

































Guide for orthopaedic surgeries

Preparing the patient for orthopaedic surgery:

- If tolerated and able to be done safely, a bath 2-3 days pre-operatively would be beneficial
- Ensure pre-anaesthetic blood work has been performed pre-operatively, ideally within one months of surgery
- Always confirm the correct side/limb with the owner on the day of surgery and check against the record
- Please have the owner sign the NRVS consent form at admission in addition to your own consent form (it can be downloaded from the website <https://nrvs.com.au/wp-content/uploads/2021/07/Owner-Consent-form.pdf>)

Premedication:

- Opioids such as methadone or morphine are acceptable **but avoid** buprenorphine and butorphanol. These are ok for sedation e.g. radiographs, but are not appropriate in most cases to address surgical analgesia due to their unique properties (partial agonists, varying duration of action)
- Opioids can be given in combination with another agent (see below the recommendations by the AAHA)
- Cefazolin should be given 22mg/kg IV 30 - 60mins prior to the surgical incision.

Desired Effect	Drug Options	Healthy	Examples	Compromised/Sick
Low FAS 	Gabapentin		50–150 mg/cat PO, 20–40 mg/kg PO (dog) 2–3 hr before visit	
	Trazodone		3–7.5 mg/kg PO (dog)	
	Alpha-2 agonist		Dexmedetomidine gel OTM. Use label dose for patient size**	
Light sedation 	Opioid		Butorphanol 0.2–0.4 mg/kg IV/IM	
	Benzodiazepine		Midazolam 0.2 mg/kg, IV/IM	
Moderate sedation 	Opioid		Butorphanol 0.4 mg/kg IM or Buprenorphine 0.02 mg/kg OTM (cat)	
	Tranquillizer		Acepromazine 0.01–0.03 mg/kg IM (dog)*, 0.025–0.1 mg/kg IM (cat)*	
	Benzodiazepine		Midazolam 0.2 mg/kg, IV/IM	
	Alpha-2 agonist		Dexmedetomidine 3–7 µg/kg IM (dog) or 3–10 µg/kg IM (cat) or 0.04 mg/kg OTM (cats)	
Heavy sedation 	Opioid		Butorphanol 0.2–0.4 mg/kg IM	
	Benzodiazepine		Midazolam 0.2 mg/kg, IV/IM	
	Alpha-2 agonist		Dexmedetomidine 7–15 µg/kg IM (dog) or 10–20 µg/kg IM (cat)	
	Neurosteroid		Alfaxalone 1–2 mg IM [§]	
	Dissociative		Ketamine 1–2 mg/kg IM	

How to use this chart:

- Select desired level of sedation.
- Consider the combinations available.
- Evaluate the health status of your canine or feline patient.
- Taking into consideration patient demeanor, the anticipated length of, and degree of pain caused by the procedure, and other factors, select a color combination that suits you and your patient's needs.
- Make appropriate combination choices, remembering to use the lower end of the drug dose when combining with other sedatives.

FAS, fear, anxiety, stress; OTM, oral transmucosal administration

* Maximum 2-3 mg total dose

* Maximum 1 mg total dose

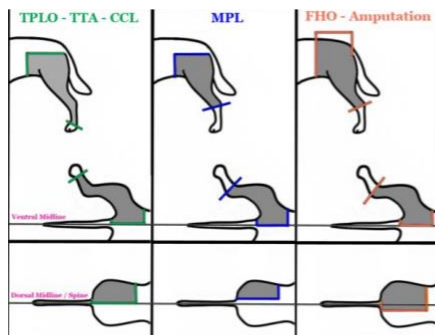
§ Best used in small patients

** Administer to fractious patients in parking lot

IMPORTANT: The authors, reviewers, and editors of the material in the 2020 AAHA Anaesthesia and Monitoring Guidelines for Dogs and Cats have made extensive efforts to ensure that treatments, drugs, and dosage regimens are accurate and conform to the standards accepted at the time of publication. However, constant changes in information resulting from continuing research and clinical experience, reasonable differences in opinions among experts, unique aspects of individual clinical situations, and the possibility of human error in preparing such an extensive text require that the veterinarian exercise individual judgment when making a clinical decision and, if necessary, consult and compare information from other sources. In particular, the veterinarian is advised to check the drug's product insert before prescribing or administering it, especially if the drug is unfamiliar or is used infrequently

Induction/preparation:

- **Always await and confirm the arrival time with the surgeon prior to induction.** We will call you approximately 30-60 min pre-operatively
- See below a diagram showing the required clipped area for a typical orthopaedic procedure e.g., TPLO/Lateral suture/MP



- A wide clip is always preferred. Always vacuum the clipped fur
- The foot will be covered by a latex glove on the foot (impermeable) and a single layer of white tape to secure the glove.
- If not done yet, please obtain pre-operative radiographs – please refer to the TPLO x-ray guide. If unsure, please wait with the radiographs and we assist upon arrival
- Remember, we will always help you as needed

Prepping of the skin for surgery:

- Please always wear exam gloves when performing any scrubbing.
- Prior to scrubbing use and sticky lint roller to capture any loose hair on the skin
- A **First** “pre” scrub is performed in the induction area with alternating 4% chlorhexidine scrub and 70% isopropyl alcohol as per the Australian Nurse association guidelines
<https://vetnurse.com.au/2018/03/07/surgical-skin-preparation/>
- The first scrub should be done until the swabs show no further gross discoloration by dirt.

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- Thereafter wrap the clean limb in a clean, dry pad or towel to protect it while being transported into the theatre.
- The **Second** “final” scrub will be performed by NRVS in the operating room after the patient has been positioned for surgery

In the surgery theatre:

- Please wear scrubs, scrub hats, masks and appropriate footwear when entering the operating room.
- Minimize the number of personnel and traffic in the theatre during the procedure

Post-Operatively:

- Surgical findings, expected outcome and post-operative care will be discussed
- Written discharge instructions will be provided for the pet owner and a surgical report and management instructions for your hospital.
- General aftercare typically involves multimodal analgesia including and opioid (egg Fentanyl patch or Methadone q4), NSAID, Tramadol, Paracetamol and/or Gabapentin as well as a 7-14 day course of a first generation Cephalosporin e.g. cephalexin 25mg/kg q8-12 or Amoxicillin/clavulanic acid 20mg/kg q12
- Activity restrictions generally are 8 weeks leash-only on a good traction surface, followed by 4 weeks of gradual return to normal activity.
- Suture removal is recommended at 2 weeks post-operative
- Further rechecks should be organised ideally weekly but minimum biweekly e.g. week 4 and 6
- Follow-up radiographic evaluation at 8 weeks. Please email follow-up radiographs to info@nrvs.com.au

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Resources:

<https://www.aaha.org/globalassets/02-guidelines/2020-anesthesia/premedication-and-sedation.pdf>

https://www.aaha.org/globalassets/02-guidelines/2020-anesthesia/anesthesia_and_monitoring-guidelines_final.pdf

https://www.aaha.org/globalassets/02-guidelines/pain-management/2015_aaha_aafp_pain_management_guidelines_for_dogs_and_cats.pdf

https://www.aaha.org/globalassets/02-guidelines/pain-management/painmgmt_booklet.pdf

<https://vetnurse.com.au/2018/03/07/surgical-skin-preparation/>