

Can a Lizard Survive a Spider Bite?

If a lizard is stunned or paralyzed by a spider bite, will it ever get better?

By Margaret A. Wissman, DVM, DABVP

I am in Adelaide, South Australia. This morning I removed a redback spider nest, which I found in the back yard. After killing the spider, I noticed that wrapped up in the web was a small gecko. I carefully removed the gecko from the webbing, but as you would expect, it is completely paralyzed. The tail is present, but he has tried to drop it as I can see that it is ready to fall off.

I am aware that a spider bite will paralyze a victim, to keep it alive until the spider is ready to eat. My question is: Is it possible that the venom will eventually wear off, or will it just kill the gecko? I am almost sure that it is still alive, but to be honest I cannot be sure. Only that he is very soft and flexible in all joints, not at all stiff. I have seen with other small lizards a heart beat in the body, but on this I can not see any movement.

Any thoughts you had on the subject would be of great help.

Thank you for your very interesting question. I had to look up about redback spiders (*Latrodectus hasselti*), as I had never heard of them, and it turns out that they are in the widow spider family. Because I live in Florida, I am well acquainted with black widows and brown widows. The female redback is large enough to bite humans effectively. The mature female has the characteristic black body of approximately 10 mm in length. The female has a very small cephalothorax and a round abdomen that usually has a bright red or orange dorsal stripe, and a ventral hourglass mark characteristic of the widow spiders throughout the world.

The toxin that is the active component of the venom is alpha-latrotoxin. It acts on nerve endings and is similar in action to that of the black widow (*Latrodectus mactans*), which has been far more extensively studied. There is an effective antivenom, which is used for humans with evidence of a known bite. The venom is slow-acting and it may take days to take full effect. My suspicion is that if you can keep the little gecko alive until the venom wears off (that is, if the venom doesn't kill it first), it might survive. While I doubt that any studies have been done using antivenom on bitten herps, it could probably be used on a gecko, but again, I doubt that there are established doses.

If the gecko is alive, and you could find a herp vet willing to work with you, if fluids can be administered parenterally (not orally), meaning by the subcutaneous route, into the body cavity, the coelom, or even by the intraosseous route (in a bone), this might help keep it alive until the venom wears off. In humans, the nerves that had been disrupted by the venom have begun to work again after 48 hours, and the nerves return to normal in eight days. But, again, the length of time that the venom would remain in effect in a lizard is probably not known, although the bite is intended to keep the lizard alive until the spider is ready for a meal, so she probably knows how much venom to inject to keep her prey immobilized.

If you can't find a vet to help you, if the gecko can swallow, you could try to administer drops of sport's drink or sugar-water to try to sustain it until it comes around. There is a chance that you could drown it or end up causing aspiration pneumonia if it inhales fluid. Keep it warm and hope for the best. Thanks for writing a most interesting question!

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Need a Herp Vet?

If you are looking for a herp-knowledgeable veterinarian in your area, a good place to start is by checking the list of members on the Association of Reptilian and Amphibian Veterinarian (ARAV) web site at www.arav.com. Look for DVMs who appear to maintain actual veterinary offices that you could contact.