

MEDICALLY IMPORTANT SPIDERS

General information and caution

Of the over 38,000 species of spiders described to date, only about 100 species worldwide have venom demonstrated to be detrimental to humans (Maretić 1987). Of these, only the widow spiders in the genus *Latrodectus* (Theridiidae) and the recluse spiders, including the brown recluse, in the genus *Loxosceles* (Sicariidae) have been definitively shown to have venom of medical importance in North America. It has been suggested that other species in this region also have venom of medical importance to humans, such as the hobo spider, *Tegenaria agrestis* (Agelenidae) (Akre & Myhre 1991) and the yellow sac spiders in the genus *Cheiracanthium* (Miturgidae) (Krinsky 1987). However, the evidence that bites from the hobo spider can cause medical problems in humans is circumstantial at best (Vetter & Isbister 2004). Evidence for lesions from bites of *Cheiracanthium* species is slightly better (Krinsky 1987). That said, since nearly all species of spiders have venom, the potential exists for some people to be allergic to components in the venom. Allergic responses to venoms of many different types of biting or stinging arthropods are possible. Spiders can control the amount of venom released so bites, even from widow spiders, can be asymptomatic if little or no venom is injected.

Whenever a person gets bitten or stung by any arthropod, it is critical to collect the offending insect or spider, or collect its remains after it has been killed, and bring it to the physician so the animal can be sent away for positive identification by an expert. Very few physicians have sufficient training in entomology or arachnology to accurately identify invertebrates. Many, if not most, necrotic lesions, sores, blisters, or other dermatological injuries that are diagnosed as spider bites without a spider having been seen at the site of the injury are likely due to other conditions. Just having spiders in the home is not valid justification for blaming the spiders for unusual wounds or sores. Many necrotic lesions or ulcerous sores diagnosed as brown recluse bites in areas of the U.S. where the recluse spiders are infrequent visitors or entirely absent are more likely caused by such conditions as diabetes (diabetic ulcers), *Staphylococcus* or *Streptococcus* bacterial infections, lymphoma, tick bites, herpes viruses, etc. (Vetter 2000b, Vetter *et al.* 2003). In those regions of the country outside the range of the recluse spiders, spiders are the least likely culprits for such ulcerous sores. Other more likely factors or conditions should first be ruled out before such a sore is diagnosed as a spider bite. Lymphoma, diabetic ulcers, bacterial infections, and tick bites can all be effectively treated if a correct diagnosis is made early on in treatment. If such conditions are initially misdiagnosed as spider bites, very serious medical complications could result.

Spiders, including widow spiders and recluse spiders, are generally timid creatures that are far more likely to try to escape when encountered than to attack and bite. Spiders typically only bite when seriously provoked – e.g., when a person inadvertently presses down on a hidden spider or reaches his/her hand into a spider's retreat.