

## Brown Recluse Spider Envenomations

Insects and spiders proliferate following a wet and mild spring, with this year being no exception. Concerns over reactions to spider bites follows with special attention to the notorious brown recluse spider (*Loxosceles reclusa*) well known for its ability to cause necrotic lesions. The diagnosis of spider envenomation is usually based on clinical presentation without confirmation since patients rarely produce the offending spider.

Brown recluse spiders are small brown spiders characterized by an upside down violin on the head, flat bodies, and only 6 eyes. They are endemic only to the south-central portion of the United States and rarely are transported to other areas. Bites from the brown recluse vary in severity from little or no reaction to severe dermal necrotic lesions occasionally accompanied with systemic symptoms. Many bites go unnoticed until intense pain and formation of a small white or hemorrhagic vesicle surrounded by swelling occurs about 8 hours later. The enzyme sphingomyelinase D, one of eight components is thought to be the main contributor to the cytotoxic and hemolytic properties of the venom. More severe envenomations are characterized by the formation over 24 to 72 hours of a blue gray colored 'sinking' lesion surrounded by a larger irregular shaped area of alternating blanching and redness. With severe bites, the center lesion forms an eschar that falls off revealing necrosis of deeper tissues. Although 90-95% of bites heal without complications there are some cases involving surgical debridement that may require several months to heal.



Necrotic lesions can be caused by bacterial (staphylococcus [MRSA], streptococcus, gonococcus, and cutaneous anthrax), viral or fungal infections. Bites from a variety of arthropods as well as a host of medical and toxicological issues can result in a similar appearance. Misdiagnosis of necrotic lesions can lead to a delay in appropriate treatment.

Treatment of brown recluse spider bites consists of tetanus prophylaxis, wound care, pain management, antibiotics for secondary infections, and supportive care. Lack of evidence of efficacy or potential side effects have limited use of other treatments utilized in the past.

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### ***DID YOU KNOW THAT... brown recluse spiders are not indigenous to Maryland?***



Brown recluse spiders are found throughout the south central states of the U.S. (see map, dark shading). The spiders are **not** found in Maryland because they cannot survive Maryland winters. The possibility exists of brown recluse spiders being introduced through shipments from other areas of the country, but infestations are unlikely to occur.