

Scorpion Sting Overview

Scorpions are a member of the Arachnida class and are closely related to spiders, ticks, and mites. Scorpions have two pincers, 8 legs and an elongated body with a tail composed of segments; they range in length from about 9 to 21 cm. Some species are smaller, more translucent, and harder to see. They may appear as a thin string on the ground. The last tail segment contains the stinger (also termed a telson) that transmits a toxin to the recipient of a sting. Most scorpions are harmless. Although about 2000 species exist, only about 25-40 species can deliver enough venom to cause serious or lethal damage to humans. One of the more venomous or potentially dangerous species, especially for infants, young children, and the elderly in the United States is *Centruroides exilicauda* or bark scorpion. Contact with scorpions is usually accidental. Scorpion stings are painful, and they can be fatal, particularly to children. Scorpions may sting more than once; the stinger, located at the end of the tail segment is usually not lost or left in the person's tissue after a sting.

Scorpions come in a variety of colors - from tan to light brown to black. Each has a long tail segment that contains a stinger. Scorpions are found in highest numbers across the southern United States and in arid or desert regions in most other countries. However, they can be found occasionally in most US states and in temperate regions of both South America and Africa and some even reside in cold climates. Scorpions hunt at night and hide along rocks or trees during the days. Homes built in arid or desert regions commonly have scorpions in them.

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Scorpion Sting Symptoms

In general, the sting usually causes discomfort that slowly decreases over time. The discomfort, described below, usually ranges from moderate to severe.

- A person who has been stung by a scorpion may feel a painful, tingling, burning or numbing sensation at the sting site.
- The reaction at the sting site may appear mild. Rarely, a person experiencing a serious reaction may develop severe symptoms throughout the body. Severe symptoms include widespread numbness, difficulty swallowing, a thick tongue, blurred vision, roving eye movements, seizures, salivation, and difficulty breathing. These symptoms constitute a medical emergency. Death may occur.

What causes the symptoms associated with a scorpion sting?

The cause of the scorpion's sting symptoms is a barb or stinger that contains a protein toxin (also termed venom). The toxin is responsible for the symptoms listed above. The toxin is not pure; it contains a mixture of proteins (neurotoxin, protein inhibitors, and other substances). The types differ from species to species and likely have evolved to target the specific prey and predators of the particular scorpion species. Depending on the literature source, only about 25 to 40 of the approximate 2000 species of scorpions have toxins or venoms that are dangerous to humans. Chlorotoxin and Maurotoxin are two scorpion toxins that have been isolated and are currently being studied as potential treatments for diseases such as cancer.

Scorpion Sting Treatment

In most scorpion stings of adults, treatment is simply supportive and can be done at home.

- Wash the sting with soap and water and remove all jewelry because swelling of tissue may impede the circulation if it not allowed to expand (for example, a sting on a finger that has a ring surrounding it).
- Apply cool compresses, usually 10 minutes on and ten minutes off of the site of the sting.
- [Acetaminophen](#) (Tylenol) 1-2 tablets every 4 hours may be given to relieve pain (usually not to exceed 3g per 24 hours). Avoid [aspirin](#) and [ibuprofen](#) (Advil, Motrin) because they may contribute to other problems.
- [Antibiotics](#) are not helpful unless the sting area become secondarily infected.
- Do not cut into the wound or apply suction

When to Seek Medical Care for a Scorpion Sting

Most infants, small children and the elderly, especially if they are stung by a bark scorpion which inhabits large areas in Arizona and New Mexico, should be seen quickly by a doctor as some of the severe reactions occur in these populations. However, anyone who experiences the severe symptoms listed above after a scorpion sting needs immediate treatment in an emergency department.

What to do:

- Call 911 and Poison Control (1-800-222-1222)
- Continuously apply ice to the sting area.
- If there is no danger to other people, carefully collecting a dead or injured scorpion into a sealed container to show to the physician may be helpful.
- [Antivenom](#) therapy is available for the *Centruroides* species (bark scorpion), the antivenom (Anascorp) has been approved for use against the bark scorpion sting in 2011 by the FDA. It is made by immunizing horses with the venom and then the antivenom (immunoglobulin) is harvested from horse blood. The antivenom may stop all symptoms within about 4 hours after administration. Other researchers are developing antivenom to other species of scorpions.
- All but the mildest of symptoms require hospital admission for 24 hours of observation, especially for children.
- Consult a doctor about treatment with available medications if antivenom is not available.

Scorpion Sting Prevention

Many scorpion stings can be prevented by taking precautions such as shaking out clothing and shoes to dislodge any scorpions, wearing clothing that covers the body (for example, wearing gloves and tucking in pant legs into boots may limit exposure). Many pesticides that are commercially used outside on homes may make some scorpions sluggish and easier to kill before they can sting. In addition, pesticides may markedly reduce the food source of scorpions.

Most investigators suggest that if a scorpion is seen or felt on the skin, it is better to brush it off quickly instead of slapping at it because the scorpion will likely sting if the slap does not kill it.

Scorpions glow (fluoresce) under UV light (black light), so if a person is doing tasks in areas where scorpions might reside (dark areas like a closet or underneath a porch), people can use a black light to find them before they sting. This technique can be used in homes at night when scorpions are more active and may be found on the floors or walls.

We live in Central Texas in areas with lots of scorpions. My wife, daughter and I have all been stung multiple times. Though it is very painful, Benadryl Gel quickly diminishes the pain and slight swelling. None of us have allergic reactions, thankfully. My wife was stung multiple times in the garden by baby scorpions and that was pretty painful, but had no long term adverse effects. I hate scorpions!

I was bitten by a scorpion in my house. It bite on my little toe of right foot. The scorpion was small and light brown in color. I felt excruciating pain in my toe for 20-30 minutes. I washed my foot with soap and water. There was no [bleeding](#). My toe developed little bit of swelling and there was one pin head size raised area probably indicating the site of sting. I iced it and now I feel better.

I was stung by a scorpion on my forehead at 1:00 am while asleep in bed. I felt a searing burning immediately. I put ice on it, called the emergency room, told to take two antihistamines and an Advil. About 15 to 30 minutes later began to feel numbness and tingling in around my mouth/tongue area and in my hands and feet. No more symptoms occurred but almost 10 hours later I am still feeling the numbness. Called Poison Control and was told it might last 12 to 24 hours or so.