

Drug	Class	Mechanism of Action
Epinephrine	Adrenergic agonist	<p>-non selectively stimulates alpha adrenergic and beta-adrenergic receptors.</p> <p>- alpha adrenergic effects: increase vascular resistance and acts as a potent vasopressor.</p> <p>-Beta 2- adrenergic effects: increase bronchodilation and decrease inflammatory mediators in airway.</p>
Atropine	Anticholinergic	<p>-Blocks acetylcholine effect at muscarinic receptors</p> <p>- results in decrease in GI motility, resp. secretions and increase heart rate and mydriasis</p>
Xylazine (Xylazine Hydrochloride)	Alpha 2 adrenergic agonist	<p>-Binds to presynaptic alpha 2-receptors which causes a decrease in the release of neurotransmitters from the neuron thus decreasing transmission.</p> <p>-Decreases sympathetic outflow resulting in analgesia and sedation</p>
Tolazoline	Alpha 2 adrenergic antagonist	-antagonizes the action of drugs that stimulate the action of alpha 2 receptors
Ketamine (Ketamine Hydrochloride)	Anesthetic	<p>-Centrally acting dissociative agent.</p> <p>-acts as a noncompetitive antagonist for n-methyl D - aspartate (NDMA) receptors therefore it produces a mild analgesia</p>
Penstrep (Penicillin G - potassium or sodium or benzathine)	Anti-bacterial (Beta-lactam)	-beta-lactam

		-binds penicillin-binding proteins to weaken/ lyse bacterial cell wall.  -bactericidal
Flunixin (Flunixin meglumine)	Analgesia, NSAID	-NSAID (analgesic & anti-inflammatory)  -Inhibits prostaglandin synthesis by non-selectively blocking COX1 and COX 2
Lidocaine	Local anesthesia and antiarrhythmic	-Local anesthesia: Inhibits nerve conduction via sodium channels blockade  -Antiarrhythmic: Class 1 -Decreases Phase 1 Depolarization without affecting conduction.  Analgesic properties
Ivermectin	Antiparasitic	-Macrocyclic lactone  - Neurotoxic to parasites -Potentiate the glutamate gated chloride ion channels which increases permeability of chloride ions and hyperpolarization to nerve cells.  - this causes paralysis and death to parasites - <b>Mammals not affected because they lack glutamate gated chloride ion channels</b>