Alpha-2 agonists

* α2-Agonists are used in large animals for standing restraint and provide both analgesia and sedation.
* Combination therapy with *α2-agonists and opioids induces profound analgesia and sedation* that is additive or synergistic as compared with the effects of either drug alone in both large and small animals.
* The mechanism of action is through G protein–coupled receptors.
* α2-Agonists are used as part *of multimodal analgesia in the perioperative period* in many species.
* α2-Receptors play an important role in the modulation of pain by the CNS.
* Caution is advised to prevent excessive sedation and concomitant ataxia, particularly in large animals.
* At relatively *low doses*, these agents cause profound *reductions in cardiac output* and may cause *significant arrhythmia in all species.*
* *Ruminants in particular require lower doses*, and *arterial hypoxemia and pulmonary edema* have been described in *sheep*. Careful patient selection is warranted.