

Insect sting allergy

Allergic reactions to insect stings are usually mild, causing pain and swelling where you were stung. Occasionally, they can cause symptoms that affect the whole body which can sometimes lead to anaphylaxis. If you have ever had a reaction you're worried about, visit your GP.

What is an insect sting allergy?

Anyone stung by a bee or wasp is likely to have a painful swelling where they were stung. This is not a sign of an allergic reaction and for most people, a sting is not dangerous.

Some people have an allergic reaction to the venom in the sting. This causes more swelling than usual but tends to be mild. Any swelling of greater than 10 cm is referred to as a large local reaction. For a small number of people, allergic reactions can be systemic which means they affect whole body systems, for example widespread swelling, a drop in blood pressure or breathing difficulties.

Systemic allergic reactions can be life-threatening. This is known as anaphylaxis. If you know you are at risk of a serious reaction, the idea of being stung can be frightening, but there are steps you can take to reduce the risks and help you feel more confident. This includes getting medical advice, carrying prescribed medication, and taking care to avoid being stung.

Who is at risk?

Anyone can become allergic to an insect sting. You are more at risk of a serious allergy if you are stung often or have multiple stings. Beekeepers, for example, are more at risk of serious reactions. People with a rare condition called mastocytosis are also at higher risk.

Having other allergies such as hay fever or food allergies does not put you at higher risk of a serious allergy to insect stings.

What are the symptoms of anaphylaxis?

The symptoms of a serious allergic reaction usually come on quickly, within minutes of being stung. Serious symptoms are often referred to as the ABC symptoms and can include:

- **AIRWAY** - swelling in the throat, tongue or upper airways, hoarse voice, difficulty swallowing.
- **BREATHING** - sudden onset wheezing, breathing difficulty, noisy breathing, persistent cough.
- **CIRCULATION** - dizziness, feeling faint, sudden sleepiness, confusion, pale clammy skin, loss of consciousness or collapse.

You might also have:

- itching and swelling away from the site of the sting
- severe abdominal (stomach) pain, vomiting or diarrhoea

The term for this more serious reaction is anaphylaxis (pronounced ana-fil-ax-is).

Most healthcare professionals consider an allergic reaction to be anaphylaxis when it involves difficulty breathing or affects the heart rhythm or blood pressure. Any one or more of the ABC symptoms above may be present.

In extreme cases there could be a dramatic fall in blood pressure. The person may become weak and floppy and may have a sense of something terrible happening. Any of the ABC symptoms may lead to collapse and loss of consciousness and, on rare occasions, can be fatal.

[Read more about anaphylaxis.](#)

Getting a diagnosis

If you have had symptoms away from the site of a sting, for example widespread hives or swelling, or any ABC symptoms as mentioned above, see your GP who can refer you

to a specialist allergy clinic if needed. They can find a clinic in your area from the [British Society for Allergy and Clinical Immunology \(BSACI\)](#).

Some people have large swellings at the site of a sting which get bigger over 24-48 hours. If you have a swelling of more than about 10cm, visit your GP. If you are stung again in future, you will probably have a similar reaction, but there is a slight risk you could have a more significant reaction. Most people won't need to see a specialist, but it can be a good idea for people who are more likely to get stung, such as beekeepers.

If you are at all worried about insect sting allergy, visit your GP.

How is an allergic reaction treated?

If you have mild allergic symptoms, you may be prescribed antihistamine medicine that you take by mouth. But if you are at risk of a serious allergic reaction (anaphylaxis), you may be prescribed adrenaline – the emergency medicine used to treat anaphylaxis. It is also known as epinephrine.

Because anaphylaxis can happen very quickly, adrenaline is available in different forms that are designed to be easy to use. It's important to know exactly how and when to use your prescribed adrenaline. Healthcare professionals can show you how to use it, and there are also resources such as practice devices and videos on manufacturer websites.

Options currently available on prescription in the UK include:

- **Adrenaline auto-injectors (AAIs)** – such as EpiPen and Jext.
- **Intranasal adrenaline** – EURneffy, a needle-free nasal spray.

You must carry two in-date forms of prescribed adrenaline at all times as a second dose may be needed if symptoms do not improve after five minutes or get worse.

[Find out more about what to do in an emergency.](#)

[Find out more about adrenaline.](#)

Avoiding insect stings

If you are allergic to insect stings, you can take steps to minimise the risk of getting stung. For example:

- Avoid walking around in bare feet or sandals when outdoors.

- Avoid using strong perfumes during the summer as they attract insects. Products such as hairsprays and other cosmetics can contain strong perfumes.
- Keep your arms and legs covered when outside, if possible.
- If a bee or wasp comes near you, don't try and swat it. Move away from it slowly and calmly. If it lands on you, try not to panic. Just wait. The insect will usually fly away after a few seconds.
- After eating or drinking, make sure you don't have any traces of food or drink around your mouth, as these will attract insects.
- If you find a nest of wasps or bees in your house or garden, contact the local authority or an insect expert for advice. Never try to move a nest yourself.
- If you are planning to eat outside, find an area where there are no wasps or bees. If you can't find anywhere, it's better to bring your picnic inside than to risk being stung.
- Keep food and drink covered as food attracts insects. Always look at what you're eating or drinking before you take a bite or a sip in case an insect has landed on it. Wasps can slip into drinks cans so the safest option may be boxed drinks with a straw, or bottled drinks and keep the lid on between sips.
- When you're outside, avoid open rubbish bins as these can attract insects.

Types of insects

The insects that cause most serious allergic reactions in the UK are wasps and honeybees. People are not usually allergic to both bees and wasps, although allergy tests can be positive for both.

Serious reactions to bumble bees and to hornets are also possible. In other parts of the world, other species of bees, wasps, ants and other insects can cause allergic reactions.

Allergy tests will help to tell you which type of insect you are allergic to but they won't be able to predict how serious any future reactions will be.

Bees: When a bee stings, it leaves its stinger in the skin. The stinger has a venom sac attached to it. It takes a few minutes for all the venom to pass through the stinger into the skin, so removing the stinger quickly lowers the risk of a serious reaction. To remove

the stinger and venom sac, flick the venom sac upwards with one quick scrape of a finger nail or credit card. Avoid squeezing the venom sac as this will inject more venom into the skin.

Beekeepers should take special care. Always wear protective clothing when collecting swarms or honey. If you are a beekeeper and you're at risk of a serious reaction to bee stings, speak to your doctor about how to continue beekeeping safely.

Wasps: Wasps can sting many times as they don't leave their sting in the skin. Wasps are often aggressive, especially towards the end of the season (late summer and autumn) when they eat any decomposing foods. From autumn until the end of the year, wasps become sleepy, keep perfectly still and stop buzzing so it is much easier to accidentally touch or step on one.

Wasps die off in the winter except for Queen wasps which hibernate in sheltered places in trees or buildings. Be aware that they may tuck themselves into nooks such as a bed, curtains, gloves, boots, or a stack of plant pots.

Hornets: Hornets are an orange-brown colour and are larger and louder than wasps. Despite their threatening size and sound they are not as aggressive as wasps. But when they do sting the amount of venom usually makes the stings very painful.

Immunotherapy treatment

If you have a serious allergy to insects, your GP or allergy specialist may suggest immunotherapy. This is where you have injections of a tiny amount of venom and build up to larger amounts over time. The aim is to desensitize your immune system so that you don't have an allergic reaction if you get stung. Immunotherapy is also known as desensitisation.

[Read more about venom immunotherapy](#)

Key messages

- Most allergic reactions to insect stings are mild.
- In a small number of people, insect stings can be life-threatening.
- If you have had a systemic (whole body) allergic reaction to a sting, see your GP and ask for a referral to an allergy specialist.

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- Swelling at the site of the sting is unlikely to be a serious problem but if you are at all worried, see your GP.
- If you are prescribed adrenaline devices, make sure you know how to use them and carry two with you at all times.
- There are steps you can take to avoid being stung, and immunotherapy can be an option for some people.

Feedback

Please help us to improve our information resources by sending us your feedback at: -

<https://www.anaphylaxis.org.uk/information-resources-feedback/>

Sources

All the information we produce is evidence based or follows expert opinion and is checked by our clinical and research reviewers. If you wish to know the sources we used in producing any of our information products, please contact info@anaphylaxis.org.uk and we will gladly supply details.

Reviewer

The content of this factsheet has been peer-reviewed by Dr Mich Lajeunesse, Consultant in Paediatric Allergy, Southampton Children's Hospital and Dr Cherry Alviani, Southampton Children's Hospital.

Disclosures

We are not aware of any conflicts of interest in relation to the review of this factsheet.

Disclaimer

The information provided in this factsheet is given in good faith. Every effort is taken to ensure accuracy. All patients are different, and specific cases need specific advice. There is no substitute for good medical advice provided by a medical professional.

About Anaphylaxis UK

Anaphylaxis UK is the only UK-wide charity solely focused on supporting people at risk of serious, life-threatening allergic reactions. We provide information and support to people living with allergies through our free national helpline. We also fundraise to achieve our ultimate aim, to create a safer environment for all people at risk of serious allergies. Visit our website www.anaphylaxis.org.uk and follow us to keep up-to-date with our latest news. We're on Facebook @anaphylaxisUK, LinkedIn, Instagram @anaphylaxisUK, Twitter @AnaphylaxisUK and YouTube.