

Snake Bites and the Rattlesnake Vaccine Information

Most venomous snake bites in the United States are caused by members of Crotalidae (pit vipers). Pit vipers have triangular-shaped heads, heat-sensing “pits” between their nostrils and eyes, and retractable front fangs. Rattlesnakes, copperheads, and water moccasins are all pit vipers. Rattlesnakes are responsible for most deaths in both human and animal victims. Copperheads are the most common snake to cause bites, as they live close to human habitation. Water moccasins can be aggressive and have a higher tendency to deliver venom when they bite. 90% of venomous snakebites occur from April to October. Snakes become more aggressive in the hotter months and are more likely to deliver a larger amount of venom. Pit vipers can control the amount of venom injected during a bite. The more threatening the situation, the more venom the snake injects into the bite.

The severity of a snake bite depends on multiple factors. These include the amount of venom injected, the species of snake, location of the bite on the animal, size of the animal, and any medications the animal may be taking (ie: a dog taking aspirin may be more prone to bleeding). Snake venom most commonly causes pain and swelling around the bite. Usually, two puncture wounds are visible at the site of the swelling. The venom contains enzymes that are destructive to tissue, so the skin and muscle will usually slough off. Sometimes, the animal will vomit or go into shock. Severe cases can cause bleeding disorders, so signs of hemorrhage may be evident. If your animal receives a snake bite, there is little first aid that you can administer at home. “At home” treatments, such as cutting open the wound, applying hot/cold packs, or sucking out the venom can cause more harm than good. **Seek veterinary attention right away.** Keep your pet as calm as possible, because the more excited they get, the faster the venom spreads. Keep the bite wound below the heart during transport to your veterinarian. Your veterinarian may advise you to give Benadryl, mainly to try to keep your pet calm. An antivenin is available at specialty hospitals, which helps reverse many of the effects of snake venom but it is expensive and often not stocked. Not all snake bites require the antivenin, but you do not know how bad the bite will be until hours after it happens. The antivenin must be administered soon after the bite to be most effective.

A rattlesnake vaccine is available to help lessen the severity of bites. It is most effective against the Western Diamondback Rattlesnake, but it also cross-protects against other rattlesnakes (excluding the Mojave). The vaccine also gives protection against Copperheads. It is not effective against water moccasins or coral snakes. While it is difficult to formulate a study on just how effective the vaccine is, vaccinated dogs typically have less severe reactions to the snake bites and tend to recover more quickly. **Even if a dog receives the vaccine, it is still essential that they receive veterinary treatment!** The vaccine is most effective 4-6 weeks post vaccination, and slowly declines after that. Good protection lasts about 6 months after vaccination, so we recommend that dogs ideally be vaccinated in the spring. As with any vaccine, there is always a risk of the rare allergic reaction. More commonly, we will sometimes see a lump that persists in the area where the vaccine was given that usually resolves with time.

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