Stinging insect allergy is responsible for more than 10% of all cases of anaphylaxis. The potential culprit insects are diverse and vary with geography. The incidence of insect allergy is declining in some areas and increasing in others, possibly due to effects of climate change, introduction of species into new areas, outdoor recreational activities, and movement of human populations that brings insects into contact with a greater number of people. Flying Hymenoptera and imported fire ant stings are responsible for the majority of patients evaluated for insect anaphylaxis. The most efficient means of identifying allergy to insects is skin testing although falsely positive and negative results occur. The limitations of testing coupled with the natural temporal variability of allergic sensitivity complicate the interpretation of test results. The clinical history is of paramount importance to be certain that the test results are relevant; therefore, screening or testing before a history of a sting reaction is not advisable. Mast cell disorders are associated with severe anaphylaxis from insect stings and should be considered in affected subjects. Insect immunotherapy, using venoms for most insects and whole-body extracts for imported fire ants, is proven effective in reducing the likelihood of anaphylaxis due to subsequent stings from 40%-60% to less than 5%. Future clinical application of component testing or in vitro cellular tests, such as the basophil activation test, may improve optimal choices for immunotherapy.

Key words
Insect; Allergy; Stinging; Venom; Anaphylaxis; Systemic; Immunotherapy

Abbreviations used
IFA, Imported fire ant; VIT, Venom immunotherapy

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