

## **Snake Bite Season**

Crotalid envenomation occurs from the bite of snakes from the Crotalidae family, such as the rattlesnake and copperhead snake. This family of snakes is a type of venomous viper found throughout our tristate area. It is reported that roughly 150,000-300,000 dogs and cats are bitten by these snakes annually, with 90% of these events occurring between the months of April and October.

Over 50 different toxins have been identified in snake venom, affecting a variety of organs such as the muscle, neurologic system, heart, kidneys and blood stream. These toxins are designed to incapacitate their prey, therefore when these toxins enter the tissue of our pets it can cause a variety of problems that can be potentially fatal.

Clinical signs vary depending on the size and age of the affected dog or cat, the amount of venom injected into the bite, the location of the bite, and the time between the bite and the start of medical intervention. Typically signs develop within 30 minutes to 2 hours of the bite, but onset of signs may be delayed for up to 8 hours in some instances. The most common signs associated with venomous snake bites are severe pain, bruising, swelling of the affected area, redness of the skin, and tissue death. Fang punctures may or may not be visible at the site and most bites occur on the face and front limbs. Swelling around the bite site is typically rapid and can progress for up to 36 hours. The most severe signs seen in our area include abnormalities with bleeding due to the venom. These signs can be seen as abnormal bleeding from the nose, mouth, skin, gastrointestinal tract, eyes or elsewhere; as well as changes in heart rate, breathing pattern and blood pressure related to blood loss.

Blood work can help support a diagnosis of envenomation and guide treatment, as changes to red blood cells, platelet and blood clotting ability can be adversely affected. When these changes are noted, along with appropriate symptoms, treatment aimed at correcting blood abnormalities must be performed as soon as possible to save the pet's life. Antivenin is the only proven therapy for crotalid envenomation and is most effective when administered early in the course of disease. Along with Antivenin, other supportive therapy may be warranted based on veterinarian recommendation and diagnostics, such as intravenous fluid therapy and pain management. Antimicrobials are not typically needed for snake bites unless the bite wound abscesses.

Prognosis for crotalid envenomation can be relatively good with prompt medical care. However, prognosis varies depending on the overall health, age, and size of the pet; the location of the bite wound(s), the time between initial bite and medical care, and the amount of venom injected. And always remember that even if your dog has received a rattlesnake vaccine in the past, that does not replace the medical care needed after a bite occurs!