

RATTLESNAKESSSSS

By Mona Miller, DVM



Northern Pacific Rattlesnake: thin neck and a large triangular head; usually with a light stripe extending diagonally from behind the eye to the corner of the mouth.

Photo courtesy www.californiaherps.com photographer Gary Nafis

With the advent of spring comes more time spent outdoors by our dog and cat friends, as well as rattlesnakes. Dogs' noses make particularly good victims, as they sniff along merrily in un-landscaped open space terrain. Occasionally a cat paw or leg will startle a snake into striking.

Rattlesnake bites in our area of California occur from mid-spring through early fall. There are eight species of rattlers in California – the most common in Northern California is the Northern Pacific. The most notable physical feature (other than the rattle!) to look for is the prominent triangular shape of the head creating a noticeable neck. About 25% of bites are "dry" – with no venom injected. However, 40% of bites produce very severe symptoms, with about a 5% mortality rate. A fair number of rattlesnake bites occurring towards pet animals are from being startled, rather than a hunt.

Venom can have three effects upon the body. The first is swelling, bruising and tissue damage at the bite

area. Swelling usually occurs within minutes to an hour. When a dog is bit on his nose or neck, internal swelling of the throat can cause breathing problems. The second effect is shock to the entire system that can occur within minutes to several hours – this is the most common reason a dog may die. This is best treated with hospitalized care that includes intravenous fluids, antihistamine and possibly antibiotic or corticosteroid medication, antivenin and oxygen support. The third effect can be delayed up to 3 days – an inhibition of the body's ability to clot blood. This is monitored with blood tests, and may require blood transfusion as treatment. Generally, hospitalization for 1-3 days is fairly common to treat a snakebite successfully, and may cost several hundred dollars or more, depending of course on the length of hospitalization and severity of signs.

Antivenin is an important component of treatment and most veterinarians who use it agree that its use may help the dog recover more quickly and fully. It is most effective

when given as soon as possible to the time of bite. It is very expensive, and can easily comprise half the treatment cost. Its use is not without possible complications. Antivenin is made up of horse antibodies in response to snake venom exposure. Because it is a different species origin, it may itself cause an anaphylactic reaction in dogs, so a test dose is usually given before the entire vial. Future use of antivenin may also cause a reaction (so if your dog has ever received antivenin in the past, please notify the veterinarian who is about to administer a second dose).

It is difficult to prevent a rattlesnake bite but there are certainly some precautions to consider ahead of time, especially if you're out hiking with your dog. Keep a charged cell phone available, ideally with your veterinary hospital number pre-programmed. Know the location of the nearest vet emergency hospital. Carry a harness or towel to drag your large dog back to the car if he becomes shocky and cannot walk. First aid measures are few and simple: remove your dog's collar so swelling doesn't constrict his neck (tip: you can make a loop with the leash and place the loop around your dog's head and under one armpit), walk steadily and slowly to the car and transport your dog to your vet, or the local vet emergency hospital. Once in the car, keep your dog's head, or

wherever the bite wound is located, at or below the level of his heart. Things that are not effective include sucking the venom out of the wound, cleaning with alcohol, applying ice packs and tourniquets, or delaying travel to the vet hospital.

Since 2004, there has been a rattlesnake vaccine available that is protective for most of the California snake species. Vaccine reactions can occur, although uncommonly. Vaccinated dogs are thought to develop protection similar to a dog receiving 2-3 vials of antivenin. Vaccination is not standard at this time. A dog who is vaccinated with the snake vaccine will still require hospitalized treatment and possibly antivenin if bitten.

Aversion training is a technique offered by several companies that use a low level electronic shock. This provides dogs with a negative stimulus to the smell, sound and sight of a rattlesnake. Live rattlesnakes that are muzzled or have had their venom drained out are used.

I recommend talking with your vet about questions raised here, as well as the following websites as additional sources of information: www.veterinarypartner.com, Department of Fish and Game via www.dfg.ca.gov/news/issues/snake.html and www.socalrattlesnakeavoidancetraining.com.



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