**Table showing Drugs**

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| **Drug** | **Uses** | **Contraindications** | **Adverse Effects** | **Concentration & Doses** | **Withdrawal Period** |
| **Ketamine** | Used to achieve general anaesthesia during surgery | Use in patients with significant hypertension, heart failure, and arterial aneurysms could be dangerous. Should not be used alone because it doesn’t cause muscle relaxation. Don’t use in animals with seizures | Inability to move, rigid muscles; high body temperature; fast heartbeat; convulsions; coma and ‘near death’ experiences; death | Concentration: 100mg/ml  Dose:  2 mg/kg IV |  |
| **Xylazine** | Alpha-2 adrenoceptor stimulant resulting in sedation, muscle relaxation and analgesia. Short term sedation. Used for restraint prior to ketamine for general anesthesia. | Do not use in:  Animals with cardiac or respiratory disease  Animals with renal or hepatic failure.  Animals with hypotension/hypovolemia.  Last trimester of pregnancy (except at parturition). | Sweating.  Piloerection.  Tremors.  Ruminal tympany.  Hypersalivation  Diuresis.  Regurgitation, hypothermia, diarrhea, bradycardia, premature parturition & ataxia. | Dose rate: 0.05 mg/kg  Concentration: 20mg/ml | Meat - 1 day  Milk - 0 days |
| **2%**  **Lidocaine** | A local anesthetic and a class 1B antidysrhythmic agent. Used for topical, infiltration, intravenous, regional, and conduction anesthesia. Extradural and spinal injection. | When used with epinephrine   Epinephrine: Intra-articular administration. Epidural administration. Intradigital administration. Intravenous administration.  In the treatment of ventricular arrhythmias.  Cardiac and hepatic insufficiency. | Convulsions followed by CNS depression with overdoses | Concentration: 20mg/ml  Dose: 1.0mg/kg | No definitive milk withdrawal time determined, but 24hrs is acceptable |
| **Banamine** | NSAID used in pre and post-operative care | Do not use it in cows with hypersensitivity reactions. The IM route is extra-label in cattle and should only be used when the IV route is not feasible for use. Flunixin should not be used in an attempt to ambulate cattle to be shipped for slaughter. | Causes anaphylactic reactions, Gastrointestinal irritation, ulceration, plasma protein-losing enteropathy,  Vomiting. Skin rash can also occur | Dosage: 2.2mg/kg    Concentration: 50mg/ml | 12-48 hours for milk cows and 5-14 days for beef |
| **Penicillin Streptomycin** | An antibiotic which is capable of combating gram positive and gram-negative bacteria | Do not use on animals with septicaemia, shock, or other grave illnesses as absorption of the medication from the GI tract may be significantly delayed or diminished. | Hypersensitivity and CNS effects | Dose Rate: 40,000 IU/kg  Concentration: 200,000 IU/ml | Meat: 30 days |
| **Penicillin G Procaine** | As an aid in the treatment of the following infections caused by bacteria susceptible to penicillin: bacterial pneumonia, calf diphtheria, foot rot, metritis, wound infections.  Used prophylactically. | Do not use in animals who have shown hypersensitivity reactions | Hypersensitivity and CNS reactions | Standard Bottle concentration: 300,000IU/ml  Dose: 21,000IU/kg | Meat: 14 days  Milk: 48 hours |
| **Mastikel**  **(Antibiotic)** | For treatment of acute mastitis occurring during lactation. | Not to be used in animals with hypersensitivity to penicillin. | Can cause allergic reactions | Cattle – 1 injector per quarter  Sheep/Goats – ½ injector per quarter  Treatment should be repeated 3 times with 12hr interval | Milk – 3 days |
| **Dryclox**  **(Antibacterial)** | For therapeutic and prophylactic treatment of mastitis caused by a sensitive cloxacillin bacteria in drying off cows. | Not to be used in animals known to be hypersensitive to penicillin.  Cows should be completely milked out before inserting the drug. | Can cause allergic reactions | Cattle – 1 injector per quarter.  Treatment should be at least 35 days before expected calving | Meat – 30 days  Milk – 49 days |
| **Sodium Chloride 0.9%** | A sterile fluid prescribed for rehydration and electrolyte balance. | Use with great care if patient is suffering with congested heart failure, severe renal insufficiency and where edema exist due to sodium retention. | Febrile response, injection site infection, venous thrombosis or phlebitis extending from the injection site, extravasation and hypervolemia. | Dosage depended on the age, weight, and clinical condition of the patient, as well as laboratory determinations. |  |
| **Tetanus Antitoxin** | It is recommended 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 with soil. | Do not use in animals who have a history of hypersensitivity reactions. | May cause anaphylactic shock. | Prevention Dosage:  1,500 units SC/IV  Treatment Dosage: 3,000-15,000 units.  Repeat in 7 days as considered necessary. | Meat: 21 days |
| **Epinephrine** | This is used as an antidote for the tetanus antitoxin, in the event that the animal has a hypersensitivity reaction. | Contraindicated in patients with narrow-angle glaucoma, hypersensitivity to epinephrine, cardiac dilatation or coronary insufficiency, and during labor or general anaesthesia. | Excitability, tremors, vomiting, hypertension and arrhythmias.  Repeated injections can cause necrosis at injection site. | Dosage: 0.5–1 ml per 100lbs (0.01-0.02ml/kg) SC or IM  Concentration: 1mg/ml | None indicated. |
| **Tolazoline** | Sedative antagonist.  Alpha-adrenoceptor blocking drug  Reverses sedative effects of xylazine.  Xylazine is an alpha2-adrenoceptor agonist. Tolazoline blocks alpha2-adrenoreceptors and displaces xylazine from these sites. | In animals showing signs of stress.  In debilitated animals.  In animals with cardiac disease.  In animals with hypovolemia or shock. | Gastrointestinal disturbances  Tachycardia.  Mild hypertension | Concentration: 20mg/ml  Dose rate: 0.1mg/kg | 96 hours for meat and 48 hours for milk |
| **Povidone- Iodine solution**  **(topical)**  **post operative care** | A germicidal cleanser for preoperative and postoperative skin washing, and shampoo for bacterial and fungal skin infections in animals.  Helps prevent infection in cuts, scratches, abrasions, and burns. Non-staining to skin, hair, and natural fabrics. | When color is lost (reduced activity).  Do not use concurrently with other disinfectants, detergents or antiseptics.  Strong solutions are ineffective. | Overstrength solutions don't work and may be toxic locally and systemically.  Hypersensitivity may occur | Requires contact time of 2 minutes at least for any effect. Rapid rinsing or removal is therefore counterproductive. | None indicated |
| **Chlorhexidine**  **Surgical prep** | Minor skin wounds.  Bacterial dermatitis.  Skin disinfection and cleaning  Surgical scrub | On open wounds - should be carefully considered  Dilution with saline causes precipitation and loss of activity  Chlorhexidine is inactivated by hard water, non-ionic surfactants, soaps and anionic substances. | Extremely low tissue toxicity but still has some harmful effects on cells in wound sites. | Dilute one (1) ounce (2 tablespoons) of chlorhexidine solution per gallon of clean water.  Rinse the area to be disinfected with an ample amount of chlorhexidine solution. Wipe away the excess and pat dry with a sterile gauze or sponge. | Not indicated |