Drug Class and Names	Receptor Activity	Nervous System Effects	Cardiovascular Effects	Respiratory Effects	Other Body Systems Effected	Additional Information
Anticholinergics -Atropine -Glycopyrrolate	Muscarinic acetylcholine receptor antagonist *Drugs oppose the effects of the parasympathetic nervous system (parasympatholytic)		Increased HR	Reduced volume of airway secretions Bronchodilation Pulmonary dilation *atropine	Reduced volume of GI secretions Reduces GI motility and lower esophageal tone	Contraindicated in patients with pre-existing tachycardia/tachyarrhythmias, glaucoma, bradycardia secondary to systemic hypertension, and pre-existing ileus
$Alpha_2$-Adrenergic Agonist -Dexmedetomidine -Xylazine -Detomidine -Romifidine -Medetomidine +Vatinoxan	$Alpha_2$-adrenergic receptors distributed throughout the body	Sedation (animal remains rousable) Analgesia Reduced sympathetic tone	Cardiovascular depression, vasoconstriction followed by vasodilation Bradycardia and bradyarrhythmias such as 1^{st} or 2^{nd} degree AV block Reduced cardiac output	Minimal effects except in sheep who will get pulmonary edema due to the activation of pulmonary macrophages	Muscle relaxation Vomiting is possible in dogs and cats Reduced insulin release associated hyperglycemia Increased urine output due to reduced ADH release and reduced kidney action Reduced GI tone and motility	Reduction in anesthetic dose requirement Can be reduced with $alpha_2$-adrenergic receptor antagonists Effects are dose dependent and most reach a ceiling Potent CNS respiratory depressants in people
$Alpha_2$-Adrenergic Antagonist -Yohimbine Tolazoline -Atipameole	$Alpha_2$- Adrenergic receptors throughout the body	When given alone: Sympathetic stimulation (increase catecholamine release), anxiety, restlessness	When given alone: Tachycardia, tachyarrhythmias, increased blood pressure			Should be administered IM to avoid sudden changes in autonomic tone

Benzodiazepines -Diazepam -Midazolam -Zolazepam Benzodiazepine ANTAGONIST -Flumazenil	Potentiate the effects of gamma aminobutyric acid on GABA receptors within the CNS *Increase CNS inhibition	Anticonvulsant Sedation in SOME species (small ruminants and rabbits), pediatric patients In adult cats and dogs the response is unpredictable	Minimal cardiovascular and respiratory depressant effects *effects can be potentiated when used with cardiorespiratory depressant drugs		Centrally acting skeletal muscle relaxant	Controlled Substances Reversal agents are available Anesthetic sparing Appetite stimulant Anxiolytic
Gabapentinoids -Gabapentin	Acts as a ligand of certain types of voltage-dependent calcium channels found in neurons and inhibits their activity *Downstream effect is reduced excitatory neurotransmitter release **Does not act at GABA receptors	Control of partial seizures in people	Reduce blood pressure in hypertensive people			Management of chronic pain Adjunct for acute pain Behavioral modification (pre-hospital visits in cats) Increasingly being abused and is a controlled substance in some countries and states (NOT California)
Phenothiazines -Acepromazine	Depression of the reticular activating system via inhibition of dopamine receptors *Dopamine receptor antagonists	Tranquilization Ataxia	Vasodilation which may lead to decreased blood pressure $Alpha_1$-Adrenergic blockade which can decrease the sensitivity of the myocardium to	Minimal respiratory effects	Antiemetic due to effects at the CRTZ Hypothermia-Peripheral vasodilation in combination with central depression of thermoregulation (mild hypothermic effect)	Dopaminergic system also controls body temperature, vasomotor tone, the chemoreceptor trigger zone, and the vestibular system Uncommon clinical effects:

			catecholamine induced arrhythmias Decreased hematocrit due to vasodilation and splenic sequestration of RBC		Antihistamine effects	Priapism in male horses → may lead to penile amputation Epinephrine "reversal" → animal receives ace and then gets excited causing a release of epinephrine and then it collapses. This is because acepromazine has blocked the $alpha_1$ receptors so the $beta_2$ agonist effects of the epinephrine on vasculature causes vasodilation Contraindicated in hypotensive, hypovolemic or anemic patients