

Venom Immunotherapy: The facts

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 losing 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 period of several weeks. This can reduce how serious any allergic reactions would be 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 has shown that VIT is very effective for people who are allergic to bees and wasps. 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 that most people who complete a course of VIT will be much less likely to have a serious allergic reaction if they are stung again.



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To get the best outcome from your treatment, it's 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 serious 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 people were still protected 7 years after treatment finished. Not many studies have looked at 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, but this often happens over 7-8 weeks. Doses can be spread over a shorter or longer period. You may need to be given 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 need one injection, 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 that VIT would be a suitable treatment 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 to an insect sting
- your allergy has been confirmed by a skin prick or blood test
- you are at increased risk of exposure to bees or wasps in the future e.g., beekeepers, gardeners or refuse collectors.

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
- autoimmune diseases – very little is known about how this may 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.

You must also let your clinic know if you have been unwell in the 24 hours before your appointment.

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's fine to take over the counter pain medications such as paracetamol or ibuprofen if you need to.

It's 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, including two adrenaline auto-injectors at all times.

Once you reach the maintenance phase of VIT, your allergy specialist will advise you about whether you can stop carrying your emergency medical kit.

People who may need to keep carrying their kit include: -

- If you are at continued risk of multiple stings, for example a gardener, beekeeper or refuse collector
- If you continued to experience allergic reactions during VIT
- If you have an elevated baseline tryptase (a type of blood test) or mastocytosis.

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. The dose of your next injection may need to be reduced. If a very long time has passed you may need to start treatment 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 allergy to the venom of other insects?

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



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Key Points

- VIT is a very effective treatment for insect venom allergy.
- Treatment 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 emergency kit during the up-dosing phase of VIT 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 in producing any of our information products, please contact info@anaphylaxis.org.uk and we will gladly supply details.

Reviewer/s

The content of this factsheet has been peer-reviewed by Patrick Yong, Consultant Immunologist, Frimley Health NHS Foundation Trust.

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.

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Document Reference: ACFS32A
Publication date: May 2023
Next review date: May 2026
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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 raise awareness 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 and follow us to keep up-to-date with our latest news. We're on Facebook @anaphylaxisUK, LinkedIn, Instagram @anaphylaxisUK, Twitter @AnaphylaxisUK and YouTube.

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