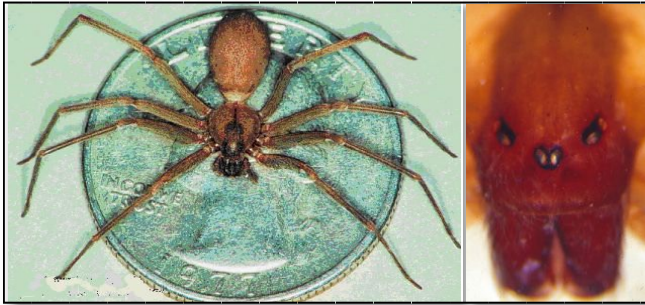


Just the Facts...

Brown recluse spiders (Loxosceles reclusa), also known as fiddle back spiders, are native to the South Central and Midwestern United States. These spiders are potentially dangerous to humans. Although bites are rare, their venom can cause serious wounds. Brown recluse spiders are uncommon outside their native range, and bites attributed to these spiders in these outside areas are highly unlikely and often misdiagnosed. Because of their secretive habits, detecting and eliminating brown recluse spiders inside structures can be a challenging and time-consuming effort.



Identifying a Brown Recluse Spider – adults, with legs extended, are a little larger than a quarter (left), and have a dark violin-shaped mark on the back. Brown recluse spiders have only six eyes arranged in three pairs (right); most other spiders have eight eyes.

What does a brown recluse spider look like?

The body of a brown recluse spider is about 3/8 of an inch long. With legs extended, they are a little larger than a U.S. quarter. Their overall color ranges from tan to dark brown. The bulbous rear (abdomen) of a brown recluse spider has no markings, and can vary from cream to dark brown in color. These spiders have a dark, violin-shaped mark on their backs, with the neck of the violin pointing toward the rear of the spider. Brown recluse spiders have only six eyes arranged in three pairs (most other spiders have eight eyes). Their legs are uniformly light-colored, with no stripes, bands, or spines.

Where do brown recluse spiders live?

Brown recluse spiders are just one of the many different types of spiders that live in and around homes and buildings. They are

common indoors and outdoors only in their native range encompassing parts of the South Central and Midwestern United States. Occasionally, brown recluse spiders are encountered in buildings outside their native areas, probably transported inside the boxes and furniture of people moving from states where the spider is common. The “recluse” in brown recluse spider comes from the spider’s secretive habits. Outdoors, brown recluse spiders live in thick groundcovers (ivy, pachysandra, etc.), dog houses, and under rocks, logs, woodpiles, landscape timbers, and debris. Indoors, these spiders spend the daytime hours in retreats in cracks and wall voids, above suspended ceilings, inside heat ducts and registers, and behind or under items stored in closets, garages, or other dark, secluded areas. Their webs are spun in these retreat areas, seldom out in the open. Usually, they are encountered crawling on floors, walls, and other exposed structural surfaces only during the nighttime hours, when they hunt for prey (live or dead insects).



Brown Recluse Range (shaded portion of map) – spiders are common in portions of the South Central and Midwestern United States.

How dangerous are brown recluse spiders to humans?

Brown recluse spiders are not aggressive. It is quite common to live or work in a building where there are many brown recluse spiders and never be bitten. These spiders have small fangs and cannot bite through clothing. Most people are bitten when the spiders wander into shoes, clothing, or bedding at night and become trapped against the skin when a person dresses or rolls over a spider in bed. Other bites occur while moving stored items. The bite of a brown recluse spider is usually painless. Severe reactions to the venom, including fever, chills, dizziness, stomach cramps, and vomiting, are more common in children, the elderly, and patients in poor health. Brown recluse spider venom can cause blood clotting in the small blood vessels of the skin surrounding the bite area. Although the majority of brown recluse spider bites heal completely within three weeks, sometimes a lesion with a core of dead tissue may develop, spreading or persisting for weeks. With some individuals, the bite wound fails to heal and may require skin grafts.

How can I be sure that I have been bitten by a brown recluse spider?

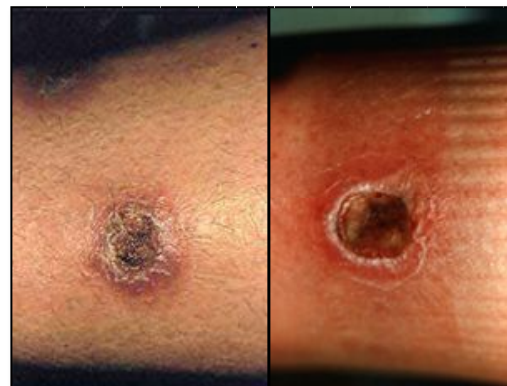
Brown recluse spider bites are not common within their natural range, and are even rarer outside of this area. Bites from these spiders are difficult to confirm from the wound alone. Also, diagnosis is difficult because the spider is rarely seen or recovered by

the bite victim. The bite itself is generally painless, and victims are usually unaware they have been bitten until about eight hours later, when the bite site may become red, swollen, and tender. Only approximately 10% of bites progress to a gray to purple discoloration at the bite site. This site is encircled by a ring of blanched skin that in turn is surrounded by a large area of redness, producing the "red, white, and blue" sign typical of a brown recluse spider bite. Many medical conditions mimic the "red, white, and blue" sore from a brown recluse spider bite, including bacterial (including outbreaks of drug-resistant infections by *Staphylococcus aureus*) and fungal infections, gangrene, and diabetic or pressure ulcers. If you suspect you have been bitten by a brown recluse spider, apply ice to the bite site, elevate the affected area, and seek medical attention immediately. If you are lucky enough to capture the spider, try to save it for identification. Even a badly crushed specimen can be identified by an expert.

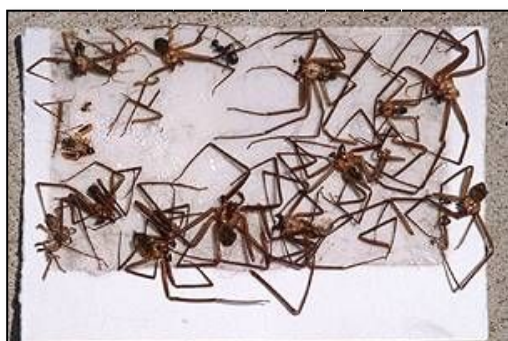
How can I avoid being bitten by a brown recluse spider?

To lessen the chances of coming into contact with or being bitten by a brown recluse spider, practice the following:

- Keep shoes and clothing off the floors; shake them out before you use them.
- Eliminate as many of the hiding places as possible for spiders and their prey; remove excess clutter.
- Store seldom-used items in tightly sealed plastic storage containers.
- Keep firewood piles as far from a home as possible.
- Make sure that beds do not touch walls, drapes, and other furniture; ensure that skirts and bedspreads do not contact the floor.
- In buildings, install sealant and weather stripping around thresholds and gaps where utilities enter structures.
- Take proper precautions: wear gloves when handling, rocks, crates, and lumber, while working in landscape plantings or when moving materials that have been in contact with the ground. *Look before you reach, into, under, over or around!*
- Spiders found on your body should be brushed off, not swatted.



Misdiagnoses of Brown Recluse Spider Bites
 – many medical conditions look like the wound from a brown recluse spider bite (right), including a fungal and bacterial (left) infections.



Glue Traps for Monitoring and Control – thin pieces of sticky cardboard can be used to detect infestations and to capture and kill large numbers of brown recluse spiders.

What can I do to get rid of brown recluse spiders in my workplace or quarters?

The presence of these spiders represents a potential health threat. Always consult with Preventive Medicine Activity personnel at your supporting clinic to confirm that you have brown recluse spiders and/or obtain identification of any spiders found inside a building. Because of their secretive habits, detecting and eliminating brown recluse spiders inside structures can be a challenging and time-consuming effort. Seek the assistance of the Installation Pest Control Office before applying pesticides for brown recluse spider control inside a building.

- **Nonchemical Approaches.** Monitoring by setting out glue boards or sticky tape (placed in corners and along wall/floor junctures, especially behind furniture and clutter) is a critical part of a brown recluse spider control program. The more glue traps used the better. Liberal use of these traps should reveal "hot spots" where brown recluse spiders are most abundant and will capture and kill large numbers of spiders. Frequent vacuuming, repacking and sealing stored items, and removing potential outdoor harborages are all part of a good sanitation program for brown recluse spider control.
- **Chemical Approaches.** Pesticides are an important tool for brown recluse spider elimination. Insecticides can be applied as crack, crevice, or spot treatments indoors and along the base of foundations outdoors. Consideration should be given to the fact that some pesticides and application techniques might encourage spiders to relocate their retreats or to wander on exposed surfaces during daylight hours.

Where can I get more information on brown recluse spiders?

- Contact the Army Public Health Center (APHC), Entomological Sciences Program, Aberdeen Proving Ground, Maryland 21010-5403: DSN (312) 584-3613, CM (410) 436-3613: FAX – 2037; <http://phc.amedd.army.mil/topics/envirohealth/epm/Pages/default.aspx>.
- **References:**
- **Hedges, S.A., and Lacey, M.S.** 2001. Field Guide for the Management of Urban Spiders. Franzak & Foster Co., Cleveland, Ohio, pp. 146-161.
- **Potter, M.F.** 2005. Brown Recluse Spider. University of Kentucky College of Agriculture, Department of Entomology, <http://www.uky.edu/Agriculture/Entomology/entfacts/struct/ef631.htm>, pp. 1-8.

Drawings/Photographs courtesy of University of Kentucky Entomology, University of Nebraska, Cooperative Extension Service, and University of California Riverside

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 For more information please consult the APHC website - <http://phc.amedd.army.mil>