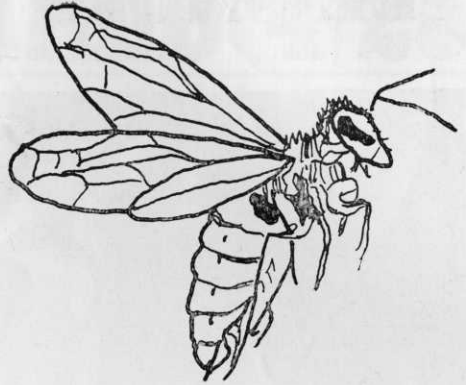


# INSECT STINGS CAN BE DEADLY



EVERY year many persons are stung by *Hymenoptera*, a group of insects which includes bees, wasps, hornets and yellow jackets. Reactions to these stings vary from simple discomfort to acute allergic reactions which, in some instances, have resulted in death. Today, states the Allergy Foundation of America, great strides in medical technology make it possible to lessen this danger by immunizing individuals allergic to these insect stings through a series of injections.

When it comes to lethal insects, there is a well-known group from the *Hymenoptera* family that refuses to take a back seat to reptiles, spiders or their kind. This group includes wasps, hornets, yellow jackets, honeybees, ants, etc. Bee stings alone annually account for the deaths of more Americans than the combined total of deaths due to bites by snakes and all other venomous reptiles. Until a short time ago, it was assumed that severe or fatal reaction to an insect sting was caused by the accidental injection of venom directly into a vein. But many medical authorities are now convinced that the severe reactions which may result from a bee sting are due to an allergy. Also medical research indicates that severe reactions to bee stings occur far more frequently than generally supposed.

The majority of us can suffer stings from bees with no serious effects. However, some people become increasingly

sensitive to them, to the point where they suffer acute and sometimes fatal reactions. And because of this, a number of authorities believe that some of the sudden deaths attributed to heart failure and heat prostration during warm weather are actually the result of an unrecognized *allergy* triggered by a bee sting. Some physicians say that it is not so much the poison that produces fatalities in stings. Rather it is the *proteins* contained in the venom that set up a disturbing and often vicious allergic reaction.

The honeybee, the bumblebee and the yellow jacket and hornet of the wasp family—are the chief culprits responsible for the most severe types of allergic reaction resulting from insect bites. There are, however, at least 25 other varieties of insects whose bites or stings are capable of producing allergic reactions in man.

How can an insect weighing less than 1/100th of an ounce kill a strong, husky human being in minutes? The answer lies in our body's allergic reaction to certain foreign materials. Usually, the allergy causes nothing more than a stinging pain of a short duration, a mild rash or a headache. In other instances, the allergic reactions may be swift, and so severe as to cause death. And just why a person who had never been seriously bothered by bees or

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wasps should suddenly develop a violent reaction to their venom is difficult to explain. It seems that in some individuals, the allergy appears in childhood or early adulthood and tends to grow more severe with each sting.

Most fatal stings seem to occur among adults, and statistics show that there are about twice as many fatalities in men as in women. This could be due to the fact that men are out in the open and more often exposed. How long a person stays dangerously sensitized to the venom is not known, although some physicians believe it may be years.

Another vicious killer among the *Hymenoptera* (hy-men-op'-ter-ah) is the small wasp known in most parts of the country as the *yellow jacket*. Compared in size with the bumblebees and wasps, the yellow jacket is pint-sized. Yet it has a venom that is often more capable of producing violent reactions than that of bees or scorpions.

*Today's Health*, a publication of the American Medical Association, lists the following points which can be of help in avoiding insect stings.

- Bees and wasps usually sting only when their nests are threatened or they are actually touched.
- Stinging insects are more apt to attack a fast moving object because they are sensitive to air movements and sudden motion.
- Bees seem to be angered by dark shades, whereas white or khaki clothing does not bother them.
- To keep yellow jackets and bees from gathering around you while you are working out of doors spray the area with a repellent chemical.
- Bees and wasps are attracted by hair oils and perfumes which contain floral odours.

Wasps will build open-comb nests under eaves, in carports, behind shutters, in shrubs and wood piles; in fact, in almost any protected place. These nests can be destroyed by hosing, knocking down with a stick or broom handle, scraping or clipping into a jar which should be covered quickly. The area should be sprayed with an insecticide

once daily for two to three days to discourage rebuilding on the same site.

Yellow jackets build in the ground. They emerge through a small hole which should be marked by daylight with a thin stick. At dusk, when all the insects have returned for the night, gasoline or kerosene should be poured freely down the hole. It need not be lighted. Lye may be used in the same way. The entire operation should be repeated the following evening in case the fumes have not penetrated to every crevice. A water hose should never be pointed at the hole, for this will cause the insects to swarm over the person holding the hose and sting him unmercifully.

Hornets build grey, football-shaped hives, usually in shrubs or trees, often high or far out on a branch.

Honeybees, whether swarming on a twig or nesting in a hollow tree, may be removed by some of the above methods or by a beekeeper who frequently is delighted to have an extra colony for his trouble.

When a bee stings, it injects only a minutely small amount of poison. The stinging is unique in that it is always fatal to the bee. The paradox is that he stings to protect his life, yet loses it. When he attacks he inserts his needle-like stinger, complete with its tiny poison sac, into the flesh of his victim. It seems to enlarge instantly to the extent that he cannot pull it out again. The tearing of the stinger, along with the muscles around it, brings death to the bee. The sac and muscles which remain in the flesh can go on emitting bits of poison from the stinger for as long as 20 minutes unless it is pulled out. While the bee only stings once, one angry yellow jacket may move about on the flesh and sting again and again; brush him off immediately and get out of the area.

The normal reaction to a sting is an itching, throbbing, burning ache. Its intensity and injury varies in different people. Beekeepers have survived as many as 200 stings at one time. However, for others only a few stings have proven fatal.

Toxicologists make an important dis-

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tinction between two kinds of poison. There is one kind of poison (strychnine being a convenient example) that is as poisonous the first time as the second or third. The other kind (of which bee venom is an important example) may do little harm the first time but may sensitize the body so that a second or third sting later on may cause a serious or fatal reaction. Such reactions are called *allergic*, meaning sensitive. And when a person is known to be sensitive, he should undergo *desensitization*. It is quite likely that more people die of this type of reaction than is now realized. The bite or sting of many ants, flies, chiggers and even the poison-tipped spines of the Southern Woolly worm, can definitely produce allergic reactions.

### Emergency treatment

The emergency treatment for a generalized reaction following an insect sting is the immediate injection of adrenalin. The spread of venom can be lessened by placing a tourniquet above the site of the sting or by the local application of ice. Flicking, emphasizes the Allergy Foundation of America, not mashing the venom sac of the bee, to remove it within a few moments of the sting reduces the venom volume injected. In the absence of any serious medical indications, known insect-sting sensitive patients should receive from their physicians prescriptions for a kit containing either an adrenalin spray or inhalation or adrenalin by injection and instructions for their use. Adrenalin is the only drug which is effective in preventing shock. Cortisone tablets and antihistamine tablets are considered useful, but do not act quickly enough in the acute emergency. After emergency treatment the person should go to the nearest doctor or hospital for further treatment and observation.

Honeybees, bumblebees, hornets and wasps have been around for many hundreds of years and the earth is a richer place for the roles they perform

in pollinating flowers and shrubs and ridding us of other insect pests. They are here and they have a purpose, and peaceful coexistence with them is not only possible, but necessary.

Superintendents and their crews who are apt to come in contact with the insect of the *Hymenoptera* family, and especially those who are sensitive to their bites and stings, should consult their physician about a handy remedy to be kept in an easily accessible place such as the barn, in a truck or even on a tractor. Aromatic spirits of ammonia can be applied with cotton or a piece of cloth to the site of a sting. In some situations it acts promptly to relieve itching or pain.

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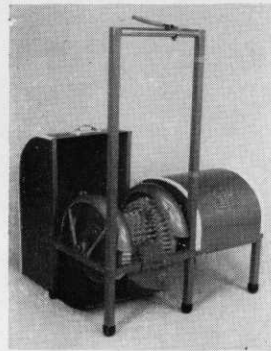
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