

Do Spiders "Bite"?

It is not often that my "day job" as an academic physician intersects with my "real job" as an outdoor educator, but it happened the other day. On rounds with our residents, I was presented a four-month-old admitted because of a presumed "spider bite." The junior doctors could tell that something was up when I started quizzing them ("pimping" is the non-p.c. term) on how one makes the diagnosis of a spider bite.

Not very well, apparently. According to a study published in the *Journal of Emergency Medicine*, more than 95 percent of patients being seen for a sus-

pected spider bite actually had something else. Most of the time, it was a soft tissue infection such as cellulitis, which was the diagnosis in the child who inspired this column.

With a couple of exceptions that I will mention later, the major problem associated with spiders in North America is arachnophobia, not bites. The former is one of the reasons I gave up on Adirondack lean-tos many decades ago!

If one stops to consider the biology, it should be no surprise that most spiders can't bite humans. There certainly are some insects and arachnids that are quite capable of piercing our skin. These critters have apparatuses that are exquisitely designed to puncture mammalian tissues deeply. They have evolved these for either protection (bees and wasps) or food (mosquitoes, ticks, and lice).

Spiders have no such needs. The puncturing and poisoning mechanisms in spiders are designed to immobilize prey that becomes trapped in webs. While these mechanisms work very well on flies, they would find human skin a veritable brick wall. For spiders to be able to inflict significant injury on humans would be overkill—something evolution usually avoids.

There are a couple of exceptions to this in North America (and a few more that I won't mention in some other parts of the world).

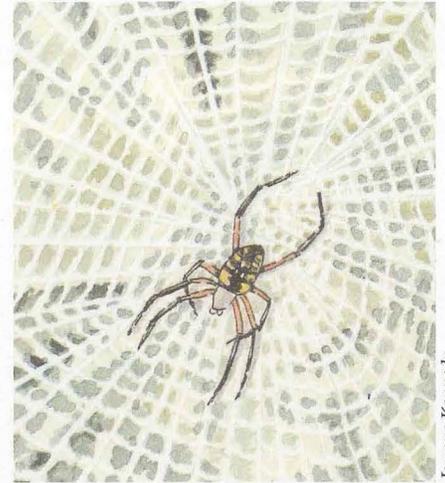
The *Latrodectus* species include the notorious black widow and related

spiders. Field guides teach us to recognize them by the "hourglass" pattern on their undersurface. I never understood how one could pick off a biting spider and turn it over to examine its underside! These bites

So, despite those spiders sharing the lean-to with you, sleep tight realizing that they are harmless. Hey, they may even help keep the mosquitoes at bay!

are not particularly painful, but occasionally individuals will have a generalized reaction starting about an hour or so after the bite. This is much rarer than lore would suggest, and mainly affects small children and the elderly. The symptoms are mainly muscle cramps and twitching, with anxiety and vomiting. Although it's usually self-limited in a few hours, anyone experiencing such a reaction should receive prompt medical attention.

The *Loxosceles* species include the recluse spiders. Their bites rarely cause generalized symptoms, but can be quite painful at first. Occasionally, after a few hours, the bitten area evolves into a very sore, red area which can remain painful and nasty-looking. Rarely, these lesions can ulcerate and cause lasting skin damage. Again, these lesions require



Joanne Kennedy

medical attention. There is little first aid beyond pain medication.

Neither of these species is common to the Adirondacks; readers would more commonly encounter them while traveling south. So, despite those spiders sharing the lean-to with you, sleep tight realizing that they are harmless. Hey, they may even help keep the mosquitoes at bay!



Tom Welch, MD, is professor and chair of pediatrics at Upstate Medical University in Syracuse and an active member of the Wilderness Medical Society. He is a licensed professional guide and a certifying instructor for the Wilderness Education Association, and has guided groups in the Adirondacks, Montana, and Alaska. More information is available at his website and blog: www.adirondoc.com.