

Insect Sting Allergy

Allergy and Immunology Awareness Program



Patient and Family Education

@ patienteducation@hamad.qa

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21-0118



Most people are not allergic to insect stings. Recognizing the difference between an allergic reaction and a normal reaction will reduce anxiety and prevent unnecessary medical expense.

More than 500,000 people enter hospital emergency rooms every year suffering from insect stings. A severe allergic reaction known as anaphylaxis occur in 0.5 percent to 5 percent of the U. S. population as a result of insect stings. At least 40 deaths per year result from insect sting anaphylaxis.

Fire ants, yellow jacket, hornets, and wasps are among the most common insects in the United States, while in Qatar and the Arabian Peninsula, black ants are common.

What is a normal reaction to an insect sting, and how is it treated?

The severity of an insect sting reaction varies from person to person. A normal reaction will result in pain, swelling and redness confined to the sting site. Simply disinfect the area (washing with soap and water will do) and apply ice to reduce the swelling.

A large local reaction will result in swelling that extends beyond the sting site. For example, a sting on the forearm could result in the entire arm swelling. Although alarming in appearance, this condition is often treated the same as a normal reaction. An unusually painful or very large local reaction may need medical attention. Because this condition may persist for two to three days, antihistamines and corticosteroids are sometime prescribed to lessen the discomfort.

Some insects can sting repeatedly. Honey bees have barbed stingers that are left behind in their victim's skin. These stingers are best removed by a scraping action, rather than a pulling motion, to avoid squeezing more venom into the skin.

Almost all people stung by fire ants develop an itchy, localized hive or lump at the sting site, which usually subsides within 30 to 60 minutes. This is followed by a small blister within four hours. This usually appears to become filled with

pus-like materials by eight to 24 hours. However, what is seen is really dead tissue, and the blister has little chance of being infected unless it is opened. When healed, these lesions may leave scars.

Treatment for fire ant stings is aimed at preventing secondary bacterial infection, which may occur if the pustule is scratched or broken. Clean the blisters with soap and water to prevent secondary infection. Do not break the blister. Topical corticosteroid ointments and oral antihistamines may relieve the itching associated with these reactions.

What are symptoms of insect sting allergy?

The most serious reaction to an insect sting is an allergic one. This condition requires immediate medical attention. Symptoms of an allergic reaction may include one or more of the following:

- Hives, itching and swelling in areas other than the sting site.
- Abdominal cramping, vomiting, intense nausea or diarrhea.
- Tightness in the chest and difficulty in breathing.
- Hoarse voice or swelling of the tongue or throat, or difficulty swallowing.

An even more severe allergic reaction, or anaphylaxis, can occur within minutes after the sting and may be life-threatening. Symptoms may include:

- Dizziness or a sharp drop in blood pressure.
- Unconsciousness or cardiac arrest.

People who have experienced an allergic reaction to an insect sting have a 60 percent chance of a similar or worse reaction if stung again.

How are allergic reactions to insect sting treated?

Insect sting allergy is treated in a two-step approach:

1. The first step is the emergency treatment of the symptoms of a serious reaction when they occur.
2. The second step is preventive treatment of the underlying allergy with venom immunotherapy.

Life-threatening allergic reactions can progress very rapidly and require immediate medical attention. Emergency treatment usually includes administration of certain drugs, such as epinephrine, antihistamines, and in some cases, corticosteroids, intravenous fluids, oxygen and other treatment. Once stabilized, these patients sometimes require close observation in the hospital for 8 hours.

Injectable epinephrine for self-administration is often prescribed as emergency rescue medication for treating an allergic reaction. People who have had



previous allergic reactions and rely on epinephrine must remember to carry it with them at all times. Also, because one dose may not enough to reverse the reaction, immediate medical attention following an insect sting is recommended.

What is venom immunotherapy?

The long-term treatment of insect sting allergy is called venom immunotherapy, a highly effective program administered by an allergist, which can prevent future allergic reactions to insect stings.

Venom immunotherapy involves administering gradually increasing doses of venom to decrease a patient's sensitivity to the venom. This can reduce the risk of a future allergic reaction to that of the general population. In a matter of weeks to months, people who previously lived under the constant threat of



severe reactions to insect stings can return to leading normal lives.

If you think you might be allergic to insect stings, talk to your allergist. Based on your past history and certain tests, the allergist will determine if you are a candidate for skin testing and immunotherapy.

How can I avoid insect stings?

Knowing how to avoid stings from fire ants, bees, wasps, hornets and yellow jackets lead to a more enjoyable summer for everyone. Stinging insects are most active during the late spring, summer, and early fall. Insect repellents do not work against stinging insects.

Yellow jackets will nest in the ground and in walls. Hornets and wasps will nest in bushes, trees and on buildings. Use extreme caution when working or playing in these areas. Avoid open garbage cans and exposed food at picnic, which attract yellow jackets. Also, try to reduce the amount of exposed skin when out-doors.

Effective methods for insecticide treatment of fire ant mounds use attractant baits. These baits often contain soybean oil, corn grits combined with chemical agents. The bait is packed up by the worker ants and taken deeper into the mound to the queen. It can take weeks for these insecticides to work.

Allergists recommend the following additional precautions to avoid insect stings:

- Avoid wearing sandals or walking barefoot in the grass.
- Never swat at a flying insect. If need be, gently brush it aside or patiently wait for it to leave.
- Do not drink from open beverage cans. Stinging insects will crawl inside a can attracted by the sweet beverage.
- When eating outdoors, try to keep food covered at all time.
- Garbage cans stored outside should be covered with tight-fitting lids.
- Avoid sweet-smelling perfumes, hair sprays, colognes and deodorants.

- Avoid wearing bright-colored clothing.
- Yard work and gardening should be done with caution. Wearing shoes and socks and using work gloves will prevent stings on hands and feet.
- Keep window and door screens in good repair. Drive with car windows closed.
- Keep prescribed medications handy at all times and follow the attached instructions if you are stung.

If you had an allergic reaction to an insect sting, it is important that you see an allergist.

People most susceptible to allergy to insect bites are those who are predisposed to be allergic and suffer from the following symptoms:

- Your allergies are causing symptoms such as sinus infections, nasal congestion or difficulty breathing.
- You experience hay fever or other allergy symptoms several months out of the year.
- Antihistamines and over-the-counter medications do not control your allergy symptoms or create unacceptable side effects, such as drowsiness.
- Your allergies or asthma are interfering with your ability to carry on day-to-day activities.
- You sometimes have to struggle to catch your breath or feel tightness in your chest.
- You often wheeze or cough, especially at night or after exercise.
- You previously have been treated for asthma, but you still have frequent attacks even though you are taking asthma medication.
- You have had reactions to foods, medications or other allergens.

Working with your allergist, you can find relief from your allergy and asthma symptoms.

Notes:

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