



Insect Allergy
(Hymenoptera Sensitivity)

Hymenoptera includes bees, wasps, hornets and yellow jackets

The normal reaction to an insect sting is pain, swelling, redness and heat around the sting site lasting several hours.

Anaphylactic allergic reactions to insect stings are systemic; this means that symptoms involve the whole body, and not just the area around the sting site. Symptoms may include an impending feeling of disaster, hives, a fall in blood pressure, and difficulty in breathing due to swelling in the throat or constriction of the smaller airways in the lung. Nausea and vomiting are less common. Every year 50 to 100 persons in this country are reported to have died from reactions to stings.

Large local reactions are larger or last longer than the usual reactions, but do not involve “systemic” symptoms. For example, a sting on the foot associated with swelling of the whole leg lasting several days is a large local reaction. Approximately one half (the exact percentage is not known) of patients with such large local reaction develop allergy antibodies (IgE) to insect venom, indicating they may be at risk for developing an allergic reaction if stung again.

Avoidance of insect stings is the best solution when possible. In addition to avoiding obvious nests and not walking barefoot in the grass, individuals allergic to insect venom should keep away from flowers and not use scented preparations (perfume, deodorants, etc.) when outdoors.

Emergency Treatment Persons allergic to insect sting should carry an insect sting kit and learn what to do if stung. Honeybees are the only insect which leave a stinger behind; it should be removed by scraping with a knife or fingernail, since squeezing it will inject additional venom into the skin. Epinephrine (adrenalin) is the best drug for allergic reactions; you should give yourself as an immediate injection without waiting for symptoms to develop. An antihistamine tablet may also be taken. Immediately go to a physician or emergency room. A second epinephrine injection may be given after 15 minutes.

Diagnosis We would like to know which patients are at risk for developing a severe reaction if stung again. In the past, only whole body insect preparations were available for skin testing and treating patients; these were not effective. In 1979, venom preparations became available for skin testing and immunotherapy (allergy injection treatment). This has been shown to be very effective in diagnosing and treating insect sting allergy. However, there is no test that can predict with 100% accuracy which patients are at risk for severe reaction to insect stings. Some patient’s allergy antibodies may decrease in time without treatment, but it is not know if this means they are no longer sensitive to stings.

Treatment Patients with a history of severe allergic reaction (difficulty breathing) and a positive skin test to venom should receive immunotherapy (allergy injections) to prevent severe reactions to insect stings in the future; these have been shown to be very effective. Injections begin at frequent intervals, but after the top “maintenance” dose is reached, the interval may be gradually decreased to monthly injections. These should be continued indefinitely. Patients with a history of mild allergic reactions (hives) to insect stings and a positive skin test venom should probably also receive immunotherapy treatment. Patients with a history of large local reactions event with a positive venom skin test should probably not receive this treatment, although this is an area in which considerable judgment is not involved.

The risks of venom allergy shots can be minimized if our instructions are followed carefully. Serious reactions are unusual, but occasionally might occur. It is important that all patients wait 1 hour in the office after every injection. A small local swelling or redness about the size of a quarter is acceptable. If there is a large local reaction, or if there are any other symptoms, such as wheezing or hives, the next visit if you have any symptoms later at home which you thought might have been related to the injection. No long-term adverse side effects to receiving venom immunotherapy have been found.