

Allergy testing

The aim of this article is to give people with allergies a basic understanding of what different allergy tests involve. If you believe you have allergies but have not been allergy-tested, we recommend you visit your GP and ask for testing to be carried out. To pinpoint what you are allergic to, the allergy clinic staff are likely to perform a blood test and/or a skin prick test. They will also discuss your medical history with you because this may hold important information to help them reach a diagnosis.

Skin prick testing

A skin prick test involves introducing a tiny amount of the suspect allergen into the skin, usually on the forearm. The test is easy to perform and causes only mild discomfort. Even babies under a year old are tested at some clinics.

Antihistamines must be avoided before the test is carried out as these may interfere with the results. Longer acting antihistamines (for example, loratadine) need five days; shorter acting ones (for example, chlorphenamine) require 48 hours, however, this should be discussed with the allergy specialist.

Suspected causes of allergy (such as foods or pollens) are mixed with liquid to make a solution. During the test, a drop of each solution is placed on the skin. Up to 10 or 12 drops of different solutions may be used in the test and the skin is marked to show which liquid has been placed where. Then the skin beneath each drop is gently pricked with a very thin needle (lancet). This is enough to let a tiny amount of solution past the top layer of the skin.

A positive test result shows you have been 'sensitised' to a particular allergen. The site where the allergen was introduced will become red and itchy and there will be a raised bump known as a wheal in the centre that looks like a small nettle sting. The wheal will reach its maximum size within 15-20 minutes and usually fades within an hour. Being sensitised means your immune system has come into contact with an allergen and committed it to its memory. It does not necessarily mean you will react to the allergen. The results require careful interpretation by the doctor.

Blood tests

During a blood test, a small amount of blood (5-10ml) is taken and tested for allergic antibodies to the suspect allergen, such as a particular food. Like skin tests, they require careful interpretation by somebody experienced at working with these tests. The results are not affected by the taking of antihistamines.

Intradermal skin tests

Intradermal skin tests can be used to identify or exclude allergy to certain substances such as insect venom or medicines. Antihistamines must be avoided for 72 hours before the test, and you must be in good health. The doctor will ask for your informed consent to proceed with the tests.

During the test a small amount of each substance (0.05ml) is injected directly into the skin, which raises a small blister. If the test is positive this blister or 'bleb' gets bigger and is accompanied by redness and itching, which develops over a period of 20-25 minutes. The reaction will then fade after 1-2 hours. Because they are more painful than skin prick tests, they are used less often for children.

Food challenges

Where doubt remains about whether or not you have a food allergy, a challenge test may be offered. In this context, the word 'challenge' means to introduce you to the food you may be allergic to.

Challenges should always be done in a hospital under medical supervision – not at home unless directed by your specialist. We believe food challenges to be safe as long as they are done by experienced medical staff in a well-equipped setting. The medical team will fully consider your medical history and ensure that you are fit and well before you take a food challenge. In particular, they will check for asthma and wheezing – as any potential allergic reaction will be worse if your breathing is already compromised.

Commercial testing kits

Commercial allergy testing kits, such as hair analysis, kinesiology and VEGA tests, are not recommended by Anaphylaxis UK. We know of little scientific evidence to support them and are concerned that patients may be misled by results that are in fact false. This view is supported by the National Institute for Health and Care Excellence (NICE). A 2004 study by U.S. researchers, involving a review of published literature also supports this view. Their report said: "To date, no complementary or alternative

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diagnostic procedure can be recommended as a meaningful element in the diagnostic work-up of allergic diseases." As far as we know, nothing has changed that would alter that conclusion.

Hopes for the future

New improved methods of allergy testing are likely to be developed in the future. For example, in 2018 a method known as the mast cell activation test (MAT) was described in the medical literature. The authors claim this offers the possibility of better, more accurate diagnosis for future patients.

A 2020 study showed that this test can be used to diagnose allergy to the antiseptic medicine chlorhexidine. The test also showed potential to help distinguish between allergy and sensitisation. Further studies are needed to determine whether MAT can be used to accurately diagnose other allergies.

Feedback

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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 article has been peer-reviewed by Professor Adam Fox, consultant Paediatric Allergist at the Evelina London Children's Hospital.

Disclosures

Prof Fox is President of the British Society for Allergy & Clinical Immunology and Chair of the Health Advisory Board of Allergy UK, both of which have received funding from Thermofisher.

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 and local support groups. 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 and follow us to keep up-to-date with our latest news. We're on Facebook @anaphylaxixUK, LinkedIn, Instagram @anaphylaxisUK, Twitter @AnaphylaxisUK and YouTube.