
Bee Sting Symptoms and Treatments

By Dr. Gigi Reed, MD: Off The Charts July 1, 2026

Warm weather brings people outdoors—and into closer contact with bees, wasps, and hornets.

For most, a sting is an unpleasant but manageable part of summer. The pain is immediate, the swelling annoying, and within a few days, it fades.

But in rare cases, a sting can trigger a life-threatening allergic reaction that requires urgent medical care.

Serious outcomes from insect stings are uncommon. In the United States, fewer than 800 deaths from bee, wasp, and hornet stings were recorded between 2011 and 2021—about 72 per year. Still, the possibility of a severe reaction makes it important to understand the risks and how to respond.

Not all stings are created equal. Bees leave behind a barbed stinger that continues to release venom after the insect flies away. Wasps and hornets, on the other hand, can sting multiple times, increasing the total dose of venom.

This is why quickly moving away from the area is essential. Compared to these insects, mosquito bites are far less medically significant, delivering only a small amount of saliva rather than true venom.

For routine stings, home care is usually enough. If a bee's stinger remains in the skin, it should be removed promptly by scraping it out with a fingernail or a flat object—avoiding squeezing, which can release more venom. Washing the area, ap-

plying a cold pack, and using over-the-counter medications can help manage pain and swelling.

The real danger arises when the immune system overreacts, leading to anaphylaxis. This severe allergic response can develop within minutes and affects the entire body.

Warning signs include difficulty breathing, swelling of the lips or throat, widespread hives, vomiting, dizziness, or a sudden drop in blood pressure.

Multiple stings can also cause serious toxicity, even in people without known allergies.

Epinephrine is the first and most critical treatment. Auto-injectors, such as EpiPen, work quickly to open airways, tighten blood vessels, and stabilize blood pressure.

Anyone experiencing signs of anaphylaxis should use epinephrine immediately and call 911. Delaying treatment can allow symptoms to worsen rapidly.

In the hospital, care focuses on stabilizing the patient and preventing the reaction from progressing. Emergency teams often give additional doses of epinephrine if needed and provide oxygen to support breathing.

Intravenous fluids are commonly administered to counteract low blood pressure and maintain circulation. Patients may also receive antihistamines and corticosteroids to reduce inflammation and help prevent a recurrence of symptoms, known as a biphasic reaction.

For patients with severe breathing difficulty, treat-

ments such as nebulized bronchodilators can help open the airways. In the most critical cases, advanced airway support—including intubation—may be required.

Because symptoms can return hours after initial improvement, many patients are observed in the hospital for several hours before being discharged.

While most stings will never escalate beyond a brief discomfort, recognizing the signs of a serious reaction — and acting quickly—can save lives.

A small insect may seem harmless, but in rare cases, its sting can set off a chain reaction that demands immediate attention. Awareness, preparation, and prompt treatment remain the best defenses.

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