

Allergy & Immunology, PLC's
Asthma and Allergy Center

Lynchburg

1715 Thomson Dr. Lynchburg, VA 24501
P. 434.846.2244 F. 434.846.0602

Roanoke

1505 Franklin Rd, SW, Roanoke, VA 24016
P. 540.343.7331 F. 540.343.7349

Salem

3529 Keagy Rd Salem, VA 24153
P. 540.343.7331 F. 540.725.1356

Dane McBride, M.D.

Luis Matos, M.D.

Saju Eapen, M.D.

Thomas Fame, M.D.

Larissa Norman, FNP

Pamela Price, FNP

Insect Stings

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 occurs 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.

The majority of insect stings in the United States come from wasps, yellow jackets, hornets and bees. The red or black imported fire ant now infests more than 260 million acres in the southern United States, where it has become a significant health hazard and may be the number one agent of insect stings.

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 sometimes prescribed to lessen the discomfort.

Fire ants, yellow jackets, hornets and wasps can sting repeatedly. Honeybees have barbed stingers that are left behind in their victim's skin. These stingers are best

Allergy & Immunology, PLC's
Asthma and Allergy Center

Lynchburg

1715 Thomson Dr. Lynchburg, VA 24501
P. 434.846.2244 F. 434.846.0602

Roanoke

1505 Franklin Rd, SW, Roanoke, VA 24016
P. 540.343.7331 F. 540.343.7349

Salem

3529 Keagy Rd Salem, VA 24153
P. 540.343.7331 F. 540.725.1356

Dane McBride, M.D.

Luis Matos, M.D.

Saju Eapen, M.D.

Thomas Fame, M.D.

Larissa Norman, FNP

Pamela Price, FNP

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 material 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, 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.

Allergy & Immunology, PLC's
Asthma and Allergy Center

Lynchburg

1715 Thomson Dr. Lynchburg, VA 24501
P. 434.846.2244 F. 434.846.0602

Roanoke

1505 Franklin Rd, SW, Roanoke, VA 24016
P. 540.343.7331 F. 540.343.7349

Salem

3529 Keagy Rd Salem, VA 24153
P. 540.343.7331 F. 540.725.1356

Dane McBride, M.D.

Luis Matos, M.D.

Saju Eapen, M.D.

Thomas Fame, M.D.

Larissa Norman, FNP

Pamela Price, FNP

How are allergic reactions to insect stings 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 it occurs;
- 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 treatments. Once stabilized, these patients sometimes require close observation in the hospital overnight.

Injectable epinephrine (EpiPen® or TwinJect®) 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 be 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-immunologist, 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.

Allergy & Immunology, PLC's
Asthma and Allergy Center

Lynchburg

1715 Thomson Dr. Lynchburg, VA 24501
P. 434.846.2244 F. 434.846.0602

Roanoke

1505 Franklin Rd, SW, Roanoke, VA 24016
P. 540.343.7331 F. 540.343.7349

Salem

3529 Keagy Rd Salem, VA 24153
P. 540.343.7331 F. 540.725.1356

Dane McBride, M.D.

Luis Matos, M.D.

Saju Eapen, M.D.

Thomas Fame, M.D.

Larissa Norman, FNP

Pamela Price, FNP

If you think you might be allergic to insect stings, ask your doctor to send you for a consult with an allergist-immunologist, a physician who is a specialist in the diagnosis and treatment of allergic diseases. 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 leads 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 nest in the ground and in walls. Hornets and wasps 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 picnics, which attract yellow jackets. Also, try to reduce the amount of exposed skin when outdoors.

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 picked up by the worker ants and taken deeper into the mound to the queen. It can take weeks for these insecticides to work.

Allergists-immunologists recommend the following additional precautions to avoid insect stings:

- Avoid wearing sandals or walking barefoot in the grass. Honeybees and bumblebees forage on white clover, a plant that grows in lawns throughout the country.
- 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 times.
- Garbage cans stored outside should be covered with tight-fitting lids.

Allergy & Immunology, PLC's
Asthma and Allergy Center

Lynchburg

1715 Thomson Dr. Lynchburg, VA 24501
P. 434.846.2244 F. 434.846.0602

Roanoke

1505 Franklin Rd, SW, Roanoke, VA 24016
P. 540.343.7331 F. 540.343.7349

Salem

3529 Keagy Rd Salem, VA 24153
P. 540.343.7331 F. 540.725.1356

Dane McBride, M.D.

Luis Matos, M.D.

Saju Eapen, M.D.

Thomas Fame, M.D.

Larissa Norman, FNP

Pamela Price, FNP

- 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 and provide time to get away from an unexpected mound.
- 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. These medications are for immediate emergency use while en route to a hospital emergency room for observation and further treatment.
- If you have had an allergic reaction to an insect sting, it's important that you see an allergist-immunologist.