

INSECT STINGS

Many people confuse insect bites with insect stings and may use the terms interchangeably. The difference is due to the nature of the bite or sting. Venomous insects attack as a defense mechanism, injecting painful, toxic venom through their stings. Non-venomous insects bite in order to feed on your blood. Although local irritation and allergic reactions to the saliva and anticoagulants do occur from non-venomous bites, severe reactions such as anaphylactic shock only develop due to venomous stings. Most stinging insects are of the order *Hymenoptera*, which includes ants, bees and wasps (also known as yellow jackets). Other stinging organisms are of the class *Arachnida*, which shares the phylum *Arthropoda* with insects. These include scorpions, spiders, ticks, and mites.

The two greatest risks from most insect stings and bites are allergic reaction (which may occasionally be fatal) and infection (more likely and less serious). When bees sting, they leave the sting and venom sack attached. Venom continues to pump in through the stinger until the sack is emptied or the sting removed. The only good part about this is that bees die after they sting. Wasps and hornets, however, do not leave their stings behind and can sting you over and over. Bees and wasps are the most common stinging insects and they can cause severe allergic reaction, including anaphylaxis.

Local reactions to the stings and bites are edema and immediate erythema followed by intense local pain. Sometimes vesicles and blisters are present at the site of the sting or bite. On rare occasions, secondary infection develops. **Systemic reactions** to the stings and bites are characterized by general pruritus and erythema followed by urticaria and angioedema. Patients with more severe reaction have dyspnea, laryngeal edema, hypotension, and loss of consciousness (anaphylactic shock). The onset of systemic reactions is early, usually within 10 minutes of the sting or bite.

If the stinger is present, it should be removed promptly to avoid continued envenomation. Immediately after the sting or bite, ice or cold compresses should be applied to the area for the first 24 hours to reduce swelling. An increase in swelling and redness on the second day is common. Local reaction can be treated by local creams containing low potent corticosteroids for 2-3 days. Local antihistamine gel or cream should be avoided because they often cause phototoxic or photoallergic reaction. An oral antihistamine can help limit the progression of itching, pain and swelling. Analgesics can help control the pain.

Drugs used in acute management of severe systemic reactions to insect stings usually require parenteral administration, e.g., adrenaline, bronchodilators, corticosteroids and antihistamines.

People who are allergic to insect bites should carry a card, bracelet or necklace that lets other people know about their allergy. Such people should bring their "emergency kit" medication always along. All persons who have allergic reaction to insect bites or stings/bites should know the facts how to avoid getting stung. If patients had a severe allergic reaction to insect sting once in their life time, they have acquired desensitization (immunotherapy).

How to avoid getting stung?

- Wear shoes, slacks, and shirts with long sleeves when outdoors. Also, wear gloves when gardening.
- Avoid brightly colored clothing outdoors.
- Stay away from things that attract insects, such as flowers, trees, bushes and piles of wood.
- Smells and bright colors attract insects. Avoid scented creams and strong perfumes if you are going to spend time outside.
- Control odors at picnics, garbage areas, etc.
- Be extra careful if you are eating or drinking (especially sweet things) outside.

- Look out for insect nests in your home or garden and have them removed or relocated immediately.
- If surrounded by a swarm of bees or wasps, move out of the way slowly. Do not try to wave the insects away. Violent movements will only excite them and make them more aggressive and likely to attack.
- Do not swat or antagonize insects – in anger, they will often sting.
- Keep a quick-kill aerosol insecticide in the kitchen and in the glove compartment of your car.
- Close the windows in the house and the car to keep the insects out.
- Visible, remove the stinger by swiftly scraping with a fingernail or the edge of a knife. Do not pick or force the stinger out because you may squeeze the venom sac, causing more venom to be released.
- Apply a paste of baking soda and water, meat tenderizer and water, a cold cloth, or ice cubes to reduce the pain and swelling. Hydrocortisone cream or calamine lotion may also reduce itch-

ing and inflammation. Insect stings generally do not lead to infection, and antibiotics or antibiotic creams are not necessary.

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References

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