

Snake Bites

Unfortunately snake bites are a not-uncommon presentation in the warmer months of the year in the area I work in (Frankston). A lot of the snake bites we see seem to occur in the Langwarrin and Cranbourne areas. If you live or walk in parkland or bushland, it is likely you are walking past or close to snakes each time you venture out – snakes tend to blend into their environment well. Snake bites are uncommon in humans – we naturally are wary of snakes, and we teach our children to stay away from them too. The majority of snake bites in humans occur when people are trying to kill them with a shovel. Unfortunately dogs and cats tend to like to hunt or play with snakes, so they are bitten regularly, usually in the summer months when snakes are more likely to venture out to bask in the sun. One thing I will mention is that snakes are not ‘aggressive’ animals. They are far more scared of us (or our pets) than we are of them. When they do bite, it is simply in self-defence (ie when a dog tries to grab them). The types of snakes we see in Australia will not aggressively chase creatures larger than themselves.

The four types of snakes we see in Victoria are the Eastern Brown, Mainland Tiger, Copperhead and Red Bellied Black Snake. Death Adders also live in Victoria, but generally not south of the Murray River. By far the most common envenomations to occur in both humans and animals in Victoria are due to the tiger and brown snake. The tiger snake is ranked 3rd on the list of the most venomous snakes in the world. In the Frankston-Langwarrin-Cranbourne area, most of our serious snake bites are from tiger snakes. Copperheads are also quite common in the area, but envenomations are usually not as severe. It is usually not necessary to identify the type of snake that has bitten your pet, if this was to occur, as we usually treat envenomations with a combined Tiger-Brown Anti-venom, which treats all types of Southern Victorian snake bites (including Copperheads and Red Bellied Black snakes). There is a lot of variation in the appearance of the different species of snakes, depending on their local environment and nutrition – it is usually not possible to identify the type of snake easily by simply their appearance.

For the purposes of this article, I will concentrate on Tiger Snake envenomations, as these are the most common and severe envenomations that we see. When the tiger snake bites, it injects a variable amount of venom into its victim. The venom contains different types of toxin, which can act on different parts of the body. Tiger snake venom contains neurotoxins (toxins that cause destruction to nerve tissue, generally causing paralysis), myotoxins (toxins affecting muscle fibres, causing weakness and severe pain) and procoagulants (toxins that lead to the blood clotting within the blood stream – once all the coagulation factors are used up, the patient is prone to bleeding externally because the body loses its ability to clot blood normally). It is hard to predict how severe a snake bite may be in an individual – symptoms can vary in severity depending on how much venom is injected into the victim when they are bitten. Most tiger snake envenomations in dogs require anti-venom. It is best to treat with anti-venom as soon as possible, as it is better to prevent the toxins from

exerting their effect, rather than trying to reverse symptoms once they have appeared. This way, less anti-venom is required.

The early symptoms of a snake bite may include sudden collapse, vomiting, salivation, defaecation, urination, trembling and a faster than normal breathing rate. These can occur quite soon after the bite. The victim may then 'seem ok' for a while, but they can then deteriorate quickly. Classical symptoms of a snake bite will then be paralysis or wobbliness, unusual/fast/laboured breathing, continued bleeding from the bite site (although this is not always obvious) and red or bloody urine. Unfortunately another symptom of a severe bite may be sudden (rapid) death. Symptoms of a sub-lethal snake bite can include dilated pupils, stiffness or wobbliness when walking and an inability to close the jaw. Cats tend not to present acutely with symptoms of snake bites. Symptoms in cats may not become apparent for 12-24 hours following the bite. They are thought to be more resistant to the toxins in tiger snake venom. They are also more agile hunters and may receive less bites and therefore a lower dose of venom.

If you see your pet playing with a snake or find a dead snake in the garden (with obvious bite wounds on it), I would recommend watching your pet closely or taking them to the vet. If symptoms become obvious, it is imperative that you take them to the nearest vet as soon as you can. Your pet will likely require aggressive treatment including intravenous fluids, anti-venom, pain relief and possibly antibiotics too. Anti-venom is very expensive, on average most clinics will charge \$600-\$800 per vial, and most dogs require at least 2 vials. Anti-venom is very expensive for us to purchase (and it has a short shelf life), so it only has a very small mark-up on it. Treatment for a snake bite can cost many thousands of dollars in some instances. If you live in an area with a known snake population (eg the Settlers Run or Botanic Ridge estates in the Cranbourne/Pearcedale area or in the vicinity of the Langwarrin Flora and Fauna Reserve) I would recommend considering taking out pet insurance. Pet insurance is excellent for accidents and emergencies, such as snake bites. Dogs under treatment for snake bites are often very unstable and will need to stay at clinics such as the Animal Emergency Centre where they can be observed all the time, this will incur additional expense. Recently, programs have been developed to train dogs not to attack snakes, this is another option to reduce the risk of your dog sustaining a snake bite. Snake proofing your property is difficult and is often unrewarding. Snakes can climb and squeeze through small fences. Snake deterring devices (such as the solar powered devices available at hardware stores) are generally not effective. Snakes love to sleep within rockeries, so removing large stones or rocks from your garden may reduce the risk. I do not recommend trying to kill a snake (they are also a native, protected species), if you find one in your garden that you wish to remove, I would recommend contacting a snake catcher who will try to find and humanely relocate the snake for a fee.

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