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| Drug | Category | Drug Info and uses | Route of Administration | Withdrawal Time | Time of Administration | Contraindications and Side effects |
| Xylazine | Sedative | Xylazine HCl Injection (xylazine), a non-narcotic compound, is a sedative and analgesic as well as muscle relaxant. Its sedative and analgesic activity is related to central nervous system depression. Its muscle relaxant effect is based on inhibition of the intraneural transmission of impulses in the central nervous system. The principal pharmacological activities develop within 10 to 15 minutes after intramuscular injection | Intramuscular (in trapezius muscle) | IV or IM: 48 hrs milk; 3 days meat | 2:23 pm | Lateral recumbency is to be avoided during recovery due to increasing the possibilities of bloat, regurgitation and/or aspiration. Sternal recumbency is the appropriate recovery position. A 24-hour fast prior to injection will also reduce the incidence of bloat. May occasionally cause slight muscle tremors, bradycardia and a reduced respiratory rate. Temporary salivation, diuresis and ruminal stasis may be observed during the period of sedation. A transient, self-limiting diarrhea may occur 24 to 48 hours following administration. |
| Flunixin Meglumine | NSAID (pain relief)-Pain Prophylaxis | A potent, non-narcotic, non-steroidal, analgesic drug with anti-inflammatory and anti-pyretic activity (NSAID). In cattle, Flunixin Injection is indicated for the control of pyrexia associated with bovine respiratory disease and endotoxemia and acute bovine mastitis. In horses, Flunixin Injection is recommended for the alleviation of inflammation and pain of musculoskeletal disorders and for the alleviation of visceral pain associated with colic | Intravenous (jugular) | 4 days for meat, 36 hours for milk. | 2.25 pm | Since many NSAIDs possess the potential to induce gastrointestinal ulceration, concomitant use of Flunixin Injectable Solution with other anti-inflammatory drugs, such as other NSAIDs and corticosteroids, should be avoided or closely monitored. |
| PenStrep | Bacterial Prophylaxis | Penicillin shows a marked bactericidal action against most commonly occurring Gram-positive cocci, bacilli and anaerobes, and also against some Gram-negative germs (e.g. Actinobacillus, Haemophilus, Leptospiren, some Pasteurella strains, anaerobes such as Fusobacterium and Bacteroides). Dihydrostreptomycin is an aminoglycoside antibiotic predominantly active against Gram-negative cocci and bacilli, and also against some Gram-positive bacteria (e.g. Staph. aureus, Mycobacterium). The combination of DHS and penicillin provides a bactericidal synergistic action with a broad spectrum. | Intramuscular (gluteus) | Meat-30 days. Milk-10 days | 2:28 pm | The drug is not administered to animals hypersensitive to penicillin and dihydrostreptomycin. Also, the composition cannot be administered simultaneously with general anesthetics, miorelaxant and magnesium preparations. |

Calculations

FLUNIXIN

Dosage: 1.1 mg/kg

Concentration: 50 mg/ml

Weight of calf: 80 kg

Volume used= $\frac{1.1×80}{50}$= 1.76 ml

XYLAZINE

Dosage: 0.025 mg/kg

Concentration: 20 mg/ml

Weight of calf: 80 kg

Volume: $\frac{Dose × weight}{concentration}$= $\frac{0.025×80}{20}$= 0.1 ml

PENSTREP

Dosage: 20,000 IU

Concentration: 200,000 IU

Volume: $\frac{20,000×80}{200,000}$= 8ml