



Insect Allergy

What is an insect allergy? How is it different to a normal reaction to a sting?

Insect stings or bite can cause a local reaction or an allergic reaction. Most people who get stung by an insect, like a wasp, feel some pain and discomfort at the site of the sting for a few hours. This is considered a local reaction. Some people, however, are allergic to insect venom and may suffer much more serious and potentially life-threatening reaction. When these people are stung, their immune systems 'overreacts' to the venom and produces an anti-allergy antibody called Immunoglobulin E (IgE). The insect venom then reacts with the IgE antibody produced in response to the actual sting, triggering the release of histamine and other chemicals in the body.

What are the symptoms of an allergic reaction to insect venom?

The allergic reaction produced by the flood of histamines in the body can trigger symptoms ranging from hives, swelling around the eyes and lips, to severe, life-threatening reactions called anaphylaxis.

Symptoms of anaphylaxis may include itching and hives over large areas of the body, swelling in the throat or tongue, difficulty breathing, dizziness, stomach cramps, nausea or diarrhea. In severe cases, it may cause a rapid fall in blood pressure that can result in shock and loss of consciousness. Anaphylaxis is a medical emergency, and may be fatal.

What insect stings can cause an allergic reaction?

There are a wide variety of insects in Singapore that can bite or sting and cause an allergic reaction, including wasps, bees, ants and spiders.



What is the treatment for an insect sting?

If you've been stung by a honeybee, which leaves its stinger and venom sac in the skin, the stinger should be removed quickly to make sure more venom doesn't enter your body. You can remove the stinger with your fingernails or a tweezer – but take care not to squeeze the sac and accidentally force more venom through the stinger and into the skin. Hornets, wasps and yellow jackets do not usually leave their stingers. Once you've been stung, remain calm and slowly brush the insect from your skin to avoid an additional sting, then quietly and immediately leave the area.

You can treat a small, local reaction by elevating the affected arm or leg, and applying ice or a cold compress to reduce swelling and pain. Gently clean the blisters with soap and water to prevent secondary infections, but try to avoid breaking the blisters. Apply a topical corticosteroid ointment or take an oral antihistamine to relieve the itch. If the swelling progresses or the sting site appears to become infected, see a doctor.

If you develop an allergic reaction, you may need medical help. Mild symptoms that involve the skin only can often be managed with an immediate dose of an antihistamine. If the symptoms are moderate to severe, you may need to inject yourself with an epinephrine autoinjector (Epipen) and call for medical help. In Singapore, the emergency call number is 995.

What should I do after I've been treated for an allergic reaction?

Your doctor can help you develop an emergency action plan, and outline steps to avoid future reactions. People with insect venom allergies should avoid wearing sweet-smelling perfumes, check carefully inside their shoes for bugs before putting them on, and use insect repellants. They should also look around their home and yard for nests, call in an exterminator if need be, and be careful near places that bees and ants typically nest, including bushes, attics, eaves and sources of food.

Your doctor will help you write up an emergency action that you should also share with family, employers and teachers, so they know what needs to be done in the case of an allergic reaction. It's important to leave a copy of this plan with people who may need to assist you, and explain the severity of your allergy so they understand how important it is that you receive help immediately.



People who have severe allergies to insect venom and develop anaphylaxis following insect stings should consider insect venom immunotherapy, or ‘allergy shots’, which is a highly effective vaccination program that prevents future allergic sting reactions in 97% of patients. During immunotherapy, an immunologist administers a gradually increasing series of doses of venom extract over a period of two years. This helps the immune system develop a tolerance to the insect venom.

About Us

The Asthma and Allergy Association is a community-based organization that aims to increase awareness of allergic diseases in Singapore, and facilitate patient education and empowerment.

We hold a series of public talks and family-oriented events throughout the year, such as the World Asthma Day and our Food Allergy Awareness Day family carnival & seminar, as well as other public education programs. The AAA also administers several funds to help low-income families buy asthma and eczema medications.

To join the AAA, visit our website at at www.aaa.org.sg and download a membership form. Membership costs just \$20 a year. Members receive invitations to family activities and free seminars and talks by leading allergy specialists. We can also help you connect with support groups in Singapore.