

Brown Recluse and Black Widow Spider Bites

By Dr. Karen Becker

Hello, I'm Dr. Karen Becker, and today I want to talk about two types of poisonous spider bites in pets -- the black widow and the brown recluse.

Black Widow

In the US, there are actually three species of widow spiders that are highly venomous to both pets and people. There's the western black widow, which is found in the western regions of the country; there's the northern black widow, found in the northernmost areas of the US and southeastern parts of Canada; and the southern black widow in the southeast US – from Florida to New York – and also in many states of the southwest. Black widow spiders are found in every state but Alaska.

Female black widows are larger than males, measuring from three quarters of an inch to about an inch in length. They're shiny and black, but they can also be dark brown. And most of them have a red or red-orange hourglass shaped mark on the underside of the abdomen. Some females also have a red marking on top of the abdomen or on their back, above the spinnerets. The spinnerets are the silk-spinning organs in a spider. Younger female spiders are brownish in color with red, orange, or yellow stripes at the top of the abdomen. These markings change into the hourglass shape as the spider matures and changes to a black color.

Male spiders are about half the size of females. They have light brown coloring, and they don't have the hourglass marking. The males aren't considered a threat, since it's usually the females that bite.

Symptoms and Diagnosis

Black widow spider bites can be dry, meaning no venom is injected. When there is venom present, it is a potent neurotoxin that triggers a massive release in a dog's or cat's body of acetylcholine and norepinephrine. This is what causes muscle spasms and paralysis.

Pets can be bitten indoors or outside obviously. Young and old pets are at increased risk for severe symptoms due to their typically weaker immune systems. Animals with systemic high blood pressure are also at increased risk of fatal complications from these spider bites.

Symptoms of a venomous black widow bite in pets include early marked paralysis; muscle tremors and cramping; a rigid and very painful abdomen; severely painful muscles in the back, chest, and abdomen; difficulty breathing and/or respiratory collapse resulting from paralysis of the abdominal muscle; excessive drooling; restlessness; increased blood pressure as well as heart rate; and loss of coordination and the ability to stand. Sometimes vomiting and diarrhea can occur, and even death if anti-venom treatment is not given quickly.

Symptoms of a black widow spider bite can be difficult to diagnose because they are very similar symptoms that are seen in many other illnesses and diseases in pets, including other types of poisons. Your veterinarian will do a chemical blood profile, a complete blood count (CBC), a urinalysis, as well as a thorough physical examination. Your vet will be on the lookout for marks on your pet's skin that may

indicate the location of the spider bite as well. Muscle rigidity and abdominal rigidity are really the classic signs of a venomous black widow bite.

Treatment and Care

If you suspect that your pet has been bitten by a black widow spider, contact your veterinarian or emergency animal hospital immediately. I suggest administering the homeopathic remedy *Latrodectus mactans* as soon as possible. A pet that has been poisoned by the bite of a black widow spider will be hospitalized and given supportive care. This may include oxygen to assist breathing and intravenous (IV) fluids to lower blood pressure.

Muscle spasms and pain will be controlled by IV muscle relaxants and painkillers as well. Anti-seizure medications will be given as needed. Anti-venom drugs should be administered very carefully, with constant monitoring for reactions. Without the anti-venom, black widow bites can be fatal – and are actually usually fatal in cats as well as in many dogs.

Your veterinarian will monitor the wound site until it has completely healed. The prognosis is often uncertain for days after the initial bite and when treatment begins. Weakness, fatigue, and insomnia can persist for many months down the road.

Brown Recluse

The brown recluse, also known as the “fiddle back” or “violin” spider after the violin-shaped marking on its back, is typically found in the Midwestern US, as far west as Colorado and New Mexico; and as far east as northern Georgia and throughout the southern US as well as up the Mississippi River Valley and into Southern Wisconsin.

The brown recluse is obviously brown in color, with a violin-shaped marking on the upper portion of the body, with the neck of the violin extending down to the base of the tail. But not all recluses have this particular marking. For example, young brown recluse spiders don't have the violin-shaped marking. But generally speaking, the violin-shaped marking is a good way to recognize brown recluse spiders. These spiders also have a unique pattern of six eyes instead of three. They're less than an inch in long, with very long legs.

Despite their fierce reputation, brown recluses really are actually reclusive and typically non-aggressive, preferring to really stay away from people and pets. They're active at night, and that's usually occur when bites occur or when a spider gets trapped in bedding and an animal or human rolls over on it. But by nature, they're not overly aggressive. A spider will also bite if an animal disturbs it in its space. Cats may be at higher risk because of their tendency to crawl into dark, small spaces – under the bed or behind cabinets.

Symptoms

A brown recluse spider bite is necrotizing, which means the bite wound will ulcerate and cause the death of surrounding soft tissue. The wound is very slow to heal. This, of course, increases the risk of secondary infections.

Serious complications arise when an ulcerated wound progresses to gangrene, or when the venom enters into internal organs or the bloodstream. Rarely, this can lead to destruction of red blood cells, kidney failure, coagulation disruption, and even death.

Some pets show no symptoms from the bite of a brown recluse. When symptoms do occur, they can include several hours of intense pain and stinging at the site of the bite. That can actually clue you into where the bite could be located. You could either shave the area or part the fur to be able to determine if there's a bite wound. It is followed by itching and soreness of that area. The lesion that forms will be white in color with a dark scab in the middle on a reddish background. So, there's a zone of inflammation around the bite. After two to five weeks, the central scab may slough off, revealing a deep, slow-healing ulcer that typically kills surrounding soft tissue.

Other signs that may occur within two to three days of the bite include fever, chills, rash, weakness, rapid production of white blood cells (which can be picked up on bloodwork), nausea, and joint pain. Rarely, anemia with bloody urine is also seen within the first 24 hours after a bite.

Diagnosis

The bite from a brown recluse can look like a number of other bite wounds. Unless you actually saw the spider bite your pet, it's likely your vet will search for a range of other possible causes for the symptoms your dog or cat is experiencing.

A chemical blood profile, complete blood count (CBC), and urinalysis will also be conducted. A coagulation profile may be necessary to check your pet's blood clotting activity. If you live where there are brown recluse spiders, you might want to ask the vet if they can check for venom in your pet's bloodstream. This is done with an enzyme-linked immunosorbent assay (ELISA) test. But unless you bring up that possibility of a spider bite, your vet probably won't consider doing that. That's something you could suggest if you believe that could have been a possibility.

Unaddressed, the venom from a brown recluse can cause severe damage to pets. The tissue death can continue well beyond the initial bite wound and in some cases of substantial tissue devitalization, an entire limb can be affected, and in the worst-case scenario amputation may be necessary. The faster a spider bite is found, the better the chance of preventing complications.

Treatment

Routine wound care will be given unless your pet is extremely ill. Very sick animals are obviously hospitalized to receive IV fluid therapy and potentially blood transfusion(s) if necessary. If the venom is mild, cold compresses can be used to reduce inflammation and pain, and several different homeopathic remedies can be very beneficial at that point in time.

If there has been significant cell death at the wound site, your veterinarian will need to surgically remove all the dead tissue. If the venom was very potent, resulting in a great deal of cellular and tissue damage, your pet may need skin grafts after the lesion reaches full maturity. Hyperbaric oxygen therapy and ozone therapy can actually be very beneficial for speeding wound healing and aiding in a full recovery in some of those more severe cases.

If you know your pet was bitten by a spider but you don't know what kind, and your pet is acting fine, consider some basic home care. I recommend shaving the area around the bite and applying activated charcoal that's actually been made into a paste. You take finely ground activated charcoal, mix it with some water until it's a thick paste, and you coat the wound entirely. Disinfect the bite every 12 hours with dilute povidone-iodine, also called Betadine.

You can also consider making a topical poultice of the herbs plantain and Echinacea tincture. I recommend that you secure the poultice to your pet's body, so that this really potent herbal solution can remain in contact with the wound continuously. Change the poultice three to four times a day and, of course, disinfect twice a day until the bite wound totally disappears.

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