical aspect of managing all surgical cases. Properly administered analgesia improves wound healing, decreases endogenous stress, improves patient quality of life and provides comfort to the pet owner. For analgesia to be most effective, a coordinated or balanced approach must be taken. This involves beginning the pain protocol in the pre-operative period to avoid the "wind-up phase" that occurs after a painful stimulus is experienced. Pre-operative analgesics can include opioids, NSAIDs, and local agents. Analgesia is continued through the operative phase as well as the post-operative phase. A balanced protocol, to be most effective, uses different classes of analgesics to block pain through different mechanisms and at different points in the pain pathway.

Atlantic Coast Veterinary Specialists is committed to providing your patients the most effective pain control possible throughout their diagnostic work-up, treatment and recuperation. We have included a list of commonly used analgesic agents and doses to serve as a resource to you in your efforts at providing the optimum analgesia for your patients. Please do not hesitate to contact us for consultation or referral.

DRUG CLASS	DRUG	DOG DOSE	CAT DOSE
OPIODS	Morphine	0.5-2.0 mg/kg SQ, IM, or IV q 4-6 hrs	0.05-0.1 mg/kg SQ, IM q 4-6 hrs
	Hydromorphone	0.05-0.2 mg/kg SQ, IM, or IV q 4-6 hrs	0.05-0.2 mg/kg SQ, IM, or IV q 4-6 hrs
	Oxymorphone	0.05-0.2 mg/kg SQ, IM, or IV q 4-6 hrs	0.05-0.1 mg/kg SQ, IM q 4-6 hrs
	Buprenorphine	0.005-0.02 mg/kg SQ, IM, or IV q 6-12 hrs	0.005-0.01 mg/kg SQ, IM, or IV q 6-12 hrs
	Fentanyl	5 ug/kg IV bolus, then 3-6 ug/kg/hr CRI	2-3 ug/kg IV bolus, then 2-3 ug/kg/hr CRI
	Fentanyl Patch	2.2 ug/kg	12.5 and 25 ug patches available
	Butorphanol	0.1-1.0 mg/kg SQ, IM, or IV q 1-3 hrs 0.5-1.0 mg/kg PO q 6-8 hrs	0.1-0.4 mg/kg SQ, IM, or IV q 1-3 hrs 0.5-1.0 mg/kg PO q 6-8 hrs
	Tramadol	2-4 mg/kg PO q 12 hrs	2 mg/kg PO q 12 hrs
NSAIDS	Rimadyl (carprofen)	Surgical pain: 4 mg/kg PO, SQ or IM once Chronic pain: 2.2 mg/kg PO q 12 hrs or 4 mg/kg PO q 24 hrs	1-2 mg/kg PO, SQ, or IM once
	Zubrin (tepoxalin)	20 mg/kg PO once, then 10 mg/kg PO q 24 hrs	

	Etogesic (etodolac)	10-15 mg/kg PO q 24 hrs	
	Metacam (meloxicam)	0.2 mg/kg PO, SQ, or IV once, then 0.1 mg/kg PO q 24 hrs	0.2 mg/kg PO or SQ once, then 0.1 mg/kg PO q 24 hrs for 2 days, then 0.025 mg/kg PO q 72 hrs
	Dermaxx (deracoxib)	Surgical pain: 3-4 mg/kg PO q 24 hrs, not to exceed 7 days; Chronic pain: 1-2 mg/kg PO q 24 hrs	
	Ketofen (ketoprofen)	2 mg/kg PO, SQ, IM, or IV once, then 0.5-1.0 mg/kg PO q 12-24 hrs	2 mg/kg PO or SQ once, then 1 mg/kg PO q 24 hrs for 3 days
	Previcox (firocoxib)	5 mg/kg PO q 24 hrs	
	Aspirin (acetylsalicylic acid)	10-20 mg/kg PO q 12 hrs	10 mg/kg PO q 48-72 hrs
NMDA RECEPTOR ANTAGONSISTS	Ketamine	0.5 mg/kg IV once, then 0.1-0.5 mg/kg/hr	0.5 mg/kg IV once, then 0.1-0.3 mg/kg/hr
	Amantadine	2-4 mg/kg PO q 12-24 hrs	3 mg/kg PO q 24 hrs
ALPHA-2 AGONISTS	Domitor (medetomidine)	1-3 ug/kg IV, then 1 ug/kg/hr CRI	
MISCELLANEOUS	Morphine, Lidocaine and Ketamine CRI	0.1-0.2 mg/kg/hr; 1.5 mg/kg/hr; and 0.1-0.5 mg/kg/hr CRI respectively (dogs only)	
	Gabapentin	Loading dose 5-10 mg/kg PO q 12 hrs for 1-2 weeks; Long term dose 3-5 mg/kg PO q 12 hrs	2-10 mg/kg PO q 12 hrs
	Amitriptyline	1-3 mg/kg PO q 12-24 hrs	1-2 mg/kg PO q 24 hrs
LOCAL BLOCKS	Lidocaine	Do not exceed 6-7 mg/kg/site	Do not exceed 2 mg/kg/site
	Bupivicaine	Do not exceed 2 mg/kg/site	Do not exceed 1 mg/kg/site
EPIDURALS	Morphine (preservative free)	0.1 mg/kg	0.03-0.1 mg/kg
	Bupivicaine	1 ml/10 lbs; total volume including morphine volume not to exceed 6 mls	1 ml/10 lbs; total volume including morphine volume not to exceed 3 mls