It's Summer!

Venomous Snakes and Dogs

Written By Chantel O. Johnson

Photo By GlobalP

Copperhead

Snake! The word alone strikes (no pun intended) terror in some people. Ophidiophobia is common and many people have some fear of snakes, even though the majority of snakes in the United States are totally harmless to humans. However, there are venomous species here that inhabit nearly every state, and these animals deserve a healthy respect. There are about 150 species of snakes indigenous to the U.S., all extremely beneficial to their habitats, and most non-venomous. There are 22 species of venomous snakes in the U.S., with a total of 37 subspecies across the country. While the terms venomous and poisonous are often used interchangeably to describe an organism that deploys toxins, the terms have biological specific meanings. A venomous species (such as spiders, jellies, scorpions, some snakes, et cetera) actively deliver their venom to their prey or threat by breaking the skin with a bite or sting. Poisonous means a substance that is toxic when swallowed, inhaled, or absorbed through the skin (such as by ingesting a poison mushroom, breathing toxic spores, touching a poison-arrow frog, et cetera). There are a handful of venomous species which if eaten are also poisonous. And humans are capable of injecting poison via broken skin using a syringe.

There is at least one species of venomous snake found in every state of the U.S., except for Alaska, where none have been documented. Maine's only recorded venomous snake, the Timber Rattlesnake, has been considered extinct in the state. Timber Rattlesnakes were historically found in Rhode Island, though there are no known populations of them currently. With Maine and Rhode Island being next door to other states that do have venomous snake populations, it should not seem unlikely that on the odd occasion one of these reptiles could find its way crossing the border. Venomous snakes exist in New England but are uncommon except in certain areas. This is true of some other states as well, with their native venomous snakes living only in a few remote areas. In Hawaii, the aquatic venomous Yellow-Bellied Sea Snake is native to the surrounding ocean but is seldom seen, and there are no terrestrial venomous snakes on the islands.

Photo By JasonOndreicka

Coral Snake

Of all U.S. states, Arizona has the highest number of native venomous snake species, followed by Texas, and California.

All venomous snakes in the U.S. fall into one of these four categories: Rattlesnakes, Copperheads, Cottonmouths, and Coral Snakes. Copperheads and cottonmouths are closely related to rattlesnakes and, together, make up the Viperidae (pit viper) family. Coral snakes are members of a family of venomous snakes called Elapidae, making them more closely akin to cobras, mambas, and sea snakes.

The venom in these two groups do different things to a bite victim. Pit vipers have venom that is generally hemotoxic, attacking the circulatory system, causing bleeding, and interfering with the blood's ability to clot, and cytotoxic, meaning it destroys the cells of various tissues. Elapid venom is typically neurotoxic and interferes with the transmission of nerve impulses. It has an immobilizing effect, making a victim's body turn rigid or become limp. Neurotoxicity includes complete respiratory failure if left untreated. Most snakebites in the U.S. are from vipers and are hemotoxic and cytotoxic.

Pacific Rattlesnake

The rattlesnakes include Eastern and Western Diamondbacks, Red Diamond, Twin-Spotted, Timber, Sidewinder (comprised of three subspecies: Mojave, Sonoran, and Colorado), Tiger, Mojave (sometimes called Mojave Green), Santa Catalina, Rock (compromised of two subspecies Banded and Mottled), and Speckled (comprised of three subspecies: Southwestern, San Lucan, and Panamint), Massasauga (comprised of three subspecies: Easter, Western, and Desert), Black-Tailed, Pacific (compromised of seven subspecies: Northern, Southern, Grand Canyon, Coronado Island, Arizona Black, Great Basin, and Yellow), Ridge-Nosed (compromised of two subspecies: New Mexican and Arizona), Prairie (and one subspecies Hopi), Pygmy (comprised of three subspecies: Dusky, Carolina, and Western).

Rattlesnakes are the largest venomous snakes in the United States. They can quickly and accurately strike out the distance of one-third or more of their body length from any position, not only coiled. They are very capable of striking from a stretched out pose.

The largest rattlesnake species in the United States by length and weight is the Eastern diamondback. A broad, heavy-bodied animal, the average length of mature adults is 3 to 6 feet, with individuals having been recorded at more than 7 feet long, and a maximum length reaching 8 feet.

Rattlesnakes may use their rattles as a warning when they feel threatened, although they do not always rattle before biting, and often do not. The sound of a rattle snake shaking its tail usually sounds like a buzzing noise. It has also been described as sounding like a running water sprinkler. Only in the larger species does the shaking tail actually sound like a typical rattle.

Rattlesnakes live in varied habitats such as forests and woods, mountains, deserts, prairies, beaches, et cetera, including where people and domesticated animals live.

The Coral (comprised of three species: Eastern, Arizona, and Texas).

- Yellow-Bellied Sea Snake (Hawaii).
- The Cottonmouth, sometimes known as Water Moccasin (comprised of three subspecies: Florida, Eastern and Western).
- The Copperhead (comprised of five subspecies: Northern, Southern, Broad-Banded, Osage, and Trans-Pecos).

Though there are venomous snakes making their homes somewhere within their native ranges in most parts of the U.S., in several states their rarity makes it highly unlikely you'd ever encounter one. If you live in a part of the country where venomous snakes are frequently seen, educating yourself on the species known to inhabit the region and how to identify them is always worth the time. This is true no matter where you live. The best way to avoid snakebites is to learn more about venomous snakes and where they can be found and avoid getting close to them.

Western Diamondback Rattlesnake (Crotalus atrox)

There is a plethora of false information about snakes online, so it is wisest to seek out actual experts. The Rattlesnake Conservancy provides educational resources, along with some local universities. The wildlife division of your state is another place to seek accurate information about the snake species native to your area.

So, should dog owners be concerned about the proverbial snake in the grass? It can never hurt to be aware, particularly if you and your dogs live where venomous snake encounters are more likely to happen, and especially if you like to take to the great outdoors with your canine friends. In states where winters tend to be harsh, snakes do hibernate during the freezing weather. However, in some areas of the Southern and Western U.S., snakes may take shelter during cold spells but can remain active year-round. Most bites occur between the months of April and October when snakes are generally most active. Spring is breeding season for rattlesnakes, and they tend to be even more active at that time of year. Obviously, your dog's chances of being bitten increase depending on what part of the country you live in and the more exposure the dog has in snake habitat. Even cautious dogs can unsuspectingly wander up on a snake and be inadvertently bitten. Dogs who stick their noses where they don't belong while trying to get a sniff of a snake, make the chance of receiving being bitten higher. The face or front leg are the most common locations for snakebite. A snake can deliver a bit without injecting any venom. This is called a dry bite, and is relatively rare—fewer than 15% of pit viper bites are dry. A hot bite is one that does envenomate.

If a dog is bitten, antivenin, antibodies made from the serum of another animal, usually a horse or sheep, is the only treatment that can directly fight the effects of snake venom. Antivenin is administered to a dog intravenously after it is bitten by a venomous snake and binds to the toxin components of a venom, obstructing them, preventing them from reaching their target. It doesn't reverse the effects of venom but prevents further damage being done by filtering out unused toxins, preventing it from damaging more tissue cells. Antivenin is costly and while most dogs will receive one vial, others will require two or more, taking about an hour to infuse per vial. Not every venomous snakebitten dog requires antivenin treatment, and even those which could have benefitted by antivenin can sometimes survive without it. A blood panel can determine how extensive the envenomation is, giving the veterinarian an idea of how damaging the toxin has been to the dog's organs and blood-clotting ability or various, and whether antivenin is required. Dogs with extensive local injury (swelling, bruising, bleeding) benefit from antivenom even if bloodwork is normal. It may be helpful for veterinarians unfamiliar with venomous snakebite to refer to the Unified Treatment Algorithm, a comprehensive procedure based on expert recommendations for proper treatment in the event of a pit viper snakebite.

Ineffective and not recommended venomous snakebite treatments include the use of a tourniquet or pressure bandage as these applications are restrictive and can increase systemic venom absorption while allowing tissue damage. Also, do not apply ice, as it causes the constriction of blood flow and localizes the venom, so that it is concentrated in a small area causing necrosis. These methods can cause additional harm. Most amputations or other serious results of a venomous snakebite are a result of applying a tourniquet or icing, or failing to seek medical attention.

Do not cut an incision at the bite site, and do not attempt to suck out the venom, by mouth or with any suction device. This action removes almost zero venom from a bite wound, may suction out important interstitial cell fluid which could concentrate the venom, and is more likely to introduce bacterial infection than the actual snake bite itself.

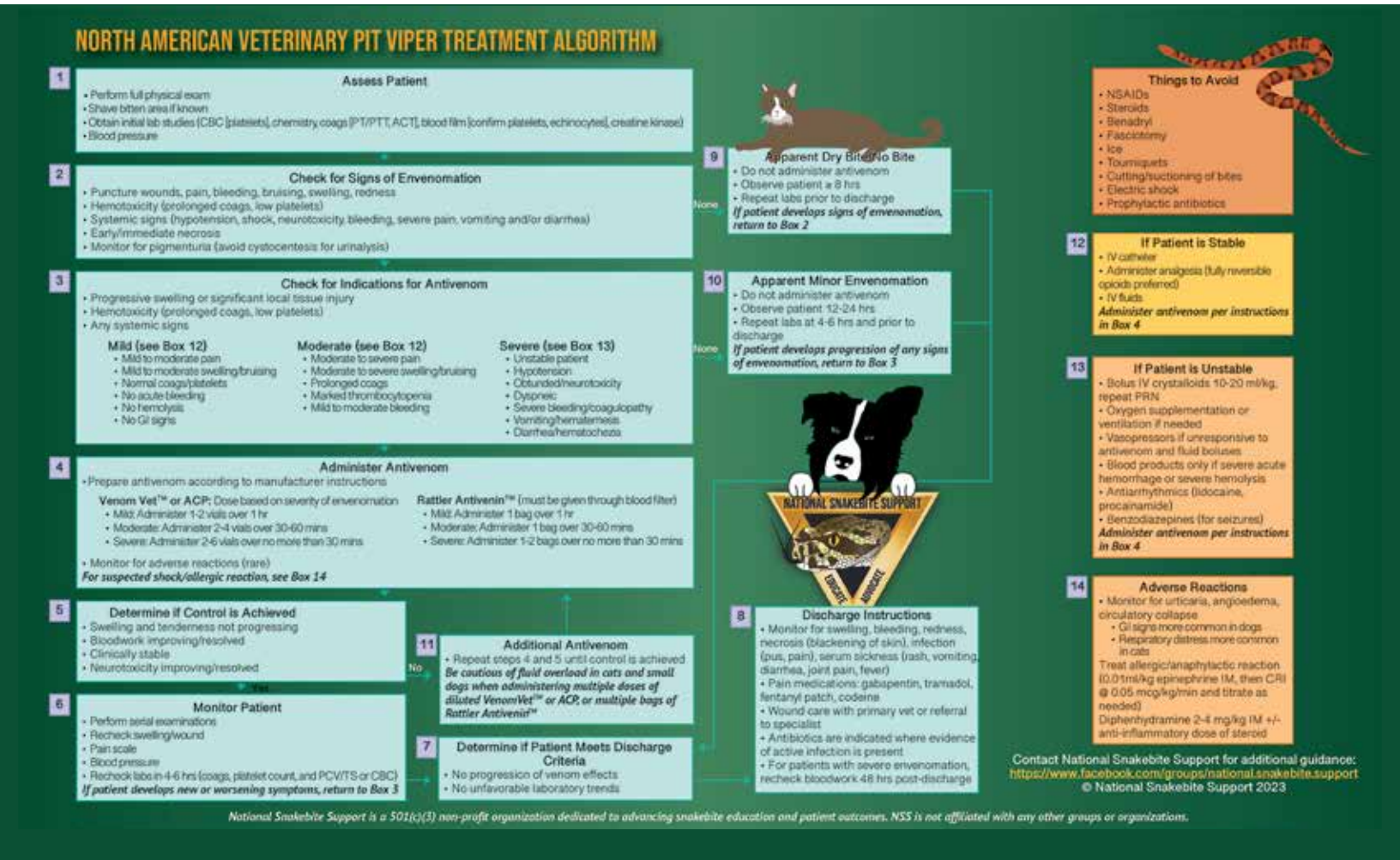
Do not apply electric shock on a snake bite using a cattle prod, car battery, Tazer, electrical outlet, shock collar or anything else. Attempting to treat snake bites using a localized electric current procedure is ineffective and dangerous.

Do not bleed out the snake bite site; cutting to cause heavy bleeding from the bite wound will not make the venom to flow out of the body with the blood. Cauterization will not hinder the toxins, either.

Do not use 'Benadryl' as a treatment for venomous snake bites. Antihistamines like diphenhydramine are ineffective for reactions caused by snake envenomation. Antihistamines are useful for swelling related to allergic reactions, since that swelling is histamine-mediated. They are not helpful for venomous snake bite related emergencies. Pit viper bite causes local tissue injury from direct venom effect. Cell death causes swelling and pain from the release of intracellular contents as the cell dies and venom makes blood vessels become leaky, resulting in further swelling, redness, and pain as fluid enters the tissues. Diphenhydramine does nothing to negate these effects.

These unproven and potentially dangerous methods also take up time that could be better spent getting the dog to a veterinarian. If possible, do gently wash the snake bite with water, and soap if available, to remove any bacteria while you're on your way to the vet hospital. Be sure to loosen or remove any collars, as these can strangle a dog if swelling occurs through the face and neck.

Since many vets will not see a snakebite their entire careers, snakebite treatment is something that is often glossed over in many vet schools' curricula. Be prepared to advocate for appropriate treatment, and don't hesitate to speak up if a vet recommends non-steroidal anti-inflammatory drugs (NSAIDs), steroids, or subcutaneous fluids, all of which can be harmful in the context of snakebites. NSAIDs increase bleeding risks, which are already elevated due to the hemotoxic nature of snake venom. Steroids can delay healing and increase the risk of gastric ulceration; these are only indicated in the event of an allergic reaction to either the venom or antivenom. Subcutaneous fluids can cause bleeding under the skin, worsening the bruising already caused by the venom. Antibiotics, which are appropriate for many other animal bites, are not needed prophylactically for snakebites, since the venom destroys bacteria in the



wound. Antibiotics are only recommended if there is evidence of infection.

A rattlesnake vaccine for dogs does exist, made from inactivated Crotalus atrox (Western diamondback rattlesnake) venom, along with aluminum hydroxide adjuvant, and thimerosal as preservative. There are no horse or sheep proteins in rattlesnake vaccine. Rattlesnake vaccine is a preventative medicine whereas antivenin is a treatment for rattlesnake bite. The vaccine is given subcutaneously and is intended to work by stimulating an immune response in canines, creating antibodies meant to protect tissues and organs if the dog is ever bitten by an actual snake. Some believe this vaccine ineffective because a rattlesnake bite may introduce a substantial amount of toxins quickly, faster than the vaccine induced antibodies can respond. It should be noted the vaccine now has conditional licensing, meaning it has passed basic safety testing, but has NOT been demonstrated to be effective. Some vets and other experts tend to recommend against vaccination, since there is no evidence to support its use, and the few independent studies that have been done have found no benefit, either in terms of "buying time," or reducing damage. There are currently no published data supporting its use, and that presently, many leading snakebite researchers and experts do not recommend it. Dog owners living among venomous snakes should discuss the rattlesnake with their veterinary and come to their own conclusion on the benefits of the vaccine.

There are many common-sense things to do to help protect your dog from being bitten by a snake. Some types of snakes thrive near human homes so it's a good idea to limit the amount of 'stuff' around the yard, especially if you live in a venomous snake prone region. Keep your property free of heavy underbrush, rock piles, and stacks of wood, and avoid tall grass or weeds near your home. Discard any refuse. Keeping the area neat will reduce potential cover for the rodents that like to live in such places, and the snakes they attract, thereby helping to keep both populations down. Clearing your yard also makes it easier to see what might be lurking on the ground. Snakes can be out and active at any time of the day or night, but learning about the behavior of the venomous snakes that are native to your area is a good idea. Though rattlesnakes will usually try to escape from a threat, they might remain still and cryptic instead, trying to use their excellent camouflage abilities to hide. A bite is their last form of defense against a perceived threat. Besides doing so to obtain a meal, most snakes will only bite in two situations: if you startle them or if you ignore their warning signs. Tightly coiling with tongue flicking while facing the threat is as much a warning sign as a rattling tail. But rattlesnakes do not always rattle before they strike. In some areas, it is said that there are isolated populations of rattlesnakes that are no longer rattling, which is causing some concern because the rattle is the snake's warning mechanism. It is believed this behavior may be evolving in a few places as the snakes have learned that rattling indicates their location. If you see a snake, rather than try to identify the species or wait for a warning signal, just leave it alone. Go around it or back track, or just let it leave by itself. People who fear or dislike snakes seek to kill them. This may temporarily reduce their numbers but will never eliminate them. If there is food and habitat, there will always be snakes. They are an important part of the ecosystem. If someone does dispatch a venomous snake, they should never handle it. A freshly killed snake can still bite and inject venom.

While out and about, restricting off-lead play during snake 'season' can help keep your dog out of trouble. When hiking with dogs it's important to remember to watch not just where you are stepping, but also where your dog is walking. Keep an eye out at least six feet ahead of their feet and yours, in all directions. Try to stay on well-worn trails and keep scanning the path ahead with your eyes, looking for the form of a snake. If walking at night, be sure to use a flashlight. As previously mentioned, rattlesnakes do not always rattle. I have come across several in the wild which remained silent even seeing me.

An excellent way to help protect your dog is rattlesnake aversion or snake avoidance training. Nothing is 100% guaranteed, but rattlesnake avoidance training has proven highly effective in preventing envenomation by rattlesnakes. The most common type of rattlesnake avoidance training involves introducing the dog to live snakes of various ages and sizes of the species found in your area. With some trainers the snakes used are mostly wild caught from the region where their classes are taught and then released after the classes for that spring are over. Other trainers use captive snakes. The snakes are safely and humanely muzzled, though some are still de-fanged, which is not recommended for many reasons. Some trainers will also use freshly shed snakeskin for teaching a dog the scent, and a real rattlesnake's shed rattle that has been mounted on a remote device designed specifically for this training. This teaches the dog to learn the smell and sound of a rattlesnake before it has even seen the snake. It is especially important that the snakes used are species from the local region that the dog may encounter. Most trainers will use

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INDICATED / RECOMMENDED TREATMENT

Antivenom	The only thing that can neutralize venom. Nothing else addresses swelling, bruising, tissue damage, pain, hematologic changes, and long-term effects from envenomations.
IV Fluids	Precise control of patient hydration.
Pain management	Pit viper envenomation is an extremely painful condition.
Bloodwork	Helps assess the progression or regression of hematologic changes.

CONTRAINDICATED / DO NOT ADMINISTER

NSAIDs	Non-steroidal anti-inflammatory drugs, including, but not limited to, carprofen and meloxicam, can increase bleeding tendencies. Bleeding risks are already increased due to venom effects. NSAIDs can also cause significant kidney injury.
Corticosteroids (aka steroids)	Corticosteroids, including, but not limited to, dexamethasone and prednisone, increase the risk of delayed healing and gastric ulceration/perforation. When combined with NSAIDs, the risk of septic peritonitis and potentially fatal GI bleeds is even higher.
Subcutaneous fluids	Administering fluids under the skin causes some bleeding. The tendency to bleed is already increased due to the venom.
Human Medications	Human medications can be fatal to pets and should never be administered except as instructed by a veterinarian.
Home Remedies	There are no effective home remedies for pit viper envenomation. Some home therapies may cause additional harm and complicate or prolong proper veterinary treatment.

NOT INDICATED / OF NO BENEFIT

Benadryl	Benadryl is an antihistamine that is useful in treating swelling and inflammation mediated by a body chemical called histamine. Histamines are released by the body in cases of allergic reactions and in response to bee, wasp, and hornet stings. Swelling from pit viper envenomation is caused by massive tissue damage mediated by hemotoxins, cytotoxins, and myotoxins, not by histamine release. Using antihistamines to address swelling related to snake venom is of zero benefit, and may cause dangerous altered mentation in patients experiencing shock.
Antibiotics	Antibiotics prescribed during the initial treatment of envenomation are unnecessary. Antibiotics should be prescribed only if infection has been diagnosed.

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a remote electronic training collar to provide a well-timed low-level stimulation when your dog approaches the rattlesnakes which are placed at various locations around the training field. Timing is everything. A signal from the collar as the dog senses the snake causes a momentary muscle contraction, like a cramp/pinch, which can be startling and uncomfortable to the dog. This message is paired with the sight, scent, and sound of the rattlesnake, which develops a direct association in the dog's mind that this animal causes discomfort, creating the reflex in the brain to move away.

Usually, it is the trainer who will walk the dog through the training while on a long lead, allowing it to attempt to investigate each snake. When the dog is close to a snake or snake evidence and has detected its presence, the trainer will make sure that your dog will associate the negative stimulus with the rattlesnake. This will effectively enable the dog to learn it should quickly move away and avoid snakes. The training process is designed to make the dog think that it was the snake that directly caused the discomfort. Trainers start with the lowest stimulation level and will adjust each dog's training session to meet its individual requirements. While this method works for most dogs, not all snake avoidance trainers use shock collars. For a few dogs, the 'Leave It' command, when fully developed, can be useful to teach them to avoid whatever they're not supposed to approach, including rattlesnakes, but this method might not be strong enough for most dogs.

Rattlesnake aversion training usually can begin with puppies as young as 6 months old, but no age is too late to train for the first time. A rattlesnake aversion class is a one-time lesson, with the session lasting about 10 to 15 minutes. Most dogs make the association quickly. Many trainers recommend a refresher training session each year at the start of snake 'season' with most dogs readily remembering what they had been taught. Even with rattlesnake aversion training, it is wise to keep in mind that even though your dog has learned the sight, sound, and smell of rattlesnakes, there is still the potential that a dog may run into/over a rattlesnake before it has any opportunity to detect it. This can happen if a dog is running full-out, especially in heavy cover or tall grass. Still, the training has proven to be very useful at keeping dogs from being bitten, and owners can learn to watch their dog's body language and know if a rattlesnake is nearby.

Here some people share their experiences with their dogs and venomous snakebite:

"Boxer about 2006, about 5pm. They come out on hot days as it's cooling off. We recently moved onto the property where we built a house on the family ranch. Our Older Rescue, Buster, was with the other Boxers, and a rattlesnake started. Sounded sort of like a Rainbird sprinkler. They were all barking. I went out and saw them surrounding it and Buster was going after the striking end. He got it from the snake a couple times. I ran in to get the gun hoping for the best. Of course, when I was yelling at them, they wouldn't come or listen! I came back out and shot it. They were afraid of the shot gun, so dogs cleared out when they saw me coming with it. I was getting the dead snake put in a secure location. Buster dropped to the ground. I picked him up and put him in the car. He peed himself. I called the vet while driving, he waited even though they were closing up. They gave him lots of fluids and Benadryl type meds. Anti venom for dogs was not really readily available here at that time. He stayed with the vet for 3 - 4 days. He looked like a Shar Pei for about a week, but he was ultimately fine." *Author's note that Benadryl is not an effective snakebite treatment, and in situations where antivenom is unavailable, supportive care should consist of IV fluids and non-NSAID pain management.*

"Carol Catunellda. I had a Dane bitten 3 months in a row. He was not the sharpest tool. He didn't react the third time, may have been a dry bite."

"Patti Sears. I lived next to a wildlife preserve in AZ. I taught rattlesnake and toad avoidance. I have raised rattlesnakes and bull snakes. I also trained with the sheriff dept and SaR. My classes were phase three."

"Barbara Moffet. Davis University doesn't recommend the shot. Natural Solutions are all Behaviorist out of San Diego Zoo

Frenchie. July 23,2023 about 5pm. My husband, sister and I were sitting at patio table, 2 Frenchies were under table. Simultaneously, my sister yelled 'Snake!', and the dogs ran to it. It came right up on the patio. We had not seen one for years. Tilly went in for the fight, I went for the gun, my husband and sister tried to get the dogs. Tilly was hard to catch because she wanted to get the snake. Both were caught and thrown into the house. The snake went into the ground cover at the patio. It was rattling but we could not see it. My husband was lifting the ground cover up with a rake. We saw it, I shot it, almost in half but they still move and can still bite when dead because of their nervous system. He tended to dispose of snake, I checked over Tilly. I couldn't really find any bite marks but saw a few scratch-like places behind her ear and on side of head. She felt burning hot like something you would take out of the oven, so I knew she got it. I dosed her with 50mg Benadryl and started to ER. I called on way and told them the situation. It was 12 miles. When we got there the side of her face had started swelling. They put her on IV and antivenom, pain meds. She kept swelling so she was intubated. Then they did a drip, fentanyl, to keep her from fighting tube. She just kept going down. Another IV of antivenom. I asked about backing off the fentanyl, but they said it was needed. My vet tech friend came. She didn't like it either, but they seemed like it was

Finding a rattlesnake aversion training class is not usually difficult when you live in a region where there is a large population of venomous snake species. But it can be a challenge to locate a trainer if you live in a place where encountering venomous snakes is rare. Some ways to find a trainer or training class are by contacting those who often sponsor the classes. Try asking local veterinarians, hunting and gun dog associations, obedience and kennel clubs, fox hunting packs, et cetera. And of course, searching the internet. Most classes start in early spring and go through to about the end of June, but it depends on the area and trainers. Living where there is the possibility of sharing space with a venomous snake doesn't mean you or your dog will ever encounter one. People can live their lives in Arizona or Southern California and never even see a wild rattlesnake. Still, putting your dog through rattlesnake aversion class can help provide some peace of mind.

After our Flat-Coated Retriever was bitten by a Southern Pacific Rattlesnake that was sunning itself on our back patio, we took all our dogs through rattlesnake aversion training. Great Danes, FCRs, and a Pembroke Welsh Corgi. Every one of our dogs picked up on the training rapidly. The summer of the first time our Corgi had gone through the training, he alerted me to a rattlesnake that was under our grill. I happened to be looking out the kitchen window to the patio when I saw the Corgi make a wide berth around the grill with his ears flat, hackles raised, and body posture low; the same attitude he displayed once he caught on to the training during his session a few months earlier. He went to the furthest part of the patio from the grill and barked with intent a few times, but it was his body language upon passing the grill that caught my attention. I stepped out to call the dogs inside and I could see a fat rattler resting under the grill, who a couple of hours later moved on. If our dog had not received the rattlesnake aversion training, I can almost guarantee that our curious Corgi would have investigated that snake.

As for our Flat-Coat, he did receive a hot bite to the face that afternoon, but hardly swelled and never acted sick. He was rushed to the veterinary hospital where he was infused with one vial of antivenin, spent the night, and was sent home happy and healthy early the following morning.

the right thing. She never recovered. They did CPR when her heart stopped, and a few injections to start her heart, but nothing. She passed. She was an AKC Grand Champion, a feisty girl. I thought for sure she would make it."
Authors note; brachycephalic breeds are at higher risk of airway complications, and during severe envenomations, multiple doses of antivenom may need to be rapidly bolused to prevent organ failure.

"Jennifer Crane. I put the car's flashers on and sped all the way to the vet. I think I made it there in under 17 minutes. The scariest part was that it was dark out and I couldn't see Naja in her crate. No streetlights for illumination because I'm in the country. I just prayed that she was still alive. I jumped out of the car, raced to the other side (still praying) and opened the door. She was alive but breathing was labored, and her neck had also become very swollen. I had never seen such swelling before and her face was unrecognizable. It was hideous! My vet had called in a vet tech to help, and they immediately went to work on her, giving her a steroid shot first then putting in an IV to administer the anti-venom. My vet assured me she would pull through and that he'd never lost one that had gotten anti-venom. He told me she would need to stay at the vet about 2 days, getting anti-venom every 3 hours before she would be well enough to leave. The fang punctures were about 1/2 inch apart indicating it was a young rattler which had released all of its venom as they aren't old enough for control. He also told me to go home, try to get some rest and call in the morning for an update. After a teary goodbye I went home and hugged Glory & Amber. They were very confused that the dog door was closed and had to be let out into the small front garden area.
"My boyfriend said he would come up the next day and search the 2/3-acre yard for rattlers. He fashioned a wire noose on a long pole and stuck it into all the sage brush, bushes, tumbleweeds etc. at different times of the day. None were found! I wouldn't have known to do that. I've since learned that it is common for a rattler to change locations once it has been threatened. We also cut back some of the bushes and removed most of the weeds so there weren't as many hiding places. Naja made it through the night! She was still swollen but it was receding which was a good sign. Updates over the next 1-1/2 days were all positive. I had a lot of support from the FaceBook community from which a friend told me about a FaceBook page on snakebites. It took 2 vials of anti-venom at $430 each and 2 days later she came home with a vet bill just under $2000. The swelling was almost indiscernible, and the puncture wounds didn't even have scabs! To have such a close call and show no signs of it 2 days later is mind boggling. I feel very fortunate that even though I live in a small town, my vet knew the correct protocol for venomous snake bites. He stocks anti-venom because there's a few bites a year here in Taos, NM. Amber and Glory have had their first of 2 rattlesnake vaccines. Naja has to wait a month before she can get hers. Best to be proactive because I never want to go through this again!"

Thank you to the NSS, for your consulting on this article. The National Snakebite Support is a 501(c)(3) non-profit organization staffed by experts in human and veterinary snakebite medicine. In the event of a bite, or if you have questions, please visit.

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