

# Protecting Yourself from Stinging Insects

Stinging or biting insects or scorpions can be hazardous to outdoor workers. Stinging or biting insects include bees, wasps, hornets, and fire ants. Outdoor workers who are at risk of exposure to them include farmers, foresters, landscapers, groundskeepers, gardeners, painters, roofers, pavers, construction workers, laborers, mechanics, and any other workers who spend time outside.

The health effects of stinging or biting insects or scorpions range from mild discomfort or pain to a lethal reaction for those workers allergic to the insect's venom. Anaphylactic shock is the body's severe allergic reaction to a bite or sting and requires immediate emergency care. Thousands of people are stung by insects each year, and as many as 90–100 people in the United States die as a result of allergic reactions. This number may be underreported as deaths may be mistakenly diagnosed as heart attacks or sunstrokes or may be attributed to other causes.

It is important for employers to train their workers about their risk of exposure to insects and scorpions, how they can prevent and protect themselves from stings and bites, and what they should do if they are stung or bitten.

## Bees, Wasps, and Hornets

Bees, wasps, and hornets are most abundant in the warmer months. Nests and hives may be found in trees, under roof eaves, or on equipment such as ladders.

### U.S. Geographic Region

Bees, wasps, and hornets are found throughout the United States.

### Recommendations for Protecting Workers

Employers should protect their workers from stinging insects by training them about:

- Their risk of exposure
- Insect identification
- How to prevent exposure
- What to do if stung

### Preventing Insect Stings

Workers should take the following steps to prevent insect stings:

- Wear light-colored, smooth-finished clothing.
- Avoid perfumed soaps, shampoos, and deodorants.
- Don't wear cologne or perfume.
- Avoid bananas and banana-scented toiletries.
- Wear clean clothing and bathe daily. (Sweat may anger bees.)
- Wear clothing to cover as much of the body as possible.
- Avoid flowering plants when possible.
- Keep work areas clean. Social wasps thrive in places where humans discard food.

- Remain calm and still if a single stinging insect is flying around. (Swatting at an insect may cause it to sting.)
- If you are attacked by several stinging insects at once, run to get away from them. (Bees release a chemical when they sting, which may attract other bees.)
- Go indoors.
- A shaded area is better than an open area to get away from the insects.
- If you are able to physically move out of the area, do not attempt to jump into water. Some insects (particularly Africanized Honey Bees) are known to hover above the water, continuing to sting once you surface for air.
- If a bee comes inside your vehicle, stop the car slowly, and open all the windows.
- Workers with a history of severe allergic reactions to insect bites or stings should consider carrying an epinephrine auto injector (EpiPen) and should wear a medical identification bracelet or necklace stating their allergy.

### First Aid

If a worker is stung by a bee, wasp, or hornet:

- Have someone stay with the worker to be sure that they do not have an allergic reaction.
- Wash the site with soap and water.
- Remove the stinger using gauze wiped over the area or by scraping a fingernail over the area.
- Never squeeze the stinger or use tweezers.
- Apply ice to reduce swelling.
- Do not scratch the sting as this may increase swelling, itching, and risk of infection.

### Additional Resources

- CDC Stinging Hymenoptera: Pictorial Key to Some Common U.S. Families [PDF -1.20 MB]
- National Ag Safety Database: First Aid for Bee and Insect Stings
- University of Nebraska-Lincoln Extension—NebGuide: Stinging Wasps and Bees

- Colorado State University Extension: Nuisance Wasps and Bees

### Fire Ants

Imported fire ants first came to the United States around 1930. Now there are five times more ants per acre in the United States than in their native South America. The fire ants that came to the United States escaped their natural enemies and thrived in the southern landscape.

Fire ants bite and sting. They are aggressive when stinging and inject venom, which causes a burning sensation. Red bumps form at the sting, and within a day or two they become white fluid-filled pustules.

### U.S. Geographic Region

Mostly the Southeastern United States, with limited geographic distribution in New Mexico, Arizona, and California.

### Recommendations for Protecting Workers

Employers should protect their workers from fire ants by training them about:

- Their risk of exposure
- How to identify fire ants and their nests
- How to prevent exposure
- What to do if they are bitten or stung

### Preventing Fire Ant Stings and Bites

Workers should take the following steps to prevent fire ant stings and bites:

- Do not disturb or stand on or near ant mounds.
- Be careful when lifting items (including animal carcasses) off the ground, as they may be covered in ants.
- Fire ants may also be found on trees or in water, so always look over the area before starting to work.

### First Aid

Workers with a history of severe allergic reactions to insect bites or stings should consider carrying an epinephrine auto injector (EpiPen) and should wear a medical identification bracelet or necklace stating their allergy.

Workers should take the following steps if they are stung or bitten by fire ants:

- Rub off ants briskly, as they will attach to the skin with their jaws.
- Antihistamines may help.
  - Follow directions on packaging.
  - Drowsiness may occur.
- Take the worker to an emergency medical facility immediately if a sting causes severe chest pain, nausea, severe sweating, loss of breath, serious swelling, or slurred speech.

### Additional Resources

- CDC Stinging Hymenoptera: Pictorial Key to Some Common U.S. Families
- Occupational Safety and Health Administration—Fact Sheet: Fire Ants
- Texas A&M University: The Two-Step Method of Fire Ant Control (in English and Spanish)

## Scorpions

Scorpions usually hide during the day and are active at night. They may be hiding under rocks, wood, or anything else lying on the ground. Some species may also burrow into the ground. Most scorpions live in dry, desert areas. However, some species can be found in grasslands, forests, and inside caves.

### U.S. Geographic Region

Southern and Southwestern United States.

### Symptoms

Symptoms of a scorpion sting may include:

- A stinging or burning sensation at the injection site (very little swelling or inflammation)
- Positive “tap test” (i.e., extreme pain when the sting site is tapped with a finger)
- Restlessness
- Convulsions
- Roving eyes
- Staggering gait
- Thick tongue sensation
- Slurred speech
- Drooling
- Muscle twitches
- Abdominal pain and cramps
- Respiratory depression

These symptoms usually subside within 48 hours, although stings from a bark scorpion can be life-threatening.

### Recommendations for Protecting Workers

Employers should protect their workers from scorpions by training them about:

- Their risk of exposure
- Scorpion identification
- How to prevent exposure
- What to do if stung

## Preventing Scorpion Stings

Workers should take the following steps to prevent scorpion stings:

- Wear long sleeves and pants.
- Wear leather gloves.
- Shake out clothing or shoes before putting them on.
- Workers with a history of severe allergic reactions to insect bites or stings should consider carrying an epinephrine auto injector (EpiPen) and should wear a medical identification bracelet or necklace stating their allergy.

## First Aid

Workers should take the following steps if they are stung by a scorpion:

- Contact a qualified health care provider or poison control center for advice and medical instructions.

- Ice may be applied directly to the sting site (never submerge the affected limb in ice water).
- Remain relaxed and calm.
- Do not take any sedatives.
- Capture the scorpion for identification if it is possible to do so safely.

## Additional Resources

- CDC Scorpions: Pictorial Key to Some Common U.S. Species [PDF - 504 KB]

## Related Links

- Poisonous Plants
- Venomous Spiders
- Venomous Snakes

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