DRUGS FOR PEPPY

LOADING DOSE:

Drugs	Dose/ Concentration	Calculations	Volume per site	Withdrawal Time	Route &Comments
Anaesthetic/ Sedative		$$\frac{Weight \times Dose}{Concentration}$$			
Lidocaine	Toxic dose: 2% of 10 mg/kg Recommended dose for cow: (half toxic dose) 2% of 5 mg/kg Recommended <u>Loading dose</u> for cow: 2% of 1 mg/kg	Toxic Dose $$\frac{103 \times 10}{20} = 51.5 \text{ ml}$$ Maximum Vol can be administered: $$\frac{103 \times 5}{20} = 25.8 \text{ ml}$$ Loading dose: $$\frac{103 \times 1}{20} = 5.2 \text{ ml}$$ Splash dose: 10 ml Lidocaine + 10 ml Saline = 20 ml mixture	Loading dose: 5.2 ml in jugular vein Splash dose: average 4 ml per splash	4 days for meat 3 days for milk	IV for loading dose SC for splash dose Onset: 15 min Duration: 60 min <u>Note</u>: Splash dose of Lidocaine was administered intermittently when the animal exhibited signs of pain over the incision site.

Xylazine	Recommended Loading dose 2% of 0.05 mg/kg	Loading Dose: $\dfrac{103 \times 0.05}{20} = 0.26$ ml	Loading Dose: 0.26 ml	4 days for meat 1 days for milk	IM Onset: 10 min Duration: 45 min
Ketamine	Recommended Loading Dose 10% of 5 mg/kg	Loading Dose: $\dfrac{103 \times 5}{100} = 5.2$ ml	Loading Dose: 5.2 ml	3 days for meat 3 days for milk	IM Onset: 10 min Duration: 45 min
NSAID					
Flunixin	Initial Dose: 5% of 2.2 mg/kg	Initial Dose: $\dfrac{103 \times 2.2}{50} = 4.5$ ml	Initial Dose: 4.5 ml	4 days for meat 1.5 days for milk	IV Onset: Within 2 hours Duration: 24-36 hours
Antibiotic					
Penicillin Streptomycin	Initial Dose: 200,000 IU/ml of 20,000 IU/kg	Initial Dose: $\dfrac{103 \times 20,000}{200,000} = 10.3$ ml	Initial Dose: 10.3 ml	30 days for meat 10 days for milk	IM Duration: 72 hours

Reversal Drugs:

Drugs	Dose/Concentration	Calculations	Volume	Route & Comments
Atropine	0.54 mg/ml of 0.04mg/kg	$\frac{0.04 \ x \ 103}{0.54} = 7.6$ ml	7.6 ml	IV/IM Used for Bradycardia (less than 38 bpm)
Epinephrine	1 % of 0.02 mg/kg	$\frac{0.02 \ x \ 103}{1} = 2.06$ ml	2.1 ml	IM Used for anaphylactic shock Signs include respiratory depression, excess salivation, urticaria, rhinitis, facial and limb oedema
Tolazoline	10 % of Recommended 2-4 times xylazine dose (0.1 mg/kg – 0.2 mg/kg)	Lower Limit: $\frac{0.1 \ x \ 103}{100} = 0.103$ ml Upper limit = $\frac{0.2 \times 103}{100} = 0.206$ ml	Lower Limit = 0.10 ml Upper limit = 0.21 ml	IV slowly Used to reverse xylazine. If signs of xylazine toxicity (bradycardia, hypotension and respiratory depression) are seen administer the lower limit, 0.1 ml. If signs continue after some time add 0.1 ml or less to reach the upper limit. BUT do not cross the upper limit.

CONTINUOUS INFUSION RATE:

CRI (drug/mg) = {Infusion Rate of drug (mg/kg/hr) ÷ Fluid Infusion Rate (ml/kg/hr)} × Diluent Volume (Saline bag ml)

Xylazine CRI (drug/mg) = {0.05 (mg/kg/hr) ÷ 5.0 (ml/kg/hr)} × 1000 (ml) = 10 mg

Volume of Xylazine to be added to Saline bag using 20 mg/ml = 10 mg ÷ 20 mg/ml = **0.5 ml Xylazine**

Ketamine CRI (drug/mg) = {0.05 (mg/kg/hr) ÷ 5.0 (ml/kg/hr)} × 1000 (ml) = 1000 mg

Volume of Ketamine to be added to Saline bag using 100 mg/ml = 1000 mg ÷ 100 mg/ml = **10 ml Ketamine**

Lidocaine CRI (drug/mg) = {1 (mg/kg/hr) ÷ 5.0 (ml/kg/hr)} × 1000 (ml) = 200 mg

Volume of Lidocaine to be added to Saline bag using 20 mg/ml = 200 mg ÷ 20 mg/ml = **10 ml Lidocaine**

DRIP RATE:

Drip rate = {Weight of animal (kg) × Fluid rate (ml/kg/hr) × Drip factor (drop/ml)} ÷ {60 (min/hr) × 60 (seconds/min)}

Drip rate = {103 (kg) × 5 (ml/kg/hr) × 20 (drop/ml)} ÷ {60 (min/hr) × 60 (seconds/min)} = 2.8 ~ **3 drop/second**