

# Allergic Reaction to Insect Stings in Dogs

We all know dogs are too often bitten by fleas. But we don't realize that man's best friend can also be bitten and stung by other insects – in fact, the same insects that plague us humans. To make matters worse, your dog is just as susceptible to an allergic reaction from insect bites and stings and these can occur in dogs of any age, breed, or sex. It generally takes several exposures before a reaction occurs, and reactions can vary from mild to severe.

**Mild.** Mild reactions include fever, sluggishness, and loss of appetite. Mild reactions to insect stings are probably similar to an immune reaction from a vaccination. They usually resolve without treatment.

**Moderate.** Urticaria is a moderate vascular reaction of the skin marked by hives or wheals and rapid swelling and redness of the lips, around the eyes, and in the neck region. It is usually extremely itchy. Urticaria may progress to anaphylaxis, a life-threatening reaction. Urticaria is the most common reaction in dogs.

**Severe.** The most severe reaction is anaphylaxis, a sudden, severe allergic response that produces breathing difficulties, collapse and possible death. Symptoms usually occur within minutes following an insect bite or sting and proceed rapidly. Symptoms usually include sudden onset of vomiting, diarrhea, staggering, rapid drop in blood pressure, swelling of the larynx leading to airway obstruction, seizures and cardiovascular collapse or death. This reaction is life-threatening for your dog.

Both anaphylaxis and urticaria are triggered by antibodies that the immune system has made to some portion of the insect venom. The antibodies cause inflammatory cells like basophils and mast cells to release substances that cause the allergic reaction. Most dogs allergic to insect stings will develop swollen face and hives and not anaphylaxis.

## Veterinary Care

There is no diagnostic test for anaphylaxis or urticaria, but your veterinarian can determine the presence of an allergic reaction by doing a quick physical examination. A history will reveal recent exposure to stinging insects.

## Treatment

Anaphylaxis is an extreme emergency and it occurs soon after being stung. Your veterinarian will begin immediate emergency life support. This will include establishing an open airway, administering oxygen, and intravenous fluids to increase blood pressure. He will probably administer drugs such as epinephrine, diphenhydramine and corticosteroids. Animals that survive the first few minutes usually return to normal health.

If your dog is known to be allergic to stinging insects, your veterinarian may recommend that you administer Benadryl® (diphenhydramine) in the early stages of the allergic reaction. Unfortunately, oral medication may not be sufficient, and you will have to take your dog in for examination and treatment.

## Preventive Care

In general, there is no way to predict if your dog will have an allergic reaction. If he has had a reaction before, make sure your veterinarian knows about it and it is in your pet's records. Since each reaction becomes more severe you should keep epinephrine available and know how to use it in case a reaction occurs. Ask your veterinarian about an "epi-pen" to keep on hand or take with you when you travel. This is a special syringe and needle filled with a single dose of epinephrine.