

## Venom Immunotherapy

This factsheet provides information about Venom Immunotherapy. In the UK, you may be offered this treatment if you have a serious allergy to the venom from bee or wasp stings.

### What is Venom Immunotherapy (VIT)?

If you have a serious allergy to insect venom and you get stung, your immune system overreacts. Your immune response can be so strong that it causes symptoms that affect your whole body, such as breathing difficulties or loss of consciousness. This type of allergic reaction can be life-threatening and is called [anaphylaxis](#).

[Read more about Insect Venom allergy here.](#)

The goal of VIT is to desensitise your immune system to the venom so that it no longer overreacts. This is done by giving you doses of the venom that gradually increase over a number of weeks. This can reduce the severity of allergic reactions if you are stung again in the future.

The exact way that VIT works is not fully understood. It is thought to involve several different processes. These include:

- changes in the type of immune system cells and proteins your body makes
- changes in the way your immune system responds to the venom

### Does VIT work?

Research shows that VIT is very effective for bee and wasp venom allergy. VIT is effective in about 80% of people who have the treatment for bee venom allergy. For wasp stings, it works in up to 95% of people having treatment. This means most people who complete treatment are much less likely to have a severe allergic reaction if they are stung again.

To get the best outcome from your treatment, it is important not to miss doses and to complete the full course. Missing doses or stopping treatment early can interfere with the desensitisation process. This reduces the effectiveness of VIT. If you stop treatment early or miss doses, you may still be at risk of a severe reaction if you are stung in the future.

Protection from VIT lasts for a long time after you complete the treatment. Some studies have found that people were still protected 7 years after treatment finished. Not

many studies have examined how long protection lasts beyond 7 years. It is possible that protection could wear off over time. You should still take steps to avoid being stung. This may include wearing protective clothing and avoiding areas where insects are common.

## What does the treatment involve?

### Up-dosing

VIT involves having injections of small amounts of the venom allergen into the layer of tissue just underneath the skin. This is called a subcutaneous injection. The first phase of treatment involves frequent injections. The injections are gradually increased in strength. Exact schedules vary between clinics and depend on individual factors, but this often happens over a period of 7, 15, or 25 weeks. Doses can be spread over a shorter or longer period. You may need to receive more than one injection on your first few visits, depending on the schedule your allergy specialist recommends. This is called the 'Up-dosing' phase.

### Maintenance

The second phase of treatment is the 'maintenance' phase. The injections will be at the full maintenance dose, which will be the highest dose reached during the up-dosing phase. They will gradually get further apart until you only have one dose, usually every 4-8 weeks. You will normally need to continue with the injections for 3 years. Occasionally, treatment may need to continue for longer.

## Who can have VIT?

Your GP can refer you to an allergy specialist if they think VIT is suitable for you. VIT is available at several specialist centres in the UK. You can find a clinic in your area from the [British Society for Allergy and Clinical Immunology \(BSACI\)](#).

You may be a good candidate if:

- You have had a serious allergic reaction (affecting your Airway, Breathing, or Circulation) to an insect sting.
- Some people may be eligible with less serious reactions, but who are at increased risk of exposure to bees or wasp stings in the future, e.g., beekeepers, gardeners or refuse collectors.

The allergy clinic will carry out tests (skin tests or blood tests) to confirm the allergy. They will also consider risk factors for more severe reactions and assess suitability for the treatment.

VIT is suitable for children and adults. There is not very much safety data on its use in children under the age of 5. Talk to your child's allergy specialist if you are considering treatment for a child under 5.

VIT would not usually be started if you are pregnant. It may be possible to continue treatment during pregnancy if you are already in the maintenance phase, as long as you stay well.

### Medical Conditions and Medicines

Some medical conditions and medicines may put you at risk of harm or interfere with how well the VIT works. Sometimes VIT may not be recommended.

Speak to your doctor or allergy specialist if you have:

- uncontrolled asthma – VIT can cause allergic reactions. It is very important that your asthma is well-controlled before starting treatment
- chronic heart disease – any allergic reaction, whether to a sting or to VIT, may be more serious
- new or active autoimmune diseases – very little is known about how this may affect treatment
- new or active cancers – very little is known about how these affect treatment

Always tell your allergy specialist about any medicines (including over the counter, herbal or supplements) you are taking before starting VIT. **Will I need to take any special precautions during treatment?**

You will usually be advised to take some precautions to reduce the chances of an allergic reaction to the VIT. These include:

- avoiding alcohol on the day of your injection and for at least 4 hours afterwards
- avoiding large meals immediately before the injection
- avoiding any exercise that's more strenuous than walking for 12 hours afterwards
- avoiding hot baths or sauna/steam rooms for 12 hours afterwards

Please also tell the clinic if you have been unwell at any time in the 24 hours before your appointment, or if you have had any vaccination or other treatment.

## What are the side effects?

You may have reactions to the treatment. It is quite common to have some redness, swelling or itching at the site of the injection. Antihistamines are usually given to help reduce this type of reaction.

People often say they feel tired or have headaches after their injections. This is normal and usually passes quickly. It is fine to take over the counter pain medications such as paracetamol or ibuprofen if you need to.

It is very unusual to have a more serious reaction, but it can happen. Every injection is given in a hospital setting. You will normally be asked to stay for 30-60 minutes after each injection.

If you have any side effects after you leave the hospital, you should always report these to your doctor. If you think you may be having anaphylaxis, you will need to get immediate medical help.

[Read more about anaphylaxis and what to do in an emergency.](#)

## Frequently asked questions

### Can I stop carrying adrenaline during or after VIT?

During the up-dosing phase of VIT, you will need to continue carrying your emergency medical kit, which includes two adrenaline devices, at all times.

Most allergy specialists would advise you to continue carrying your emergency medical kit with you throughout the VIT course.

Some people may need to continue to carry their emergency kit even after VIT, including:

- people who are allergic to honey bee venom
- people with clonal mast cell disorders, such as mastocytosis
- people who are at continued risk of multiple stings, for example, a gardener, beekeeper or refuse collector
- people who continued to experience allergic reactions during VIT

### What happens if I miss a dose?

This will depend on how much time has passed and the stage that you are at in your VIT. Missing a dose during the up-dosing phase may mean the up-dosing takes longer, and missing too many doses might mean starting again from the beginning. During maintenance therapy, extending the interval between doses might mean that the dose of your next injection needs to be reduced and then increased again with weekly doses. If a very long time has passed, you may need to start treatment again from the beginning.

### Can I get immunotherapy for other allergies at the same time?

It may be possible to have more than one type of immunotherapy at the same time. For example, if you are allergic to both wasp and bee venom. Speak to your allergy specialist about whether this would be suitable for you.

### Can I get immunotherapy for an allergy to the venom of other insects?

VIT in the UK is only available for allergies to the venom of bees and wasps. VIT can be done for allergies to the venom of insects that are found in other countries, such as fire ants and paper wasps, but these treatments are not routinely available in the UK.

## Key Messages

- VIT is a highly effective treatment for insect venom allergy.
- Treatment usually takes at least 3 years, so you need to be committed to completing the full course.
- It is possible that protection could wear off over time, so you should still take steps to avoid being stung.
- You will need to continue to carry an emergency kit during the up-dosing phase of VIT, often during the maintenance phase, and sometimes for longer.

## 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



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in producing any of our information products, please contact [info@anaphylaxis.org.uk](mailto:info@anaphylaxis.org.uk), and we will gladly supply details.

### Reviewer/s

The content of this factsheet has been peer-reviewed by Dr. Andrew Whyte, a specialist at the Department of Allergy and Immunology at Derriford 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 campaign and 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](http://www.anaphylaxis.org.uk) and follow us to keep up-to-date with our latest news. We're on Facebook @anaphylaxisUK, LinkedIn, Instagram @anaphylaxisUK, and you can find our podcast [here](#).