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| **Drug** | **Active Ingredient** | **Uses** | **Contraindications** | **Adverse**  **Effects** | **WDT** | **Conc & Dose** | **Volume** |
| Xylazine | Xylazine Hydrochloride | Used for sedation, muscle relaxation and analgesia  -allows for standing sedation  Indications : Shot term sedation | This drug should not be used in:  - animals with cardiac and respiratory distress.  -animals with renal or hepatic  - cows in the last trimester of pregnancy  When given the animal should remain in sternal recumbency to avoid bloat. | Ruminal Tympany  Hypersalivation  Hypothermia  Regurgitation | Meat:  1 days  Milk:  0 days | Conc 20mg/ml  Dose : 0.025mg/kg | V = [550kg x 0.025 mg/kg]/20mg/ml  = 0.6875 mls |
| Banamine | Flunixin Meglumine | This is an NSAID that for is used for the treatment of fever and inflammation associated with bovine respiratory disease and acute mastitis | Should not used in cows with:\  Hypersensitivity reactions.  IM route should only be used when IV route is not available since using IM can cause tissue reactions/ irritations. | Can cause:  -anaphylactic reaction gastrointestinal irritation  - ulceration - vomiting. | Meat – 5-14 days  Milk – 12-48 hours | Conc : 50mg/ml  Dose: 2.2mg/ml (24hours) | V = [550kg x 2.2mg/ml] / 50mg/ml  = 24.2mls |
| Lidocaine | Lidocaine Hydrochloride | This drug :  -Can block the conduction of nerve fibres resulting in muscle paralysis and loss of sensation  - used for topical, infiltration, intravenous, regional and conduction anesthesia.  - used in extradural and spinal injections | If it is being used in conjunction with Epinephrine,  Do not use in:  -Intra-articular administration  -Epidural administration  - Intradigital administration  -Intravenous administration | Overdose  -Convulsions followed by CNS depression | Meat - 28days  Milk - 15days | Conc: 20mg/ml  Dose: 1.0mg/ml  Toxic Dose  10mk.kg | V = [550 kg x 5mg/ml] / 20mg/ml  = 27.5mls  Toxic volume  275 mls |
| Pen-Strep | Penicillin Streptomycin | This is an antibiotic that combats gram positive and gram negative bacteria | In animals with shock, septicemia, the absorption of the antibiotic can be diminished therefore it should not be used on these animals. | Hypersensitivity and CNS effects | Meat – 30 days | Conc:  200 000 IU/ml  Dose: 20 000 IU/kg | V = [550kg x 20 000 IU/kg] / 200 000 IU/ml  = 55mls |
| Tolazoline | Tolazoline Hydrochloride | This drug is a sedative antagonist, it is an Alpha-adrenoceptor blocking drug, it reverses the effects of xylazine. | Do not use in animals showing signs of stress, Debilitation, cardiac disease, hypovolemia or shock | Causes gastrointestinal disturbances, tachycardia and mild hypertension |  | Concentration : 100mg/ml  Dose: 0.05mg/kg | V = [550kg x 0.05mg/kg] / 100mg/ml  = 0.275 mls  Increasing the dose for such a large animal :  2x = 0.55mls  4x = 1.1mls |
| Atropine | Atropine Sulfate | This drug can act as a pre-anaesthetic to either reduce or prevent secretions from the respiratory tract. (Treat the effects of Xylazine)  Also treats sinus bradycardia | DO NOT USE: in patients with glaucoma, myocardia ischemia, has a hypersensitivity to anticholinergic drugs, severe ulcerative colitis, obstructive uropathy | Adverse effects include:  -dry mouth  -dysphagia  -constipation  -urinary retention  -drowsiness  -ataxia  -respiratory depression  -seizures | Meat - 14 days  Milk - None | Concentration - 0.54mg/ml  Dose: 0.04mg/kg | V = [550kg x 0.04mg/kg] / 0.54mg/ml  = 40.74 mls |
| Epinephrine |  | Treat anaphylactic reactions | Hypersensitivity to epinephrine, narrow closed glaucoma, during general anesthesia with halothane | Anxiety, tremor, excitability, arrythmias, vomiting |  | Dose: 0.02mg/kg  Concentration: 10 mg/ml | V = [ 550kg x 0.02mg/kg] / 10mg/ml  = 1.1mls |