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| **Drug** | **Indication/Purpose** | **Contraindications** | **Route of administration** | **Calculation for dose & toxic dose** | **Concentration** | WDT |
| Xylazine (active ingredient - xylazine hydrochloride. Other names - rompun)  | Used as a sedative and for analgesia, and used as pre anesthetic/pre medication before administration of local/general anaesthetic. | * Cattle are very sensitive to xylazine
* Contraindicated in animals who have been given epinephrine
* Contraindicated in animals with active ventricular arrhythmias, hypotension, urinary tract obstructions, shock, and hepatic, cardiac and respiratory dysfunction
* Should not be given to pregnant animals in their 3rd trimester - can cause uterine contraction
* and lead to early delivery
* do not use in patients with oesophageal obstruction, torsion of the stomach - drug appear to worsen effects of the obstruction
 | IM | 0.05 mg/kg CALF 1: [(0.05 mg/kg X 250 kg)/20 mg/ml)] = 0.625 ml (given - 0.6 ml)reversal Tolazoline doses:2x: [(0.1 X 250)/100] = 0.25 ml4x: [(0.2 X 250)/100] = 0.5 mlCALF 2: [(0.05 mg/kg X 165 kg)/20 mg/ml] = 0.412 ml reversal Tolazoline doses:2x: [(0.1 X 165)/100] = 0.165 ml4x: [(0.2 X 165)/100] = 0.33 ml  | 2% | MEAT 4 days Milk 24 hours  |
| Ketamine | * Analgesia
 | * always use in conjunction with xylazine, atropine
* can cause increased CSF pressure, should not be used in patients with high intraocular pressure or if there has been head trauma.
* can increase heart rate and blood pressure and so should not be used in patients where an increase in heart rate, blood pressure and myocardial oxygen consumption can be risky (eg. shock or congestive heart failure).
* should be carefully used in animals with preexisting seizure disorders
* should not be used in procedures involving the pharynx, larynx or trachea. Ketamine
 | IM | * 0.05 mg/kg

CALF 1[(0.1mg/kg X 250 kg)/100 mg/ml] = 0.5 mlCALF 2 [(0.1 mg/kg X 165 kg)/100 mg/ml] = 0.165 ml | 10% | Meat - 3 days, milk 48 hours |
| Ketamine stun | Xylazine + ketamine = addition of small dose of ketamine to provide chemical restraint  |  | IM | Using previous calculations, mixed…CALF 1 - 0.06 + 0.05 ml = 0.11 mlCALF 2 - 0.4 + 0.165 = 0.57 ml |  |  |
| Lidocaine | a local anaesthetic used to provide a loss of sensation/analgesia.  | - should not be used with epinephrine IV.- do not use in patients with hypersensitivity to amide class local anesthetics - do not give to patients with AV, SA or intraventricular heart block.- take caution with administration to patients in shock or with respiratory depression, liver disease, congestive heart failure & hypovolemia. | Cornual nerve block - in or around nerve | 5 - 10 ccs at each siteCALF 5 ccs 3 subcut and 2 in spermatic cord Toxic dose @ 10 mg/kg [(10 mg/kg X 250 kg)/20 mg/ml)] = 125 ml1/2 of toxic dose = 62.5 **ml**CALF 10 ccs/site 5 subcut, 5 in spermatic cordToxic dose @ 10 mg/kg [(10 mg/kg X 165 kg)/20 mg/ml)] = 82.5 ml1/2 of toxic dose =41.25 ml | 2% | Meat -1 day, milk - 24 hrs |
| Banamine (flunixin meglumine) | An NSAID used for control of inflammation, pain, pyrexia. | * patients with dehydration, on concomitant diuretic therapy, or those with renal, cardiovascular, and/or hepatic dysfunction are at risk for renal toxicity
* Avoid or monitor use with other anti-inflammatories as this can cause GI ulcers
* Do not use in bulls to be used for breeding
* May have effects on estrus cycle and parturition
 | IV | 1.1 mg/kgCALF 1 [(1.1 mg/kg X 250 kg)/50 mg/ml)] = 5.5 mlCALF 2[(1.1 mg/kg X 165 kg)/50 mg/ml)] = 3.63 ml | 5% | Meat - 30 days, milk - 72 hours  |
| Pen-Strep (penicillin-streptomycin) | * Long-acting antibiotic
* Treats systemic infections, mixed infections of gram positive and gram negative organisms [ *Arcanobacterium pyogenes*

*Erysipelothrix rhusiopathiae**Klebsiella pneumoniae**Listeria* spp*Mannheimia haemolytica**Pasteurella multocida**Staphylococcus* spp (non-penicillinase producing)*Streptococcus* spp*Salmonella* spp] | * In cases of penicillin hypersensitivity
* Narrow margin of safety
* Withdrawal time - do not slaughter animals under treatment with drug for human consumption
 | IM | 20,000 IU CALF 1 [20,000 IU X 250 kg)/200,000)] = 25 mlCALF 2 [20,000 IU X 165 kg)/200,000)] = 16.5 ml | 200,000 IU | Meat -31 days, milk - 60 hours  |
| Tetanus antitoxin  | - for use whenever a non-immunized animal, or one whose immune status is unknown, suffers a deep penetrating wound that has or may become contaminated - it provides quick, short-term protection.- administered to animals following castration, docking, and other operations as a prophylactic measure especially when performed in an environment where tetanus infection has been present.**For prevention** in horses, cattle, swine, and sheep: 1,500 units IM or SQ. (1500 units = 1 single dose.)**For treatment**:**Horses** and **cattle:** give 10,000 to 25,000 units**Sheep** and **swine:** give 5,000-12,500 units.**Also approved for Goats:** |  | IM |  |  |  |
| Tetravet Antibiotic spray |  |  | Topical |  |  |  |
| Larvicidal (Screwworm spray) |  |  | Topical |  |  |  |