



FLORIDA POISON INFORMATION NETWORK RECOMMENDATIONS FOR TREATMENT OF THE EASTERN CORAL SNAKE ENVENOMATIONS

The Eastern Coral snake (*Micrurus fulvius fulvius*) is one of 6 venomous snakes found in Florida Statewide, and are related to Cobras, Mambas and Kraits.

They are often found in suburban areas crossing driveways or crawling in yards, especially during the spring and cool fall months.

They are most often encountered in the late morning and early dusk. Coral snakes are often confused with the harmless Scarlet King snake and Florida Scarlet snake which share similar color patterns, however the red and yellow bands of the coral snake touch while the red and yellow bands are separated by black bands on the harmless mimics. In addition, the head of the coral snake is black with a yellow ring just behind the eyes. The heads of the mimics are red in color.



Unlike Pit Vipers (Rattlesnakes, Copperheads and Cottonmouths), Coral snakes lack an effective venom delivery system using a set of grooved teeth in the anterior maxilla, and must bite, hang on tenaciously, and chew to introduce venom into the victim. Because of their shy and reclusive nature, most bites occur from intentionally handling the snake or unsuspectingly picking it up thinking it is a harmless species.

The Coral snake injects a powerful neurotoxic and myotoxic venom comprised of Alpha-neurotoxin and Phospholipase A2 which binds to the acetylcholine receptors on the skeletal muscle neuromuscular junctions of the muscle endplates causing flaccid paralysis. Signs and symptoms may be delayed for 12-18 hours.

Signs and Symptoms

- Minimal local effects including abrasions or scratches, punctures may be indistinct which may ooze blood
- Pain or paresthesia may radiate up the extremity
- **Signs of Bulbar Paralysis:**
- Ptosis (drooping eyelids)
- Diplopia
- Dysphagia
- Dysphonia
- Fasciculations of the tongue
- Altered Mental Status
- Weakness
- **Signs of Impending Respiratory Failure**
- Pharyngeal spasm
- Hypersalivation
- Cyanosis
- Tachycardia
- Hypotension
- Death results from complete respiratory failure
- Despite treatment, clinical effects may require weeks of supportive care, and weakness may persist for weeks to months.

The Florida Poison Information Center-Tampa recommends the following treatment for victim's with Eastern Coral snake envenomation.

- **Immediately notify the Poison Center of the Coral snake envenomation at 1-800-222-1222.**

Treatment Recommendations

1. All patients should be admitted to the ICU for 24 hours of observation due to possible delayed effects.
2. Keep patient NPO to prevent aspiration
3. Establish a large-bore IV site and infuse a maintenance IV solution.
4. Update Tetanus Toxoid if needed
5. Apply Cardiac monitor and pulse oximetry monitoring vitals every 30 minutes, especially respirations
6. Obtain blood for CK level to R/O myotoxic damage
7. Perform Peak Flow initially and every 2 hours
8. Perform ABG immediately for respiratory distress
9. Avoid Narcotics or Sedatives which may mask Neurologic effects and suppress respirations
10. Immediately intubate and ventilate aggressively for signs of respiratory distress
11. Antibiotics are generally not indicated

Antivenin Therapy

In 2003, Wyeth discontinued production of Coral snake antivenin, however some stock remains available, but the exact amount is unknown. In order to preserve remaining antivenin, the Florida Poison Information Center-Tampa recommends:

(1) Patient should be admitted and closely observed, (2) Antivenin be administered upon development of neurologic or respiratory signs or symptoms, and (3) If administered, Dosing should be started at 3 vials, and additional antivenin given if needed.

The Florida Poison Information Center-Tampa is closely monitoring the current Antivenin Situation.