**[Optimizing The Pharmacodynamics And Evaluating Cardiogenic Effects Of The Injectable Anesthetic Alfaxalone In Prairie Rattlesnakes (](https://doi.org/10.1638/2021-0056)*[Crotalus viridis](https://doi.org/10.1638/2021-0056)*[)](https://doi.org/10.1638/2021-0056)**

**Practice Question:** Which of the following is true of alfaxalone in prairie rattlesnakes?

1. Can be administered IV, IM, SC, or intracoelomic
2. SC administration most reliable
3. No difference in HR or RR between routes
4. 20 mg/kg dose is adequate for most snakes
5. Associated with decreased cardiac contractility

Answer: D

[**Neuraxial administration of morphine combined with lidocaine induces regional antinociception in inland bearded dragons (*Pogona vitticeps*)**](https://doi.org/10.2460/ajvr.21.08.0104)

**Practice Question:** Which of the following is true of neuroaxial morphine and lidocaine in bearded dragons?

1. Slow onset of action
2. Commonly induces apnea
3. No cardiovascular effects
4. At least 12-hour duration
5. Low administration success

Answer: D

Evaluation of subcutaneous administration of alfaxalone-midazolam and dexmedetomidine-midazolam for sedation of ball pythons (Python regius).

Yaw, T.J., Mans, C., Johnson, S., Bunke, L., Doss, G.A. and Sladky, K.K.

*Journal of the American Veterinary Medical Association*, 2020;256(5):573-579.

Which of the following is true when comparing subcutaneous midazolam combined with Alfaxalone or dexmedetomidine in ball pythons?

1. Alfaxalone resulted in shorter time to effect
2. Alfaxalone resulted in deeper plane of sedation
3. Alfaxalone resulted in transient apnea while dexmedetomidine did not
4. Dexmedetomidine resulted in longer duration of sedation
5. Dexmedetomidine resulted in transient tachycardia

Answer: A

Distractors: similar level of moderate sedation, both had transient apnea, Alfaxalone longer duration of loss of righting reflex and time to recovery probably because dexmed was reversed, dexmed had a greater decrease in HR and RR compared to Alfaxalone.

Evaluation of the effects of a dexmedetomidine-midazolam-ketamine combination administered intramuscularly to captive red-footed tortoises (*Chelonoidis carbonaria*)

Eshar D, Rooney TA, Gardhouse S, Beaufrère H

*AJVR* 2021 82(11):858-864

Which of the following is a commonly reported effect of alpha-2 adrenergic agonists in reptile species?

A. Increase in heart rate

B. Decrease in cloacal temperature

C. Initial excitatory phase

D. Injection site inflammation

E. Decrease in respiratory rate

Answer: E

A ball python is recovering from (*Python regius*) is recovering from a coeliotomy. The patient is not ventilating well on its own. What is one benefit of using doxapram rather than reversal with atipamezole in this situation?

Answer: Doxapram reduces respiratory depression without impacting analgesia in this species.

1. Which of the following opioids has been shown to be effective in *Pantherophis guttatus*?
	1. Morphine
	2. Buprenorphine
	3. Fentanyl
	4. Butorphanol
	5. Tramadol

Answer: D. Butorphanol

1. Which species has Fentanyl been found to not be effective in?
	1. *Crocodylus niloticus*
	2. *Trachemys scripta elegans*
	3. *Pogona vitticeps*
	4. *Python regius*
	5. *Salvator merianae*

Answer: D. Python regius- ball python

**QUESTION:** What would be an advantage of using alfaxalone over ketamine in combination with dexmedetomidine and midazolam in an IV anesthetic protocol in American alligators?

1. Allows for surgical plane of anesthesia
2. Provides longer anesthetic time
3. Decreased risk of apnea
4. More likely to facilitate safe intubation
5. Prevent hypothermia

Answer: A

*ADM had deeper plane of anesthesia (apnea, loss of withdrawal in all four limbs)*

*KDM provided 150 min anesthesia, ADM provided 60 min*

*All ADM gators were apneic, only ⅙ KDM gators were apneic*

*Both protocols facilitated safe intubation within 1- minutes*

*Esophageal and cloacal temps increased over time with both protocols*

SOURCE: Comparison of Ketamine–Dexmedetomidine–Midazolam Versus Alfaxalone–Dexmedetomidine–Midazolam Administered Intravenously to American Alligators (Alligator mississippiensis). J. of Herpetological Medicine and Surgery, 31(2):132-140 (2021).

**QUESTION:** Which adverse effect may you expect with repeated intramuscular ketoprofen injections in bearded dragons?

1. Gastrointestinal ulceration
2. Muscle necrosis
3. Hypercoagulability
4. Decreased appetite
5. Hepatic lipidosis

Answer: B - muscular necrosis at injection site

*Positive fecal occult in this study but no GI ulceration*

*No change in clotting time*

*No change in appetite, activity or body weight*

*Hepatic lipidosis present in these BDs but severity was not significant between controls and treatment group*s

SOURCE: Evaluation of the Safety of Multiple Intramuscular Doses of Ketoprofen in Bearded Dragons (Pogona vitticeps). J. of Herp Medicine and Surgery, 32(2):123-129 (2022).